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ULUSAL VASKÜLER VE ENDOVASKÜLER CERRAHİ DERNEĞİ

21st Congress of Turkish Society for Vascular and Endovascular Surgery

24th Congress of Asian Society for Vascular Surgery (ASVS)

18th Asian Venous Forum

12th Congress of Turkish Society of Phlebology

30 November - 03 December 2023

Rixos Sungate
Vega Convention
Antalya, Türkiye

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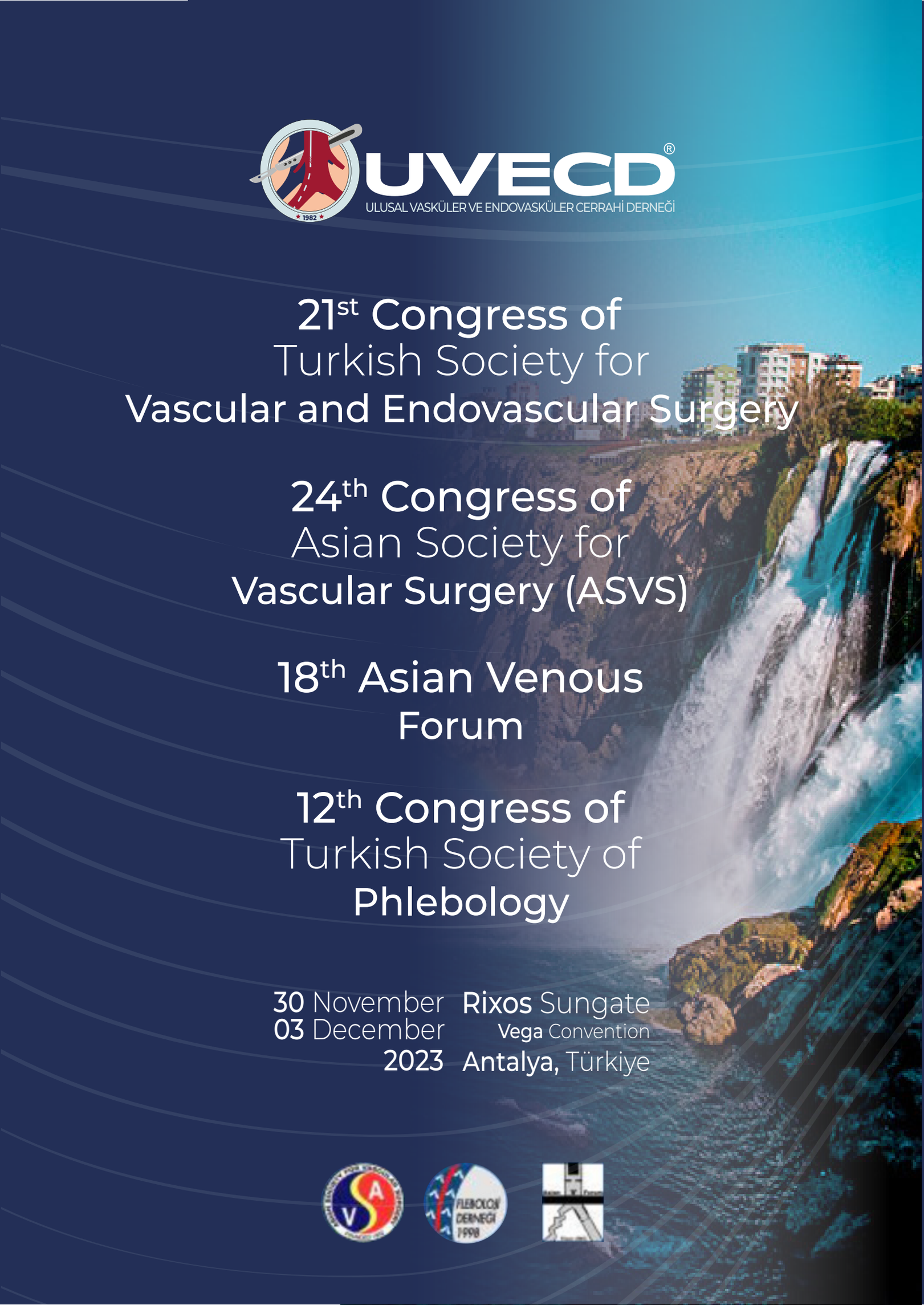

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30 NOVEMBER 2023, THURSDAY

ASPENDOS HALL

13:30 - 15:00	**KTEPH in Every Aspect (In Memory of Prof. Dr. Gökçen Orhan)** **Moderators: Ali Gürbüz, Cihangir Kaymaz, Rıza Doğan**	
	Son kılavuzlar eşliğinde KTEPH	Özlem Erçen Diken
	Göğüs hastalıkları gözü ile KTEPH	Şerife Bozbaş
	Kardiyolog gözü ile KTEPH	Mesut Demir
	KTEH tanı ve tedavi farkı	Deniz Doğan
	KTEPH ve zor olgu nedir?	Mehmed Yanartaş
15:00 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Pulmonary Artery Session (In Memory of Prof. Dr. Gökçen Orhan)** **Moderators: Rüçhan Akar, Mehmet Akbulut, Tanzer Çalkavur, Parham Sadeghipour**	
	Korean subgroup analysis from XALIA(-LEA) studies - Characteristic of Korean VTE	Seung-Kee Min
	Acute pulmonary embolism- What do guidelines say?	Nesrin Öcal
	Acute Pulmonary embolism- Surgery	Cahit Sarıcaoğlu
	Acute pulmonary embolism – Ultrason guided catheter thrombolysis	Mustafa Şırlak
	Acute pulmonary embolism – Rheolytic thrombolysis	Cihangir Kaymaz

CAPPADOCIA HALL

15:30 - 16:30	**Advanced techniques in vascular pathologies: Meet the experts** **Moderator: A. Kürşat Bozkurt, Soner Yavaş**	
	How I approach from C1 to C6 disease: A case based discussion	A. Kürşat Bozkurt
	How I approach for acute DVT : A case based discussion	Şahin Bozok
	How I approach for posttrombotic patients : A case based discussion	Murat Uğur
	Current trends for the treatment of PAD	Ali Aycan Kavala
	Treatment of AAA in 2023: Open or endo - Case discussions	Zafer İşcan

EPHESUS HALL

13:30 - 15:00	**Advanced Diagnostics Course** **Moderators: Houman Jalaie, Suat Doğancı**	
	Standards in duplex ultrasonography for phlebology	Irwin Toonder
	Role of IVUS in deep venous interventions	Houman Jalaie
	Doppler Course	Irwin Toonder, Suat Doğancı
15:00 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Advanced Diagnostics Course** **Moderators: Houman Jalaie, Suat Doğancı**	
	Doppler Course	Irwin Toonder, Suat Doğancı

AFRODISIAS HALL

15:30 - 16:30	**Doğsan Anastomosis Techniques Course** **Moderator: Ömer Tanyeli**	
	Mustafa Bahadır İnan	
	Abdullah Özer	
	Ümit Arslan	
	Hayrettin Levent Mavioğlu	
	Kubilay Karabacak	
	Murat Kadan	

TROYA HALL

13:30 - 15:00	**Analysis of Venous Insufficiency Risk Factors and Demographic Characteristics in Nurses. Results of the centers participating in the study.** **Moderators: Gökçen Özkan, Altay Nihat Acar, Aysel Acar**	
NP-023	Adana City Hospital	Emine Yılmaz
NP-016	Başkent Hospital	Sevcan Avcı Işık
NP-017	Ankara Bilkent City Hospital	Yeşim Aslan
NP-022	Ankara University	Kıymet Kaplan Yücel
NP-018	Bursa Yüksek İhtisas Training and Research Hospital	Durgadın Selçuk
NP-019	Erzurum City Hospital	Tuğçe Dalbay
NP-024	Necmettin Erbakan University	Özge Özcan
NP-029	Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training Research Hospital	Dilek Korkmaz
NP-020	İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital	Merve Önal
NP-026	Ege University	Gülver Hacıoğlu
NP-021	İstanbul Bağcılar Training and Research Hospital	Miraç Karabiber
NP-025	İzmir Atatürk Training and Research Hospital	Ayşe Cankut Çetin
NP-027	Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Education Research Hospital	Asiye Tüfekçi
NP-028	Ahi Evren Thoracic and Cardiovascular Surgery Training and Research Hospital	Öznur Gümrükçüoğlu
NP-030	Antalya Training and Research Hospital	Simge Alp
15:00 - 15:30	**COFFEE BREAK**	
15:30 - 17:45	**Nurse Presentations 1** **Moderators: Gökten Aşkın, Emre Külahçıoğlu, Yeşim Aslan**	
NP-007	5-Year outcomes of patients who underwent femoropopliteal bypass surgery and applied nursing interventions Sevcan Avcı Işık, Elif Budak Ertürk, Hakkı Tankut Akay, Aysel Abbasoğlu, Ecem Tuğba Yamaç, Elşat Mansimzade	
NP-006	Risk factors for the development of pressure injury in patients with peripheral arterial disease Gülşen Kılıç, Elif Çal, Merve Sobe, Tankut Akay	
NP-005	Determination of intensive care nurses' perceptions of privacy during dressing after femoral popliteal bypass (Fem-Pop) surgery: A qualitative study Hülya Karaer, Merve Söbe, Hakkı Tankut Akay	
NP-004	Critical leg ischemia and nursing care Gülçin Aydın, Azize Karahan, Hakkı Tankut Akay	
NP-003	The effect of foot reflexology on pain and ankle brachial index level in patients with peripheral artery disease: A randomized controlled trial Elif Budak Ertürk, Sevcan Avcı Işık, Azize Karahan, Ilknur Şenel, H. Tankut Akay	
NP-002	The effect of pulmonary endarterectomy on patients' quality of life and health outcomes Gülçin AYDIN, Hatice Nalan Özhan Elbaş , Hakkı Tankut Akay	
NP-015	Investigation of knowledge levels of nurses working in surgical clinics about venous thromboembolism Aylin Günay, Gizem Göktaş, Merve Fettahoğlu, Ziyafet Uğurlu, Ecem Tuğba Yamaç, Hakkı Tankut Akay	
NP-001	Evaluation of the effectiveness of the care bundle for the prevention of ventilator associated pneumonia in patients undergoing pulmonary endarterectomy Aylin Günay, Merve Fettahoğlu, Denizhan Akpınar, Okay Karslioglu, Hakkı Tankut Akay, Atila Sezgin	

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ASPENDOS HALL

08:20 - 09:15	**Aneursym Session** **Moderators: Levent Yılık, Tankut Akay, Morteza Noparast**	
	Endovascular branched aortic arch repair	Stephen Cheng
	Open repair of thoracoabdominal aortic aneurysms - Technical aspects	Anıl Ziya Apaydın
	Open Surgery: Still a Good Option for Abdominal Aneurysm Treatment	Thomas Holzenbein
	Surgeon modified fenestrated grafts at Zone II; Mid-term results	Zafer İşcan
	The role of ESAR (Endoanchor) and ChEVAR in juxtarenal aneurysms (AAA)	Uğursay Kızıltepe
09:15 - 10:15	**Carotid Session** **Moderators: Sandeep Raj Panday, Mehmet Ali Özatik, Mohamad Mozafar**	
	Carotid artery stenosis, when and how	Dong Ik Kim
	Modified Carotid endarterectomy, technique and pitfalls	Tankut Akay
	Carotid body tumors	Levent Yazıcıoğlu
	Evaluation of CREST-2 trial - Will it be the final answer?	Barış Durukan
	CEA/CAS in bilateral carotid stenosis	Ravul Jindal
	Carotid & Coronary arterial disease: What is the strategic plan	Barış Çaynak
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Aneurysm Session** **Moderators: Michael Jacobs, Stephan Cheng, Rüçhan Akar, Mehdi Davoodi**	
	CANDY PLUG for aortic dissections	Tarun Grover
	Ten years experiences of hybrid procedure for thoracic aortic disease at Viet-Duc university hospital	Nguyen Huu Uoc
	Surgery for the treatment of thoracoabdominal aort aneurysms	Kamuran Kazımoglu Musayev
	Endovascular and hybrid repair of arch Disease - Sharing best practices and anchor technique	Uğursay Kızıltepe
	What to consider when treating Korean patients with AAA	Sanghyung Ahn
	The Endovascular treatment of visceral artery aneurysms	Dae Hyun Hwang
11:45 - 12:30	**RD Global/Invamed - Satellite Symposium (Artery)** **Moderators: Özcan Gür, Tolga Demir, Nail Kahraman**	
	Endovascular Treatment of diffucult Aortic Aneurysms and Dissections	Murat Uğur
	The Importance of stent grafts for the endovascular Treatment of PAD	Hidayet Demir
	Endovascular Treatment of Occluded AV access fistulas	Fatma Tuğba İlal Mert
	The Importance of Atherectomy in PAD	Temmuz Taner
	The Importance of drug coated Balloons in PAD	Halit Yerebakan
12:30 - 13:30	**LUNCH BREAK**	
13:30-14:30	**Peripheral Artery Session** **Moderators: Cengiz Köksal, Niyazi Görmüş**	
	SUPERA (VMI Stent) Indications and use in cahellenging cases	Tarun Grover
	Critical role of vascular surgeons in Oncology	Thomas Hoelzenbein
	Intravascular lithotypsy and DCB option in calsified common femeral artery lesions	Davor Mrda
	Current status and strategy of CLTI treatment in Japan	Nobuyoshi Azuma
	Why and how to report rare vascular disease cases	Seung-Kee Min
14:30 - 15:15	**Sigvaris Group Satellite Symposium** **Innovation & Care in Compression for Venous Leg Ulcers** **Moderators: A. Kürşat Bozkurt**	
	Speakers: Jin song Wang, Harikrishna K. Ragavan Nair	
	Panelists: Liew Ngoh Chin, Sun-Cheol Park, Tomohiro Ogawa	
15:15 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Endovascular Treatments** **Moderators: Kemalettin Uçanok, Gökhan İpek, Fuat Bilgen**	
	TEVAR - Subklavian arter iğne fenestrasyon tekniği	İlker İnce
	Aort diseksiyonunda endovasküler girişimler ilk seçenek mi?	Şahin Bozok
	Aort diseksiyonu sonrası false lümen açıklığı ne kadar önemli?	Ersin Kadiroğulları
	Çalışan kalpte hibrit arkus cerrahisi	Altuğ Tuncer
	Renal problemli hastalarda CO2 Anjiografi	Naim Boran Tümer
16:30 - 19:30	**Opening Ceremony**	

CAPADOCIA HALL

08:20 - 09:15	**Asian Venous Forum Session** **Thermal and nonthermal ablation for GSV and SSV disease** **Moderators: Lowell Kabnick, Mohammad Reza Zafarghandi, Soner Yavaş**	
	What is the gold standard for truncal ablation?	Tapish Sahu
	Superficial devices in development	Lowell Kabnick
	Strategies for recurrent varicose veins	Sriram Narayanan
	Laser crossectomy vs normal laser treatment	Igor Zolutukhin
	Complications of cyanoacrylate closure	Nuttawut Sermsathanasawadi
	Safety and efficacy of cyanoacrylate glue: A metanalysis	A. Kürşat Bozkurt
09:15 - 10:15	**Joint Session - Russian Phlebological Association & Russian Society of Angiologists and Vascular Surgeons & Turkish Society of Vascular and Endovascular Surgery** **Moderators: Igor Suchkov, Petr M. Lepilin, Alexei Svetlikov, Igor Zolotukhin**	
	Wellcoming words	Stephan Cheng
	Algorithm for deciding whether treating superficial venous reflux will be beneficial in advanced venous disease	A. Kürşat Bozkurt
	Vascular surgery in the elderly	Petr M. Lepilin
	Type 3b endoleak as a non-negligible factor of sac enlargement resulting in late open conversion after EVAR	Yang-Jin Park
	Is hemodynamic approach in varicose veins justified by saving of GSV for future conduit if PAD develops?	Igor Zolotukhin
	Treatment of aorto-caval fistula: historical data and modern options	Alexei V. Svetlikov
	Fundamental aspects of chronic venous disease	Igor Suchkov, Nina Mzhavanadze
10:15 - 10:45	**COFFEE BREAK**	

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10:45 - 11:45	**Turkish Society of Phlebology Pelvic Venous Disease Session/'Hot Topics' from the Turkish Journal of Vascular Surgery December 2023** **Moderators: Suat Doğancı, Sriram Narayanan**	
	Not all PeVD is the same! Apple and oranges	Sergio Gianesini (Online)
	Patterns of distribution of pelvic venous disease on cross sectional imaging	Carsten Arnoldussen
	Invasive treatment modalities in pelvic venous disease	Suat Doğancı
	The last frontier in pelvic venous disease/Top/down versus Bottom-up	Marald Wikkeling
	PeVD fertile dysfunction?	Zaza Lazarasvilli
	Edited case/Optimum technique for pelvic venous embolization for pelvic congestion	Sriram Narayanan
11:45 - 12:30	**OM Pharma - Abdi İbrahim Satellite Symposium** **Bridges in chronic venous insufficiency (CVI): New data and calcium dobesilate**	
	CVI and Diabetes, any links and similarities? Identification and treatment of patients with concomitant chronic venous insufficiency and diabetes mellitus via Delphi method	A. Kürşat Bozkurt
	NueVo TR study: Analysis of the prevalence, incidence, and general characteristics of chronic venous insufficiency in health professionals in Türkiye	Tankut Akay
	CVI medical management and the role of calcium dobesilate	A. Kürşat Bozkurt, Tankut Akay
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 14:30	**Phlebology Association Session/Chronic Venous Insufficiency** **Moderators: Adnan Taner Kurdal, Öcal Berkan, Soner Yavaş, Emir Cantürk**	
	Eş zamanlı termokoagülasyon ve skleroterapinin uzun dönem sonuçlar üzerine etkisi	Adem İlkay Diken
	İleri venöz yetersizlikte kompresyon	Aybanu Gökçen
	Estetik fleboloji öncesi hastanın değerlendirilmesi ve doğru planlama	Umut Serhat Sanrı
	Estetik fleboloji komplikasyonları ve çözümleri	Sinem Yiğit Uğur
	Glue Komplikasyonları	Altay Nihat Acar
	Kronik derin ven trombozu hastalarında yüzeyel venöz yetmezliğin tedavi stratejileri	İlker Kiriş
14:30 - 15:15	**Boston Scientific - Satellite Symposium** **A look at the Sports Gear : Then and Now** **Moderator: Tankut Akay**	
	Speakers: Adil Polat, Selim Aydın	
15:15 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Aortic Session** **Moderators: Erol Şener, Ali Gürbüz, , Murat Özeren, Sadi Kaplan**	
	Minimal invaziv aort cerrahisi/Avantajlar/Dezavantajlar	Erdal Şimşek
	Abdominal aort anevrizmalarında retro/transperitoneal yaklaşım	Orhan Veli Doğan
	Abdominal debranching	Caner Arslan
	Arkus debranching	Kemal Erdoğan
	İkincil torakoabdominal aort cerrahisi girişimleri	Hayrettin Levent Mavioğlu
16:30 - 19:30	**Opening Ceremony**	

EPHESUS HALL

08:20 - 09:15	**Cardiovascular Health - Microbiome and Cardiometabolic Balance** **Moderators: Dilek Erer, Mustafa Şırlak, Necmettin Yakut**	
	Bağırsak kalp damar ekseninde iyi, kötü ve bilinmeyen	Meltem Yalınay
	Kardiyovasküler sağlığın destekçileri	Pelin Arıbal Ayral
09:15 - 10:15	**Wound Session** **Moderators: Emre Özker, Şah Topçuoğlu, Abdullah Kemal Tuygun, Nurkay Katrancıoğlu**	
	Neovaskülarizasyonda büyüme faktörlerinin rolü. Elimizde hangi silahlar var?	Bülent Ertuğrul
	Yarada kök hücre uygulamaları- Nasıl yapıyorum?	Alper Erkin
	Diyabetik ayak tedavisinde neden EGF kullanmalıyız?	Emre Özker
	Alt ekstremite ülserlerinin tedavisinde Hiperbarik oksijen tedavisinin yeri?	Şamil Aktaş
	Diyabetik ve ülseri olan hastalarda fizyoterapi	Dilek Yamak
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Carotid Artery Surgery Session** **Moderators: Atıf Akçevin, Suat Nail Ömeroğlu, Hakan Aydın, Ümit Kervan**	
	Karotis eversiyon tekniği - Her hastaya uygun mu?	Sadettin Dernek
	Karotis ve koroner arter hastalığı birlikteliğinde zamanlama	Mete Gürsoy
	Karotis body tümörleri. Hangi tedavi, ne zaman	Şahin Şahinalp
	Vertebral arter cerrahisi. Ne kadar yapıyoruz?	Bülent Mert
	Semptomatik düşük dereceli karotis hastalıklarda ne yapmalı?	Sefer Usta
11:45 - 12:30	**Satellite Symposium** **Desperate situations in limb-threatening ischaemia and gene therapy** **Moderator: Dilek Erer**	
	Speaker: Hiroyoshi Komai	
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 14:30	**Aneurysm Session** **Moderators: Mete Hıdıroğlu, Yüksel Beşir, Cevdet Uğur Koçoğulları**	
	EVAR / TEVAR ölçümleri ve planlama	Serkan Yazman
	EVAR'da zor boyun ve çözümler	Ömer Tanyeli
	Zone 2 TEVAR'da LSA revaskülarizasyon	Deniz Günay
	EVAR sonrası Tip 2 endoleak transkollateral koil embolizasyonu	Eren Karpuzoğlu
	Trombon tekniği	Ertekin Utku Ünal
15:15 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Vascular Access** **Moderators: Mesut Kösem, Tanzer Çalkavur, Gholam Hossein Kazemzadeh**	
	Strategies for prolonging the lifespan of vascular access;Optimal planning and placement	Sanghyun Ahn
	Pathogenesis of renal access related venous aneurysm	Liew Ngoh Chin
	Patient selection and procedures	Niki Tadayon
	How to achieve good one-staged brachiobasilic arteriovenous fistula	Boonying Siribumrungwong
	Complications of vascular access	Mohamad Mozafar
	IN.PACT AV Access trial - 3 year subanalysis data	Abdulkerim Özhan
	DRIL in immediate postoperative hemodialysis access-induced distal ischemia	Boonying Siribumrungwong
16:30 - 19:30	**Opening Ceremony**	

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TROYA HALL

08:20 - 09:15	**Nursing Session -1** **Moderators: Bahadır Aytekin, Hakan Çomaklı, MF Tolga Soyal, Meryem Türkoğlu**	
	Venöz yetersizlik (varis) nedir?	Çağla Çakır
	Venöz yetersizlikte tedavi yöntemleri	Özge Açıkel
	Kompresyon çorapları	Tülay Akın
	Venöz cerrahide ameliyathane hazırlığı	Gökçe Çakır Ünsal
	Venöz ülserasyonlar ve hemşirelik bakımı	Tuğba Oktav Tönbül
09:15 - 10:15	**Nursing Session -2** **Moderators: Hasan Berat Cihan, Emre Demirbenli, Bülent Mert, Suzan Uğur**	
	Ameliyathanede güvenlik kavramı ve kalite göstergeleri	Pınar Demirci Eröztekin
	Damar cerrahisinde hızlandırılmış iyileştirme protokolleri ve hemşirelik bakımı	Sevcan Avcı Işık
	Malzeme, zaman ve personel yönetimi	Miyeser Hızlı
	Aort cerrahisinde hemşirenin rolü	Havva Usal
	KVC'de hibrit/endovasküler yaklaşımlar ve hemşirenin rolü	Büşra Kayar
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Nursing Session - 3** **Moderators: Fehim Can Sevil, Hüseyin Bayram, Ufuk Mungan, Mine Yüksel**	
	Kalp damar cerrahisi hemşiresi olmak	Aysel Acar
	Periferik damar cerrahisinde enfeksiyon önlemleri	Halil Ceyhan
	Karotis endarterektomide society of Vascular Nursing kılavuzluğunda güncel hemşirelik yaklaşımları	Elif Budak Ertürk
	Yoğun bakım hasta takip standardizasyonu	Mine Yüksel
	Yoğun bakıma acil olarak kabul edilen hastalarda yönetim ve takip	Zeynep Çekim
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 14:30	**Nursing Session - 4** **Moderators: Rıfat Özmen, Cemal Düzgün, Hüsniye Sarıyıldız, Sevil Ulu Alkış**	
	EVAR/TEVAR hastalarında hemşirelik bakımı	Dürdane Şenol
	ECMO/İABP olan hastalarda takip yöntemleri	Hacer Toprak Şepçi
	Pulmoner endarterektomi sonrası hemşirelik bakımı	Gülçin Aydın
	Kan ürünlerinin güvenli kullanımı	Abdullah Çalışkan
	Minimal invaziv kalp cerrahisi yapılan hastalarda periferik kanülasyon ve vasküler hemşirelik yönetimi	Burcu İstekli Medine
15:15 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Nurse Presentations - 2** **Moderators: Sefa Şenol, Sefa Sağlam, Canan Karakaya, Seda Güre**	
NP-008	Evaluation of the effectiveness of the safe surgery checklist in patients undergoing thoracic and abdominal endovascular aortic aneurysm repair Aylin Günay, Seren Altınköprü, Dominique Seri, Elshad Mansimzada, Hakkı Tankut Akay, Atila Sezgin	
NP-010	The effect of peripheral pulse monitoring and nursing care against possible complications in patients used with intraaortic balloon pump Ebru Azan, Süheyla Karakaya	
NP-009	Job satisfaction and job stress of nurses working in the field of cardiovascular surgery Gülcan Kendirkıran, Seda Nur Sungur	
NP-011	Our nursing experiences and responsibilities in carotid surgery Ayla Aksoy, Nurcan Aşcı, Ilker Hasan Karal, Emrah Ereren, Hüseyin Ağırbaş,Aşkın Kılıç, Serdar Menekşe, Gökhan Lafçı	
NP-012	The importance of nursing care in preventing complications of brachial artery catheterization. Seda Alabaş, Berfin Tuğrul, Dürdane Şenol	
NP-013	Contribution of Effective Pain Management to the Treatment Process in the Intensive Care Nursing Process in Peripheral Artery Disease (PAD). Süheyla Karakaya, Ebru Azan	
NP-014	Nursing follow-up and care to prevent the development of arterial pseudoaneurysm after vascular interventions Seda Alabaş, Berfin Tuğrul, Dürdane Şenol	
16:30 - 19:30	**Opening Ceremony**	

AFRODISIAS HALL

08:20 - 09:15	**European Vascular Surgeons in Training (ESVT) Session** **Moderators: Emrah Uğuz, Donna Wouters, Burak Koçak** **Members: Arif Okay Karslıoğlu, Burak Koçak, Berat Hasbal, Mehmet Ali Dala, Uğur Postal, Defne Güneş Ergi, Merve Yakupoğlu, Ahmet Ozan Koyuncu, Enis Burak Gül, Alp Yıldırım, Nilgün Yazıksız, Alperen Kutay Yıldırım, Sedat Karaca, Nazenin Durak, Salih Anıl Boğa, Serenay Ersoy, Denizhan Akpınar**	
OP-074	Clinical presentation and management of ruptured pseudoaneurysm: A case study Enis Burak Gül, Alp Yıldırım, Serkan Mola	
OP-03	Comparison of carotico-Subclavian bypass requirement in TEVAR patients at our institution with the literature Mete Kubilay Kasap, Özgür Çoban, Nazenin Durak	
OP-065	Triple application of radiofrequency ablation of great saphenous vein diameter of ≥ 10 mm; 6 months follow-up results Ahmet Ozan Koyuncu, Mehmet Ali Yeşiltaş, Ayşegül Aydin, Görkem Can, Meryem Ertekin, Tolunay Toy, Zeynep Alkas	
OP-021	Negative pressure wound therapy for fasciotomy closure after vascular trauma Sedat Karaca, Zehra Unlu, Islam Yalic, Ece Pala, Ümit Kahraman, Yaprak Engin, Çağatay Engin, Tahir Yağdı	
OP-024	Hybrid approach to thoraco-abdominal aortic aneurysm: A case report Osman Eren Karpuzoğlu, Murat Baştopçu, Berat Hasbal, Ahmet Demir, Kağan Usca	
OP-04	Navigating aortoesophageal fistula treatment post-esophageal stenting: The role of TEVAR in a case analysis Birol Akdoğan, Nilgun Yaziksiz, Bessam Ali, Türkan Tansel	
OP-01	Which way to avoid complications of brachial artery access: Percutaneous or cut-down Serenay Ersoy, İsmet Onur Tanıyan, Ali Fuat Karaçuha, Levent Yazıcıoğlu, Çağdaş Baran, Mehmet Cahit Sarıcaoğlu, Nur Dikmen, Onur Buyukcakir, Salih Anıl Boğa	
OP-010	Comparison of long-term results according to localization of stenosis and occlusion in patients which atherectomy applied due to infrainguinal peripheral arterial disease Onur Emre Satılmış, Ali Aycan Kavala, Saygın Türkyılmaz, Yusuf Kuserli	
OP-072	Is there any residual stenosis after evertion carotid endarterectomy? A retrospective analysis of postoperative carotid anatomy by computed tomography angiography Fevzi Ayyıldız, Emre Pınar, Ömer Faruk Rahman, Mehmet Mehdi Cambaz, Umut Alkan, Ahmet Tanyeri, Canten Tataroglu, Tünay Kurtoğlu	

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09:15 - 10:15	**Nasıl yapalım? - Uzmanına soruyoruz - 1** **Moderators: Münacettin Ceviz, Mehmet Ali Kaygın, Oğuz Karahan**	
	Karotis cerrahisi	Sadık Eryılmaz
	Karotikosubklavian bypass	Ünal Aydın
	Karotis arter yaralanmaları	İyad Fansa
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Nasıl yapalım? - Uzmanına soruyoruz - 2** **Moderators: Cengiz Bolcal, İbrahim Özsöyler, Serkan Durdu, Fuat Bilgen**	
	Distal bypasslar	Anıl Özen
	Juksta/suprarenal aort cerrahisi	Anıl Ziya Apaydın
	Aortobifemoral bypass	Ali Ümit Yener
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 14:30	**Best Abstracts Session** **Moderators: Cemal Levent Birincioğlu, Birol Yamak** **Jury - Ferşat Kolbakır, Serdar Bayrak, Kubilay Karabacak, Abidin Cenk Erdal, Murat Sargın, Nevzat Erdil, Abdullah Kemal Tuygun**	
Best Abstracts -1	Mid-term follow-up results of SMFSG Assisted TEVAR for Zone 2 Thoracic Aortic Pathologies. Hakkı Zafer Iscan, Sinan Ozçelik, Murat GEVREK, Servet Turgut, Baran Karadeniz, Mehmet Ali Unal, Naim Boran Tumer	
Best Abstracts -2	Arterial Stiffness Index Assessment in Patients Diagnosed with Leriche Syndrome Hakan Guven	
Best Abstracts -3	Decoding the transcriptome for the ulcerated plaque discrimination in carotid artery stenosis. Ceyda Çolakoğlu Bergel, Işıl Ezgi Eryılmaz, Atıf Yolgösteren, Ünal Egeli, Can Koşukcu, Başak Erdemli Gürsel, Murat Biçer, Gülşah Çeçener, Mustafa Tok	
Best Abstracts -4	Venous Thromboembolism Risk And Thrombophylaxis Assessment By Integration Of Vte Prevention Algorithm And Vte Risk Evaluation Assessment Tool Into The Hospital Information Management System. Atilla Aral, Cansev Sevencan, Evren Ozcinar, Atilla Halil Elhan, Birgul Yurdakul, Semih Ulupınar, Arda Ömer Çetinkaya, Suleyman Altun, Birsen Aksoy, Sehriban Irmak	
Best Abstracts -5	Morpho volumetric analysis of aneurysm sac and correlation with maximum diameter for Post-EVAR surveillance. Mehmet Ali Turkcu, Ferit Cetinkaya, Gokay Deniz, Mustafa Daglı, Ertekin Utku Unal, Hakkı Zafer Iscan	
Best Abstracts -6	Comparison of Drug-Coated Balloon Angioplasty Alone and Directional Atherectomy Combined with Drug-Coated Balloon Angioplasty in Patients with Lower Extremity Peripheral Arterial Disease with Claudication. Ali Aycan Kavala, Yusuf Kuserli, Gülsüm Türkyılmaz, Mehmet Ali Yeşiltaş, Saygın Türkyılmaz, Utku Çelik	
Best Abstracts -7	An Alternative Approach To The Treatment Of Raynaud's Phenomenon: Cilostazol. Kudret Atakan Tekin	
Best Abstracts -8	Investigation of the Vasculoprotective Effects of Bempedoic Acid Against Senile Aortic Damage and Atherosclerosis on Aged Rats. Cenk Anil Olsen, Ozgur Baris, Zehra Seda Halbutogullari, Selenay Furat Rencber, Gulsen Celebi, Gozde Bugutekin, Semil Selcen Gocmez, Yusufhan Yazir, Muhip Kanko, Tijen Utkan	
Best Abstracts -9	The Factors Affecting Amputation in Patients with Acute Limb Ischemia: Evaluation of Biochemical Markers and Time of Admission. Yusuf Erkal, isa Civelek, Sertan Özyalçın, Emre Boysan, Renda Circi, Ferit Çiçekçioğlu	
Best Abstracts-10	Initial Experiences of Our Clinic Related to Limb Salvage Treatment; Stem Cell Therapy. Özgür Altınbaş, Erhan Hafız, Işık Betil Kutlu, Uğur Şener, Mehmet Adnan Celkan	
15:15 - 15:30	**COFFEE BREAK**	
15:30 - 16:30	**Nasıl yapalım? - Uzmanına soruyoruz - 3** **Moderators: Rüçhan Akar, Levent Yılık, Murat Bülent Rabuş**	
	Torakoabdominal aort anevrizmaları	Ahmet Sarıtaş
	Mezenter iskemi yönetimi	Ozan Onur Balkanay
	Ekstra anatomik bypasslar	Şeref Alp Küçüker
16:30 - 19:30	**Opening Ceremony**	

ZEUGMA HALL

08:20 - 09:15	**Oral Presentations (Turkish) - 1** **Moderators: Rıfat Özmen, Ali Aycan Kavala, Vedat Bakuy**	
OP-025	Which access is safer in EVAR: open or percutaneous? Osman Okan Özocak, Yasin YILMAZ, Gülden Sarı, Rıfat Özmen, Aydin Tunçay	
OP-035	Results of thoracic endovascular aortic repair in >7 cm isolated thoracic aortic aneurysm: early term, single center experience Serkan Ketenciler, Mehmet Ali Yesiltaş, Ilhan Özgöl, Cihan Yücel, Seran Gülbudak	
OP-061	Surveillance of EVAR with USG in a special group of paitents Elshad Mansimzada, Muhammet Kursat Sımsek, Ozgür Özen, Tolga Zeydanlı, Okay Karslioglu, Ecem Tugba Yamaç, Denizhan Akpınar, Hakkı Tankut Akay	
OP-120	Post-TEVAR evaluation of cardiac remodeling by transthoracic echocardiography for thoracic aortic aneurysm Sabir Hasanzade, Ayla Ece Çelikten, Enis Burak Gül, Murat Gevrek, Nur Gizem Elipek, Ferit Kasımzade, Anıl Özen, Hakkı Zafer İşcan	
09:15 - 10:15	**Oral Presentations (Turkish) - 2** **Moderators: Recep Oktay Peker, Banu Lafçı, Gökhan Erol**	
OP-070	Comparison of modified eversion endarterectomy against conventional techniques in carotid endarterectomy surgery Denizhan Akpınar, Arif Okay Karslıoğlu, Elshad Mansimzada, Ecem Tuğba Yamaç, Deniz Sarp Beyazpınar, Hakkı Tankut Akay	
OP-091	The effect of tumor size on postoperative complications in patients undergoing carotid body tumor surgery Barkın Dost Bulut, Dilek Erdinli, İrem Demiray, Aysen Yaprak Engin, Tahir Yagdi, İsmet Tanzer Çalkavur, Cagatay Engin, Ümit Kahraman, Yuksel Atay, Mustafa Ozbaran	
OP-101	Carotid endarterectomy compared with carotid artery stenting for extracranial carotid artery stenosis: A retrospective single-centre study Oğuzhan Birdal, Eyüp Serhat Çalık, Ümit Arslan, Yavuzer Koza, Ugur Kaya, Abdurrahim Colak, Muhammet Hakan Taş	
OP-023	Pinch-off syndrome, a rare and serious complication of subcutaneous port catheters: A case series Nadide Örs Yıldırım, Alperen Kutay Yıldırım	
Attendance was not achieved	Emergent surgical revascularization for acute critical limb ischemia due to popliteal artery aneurysm: Does limb salvage possible in rutherford class III patients? Serkan Yazman, Burak Can Depboylu, Kadir Arslan, Ramina Javed, Bugra Harmandar	
10:15 - 10:45	**COFFEE BREAK**	

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10:45 - 11:45	**Oral Presentations (Turkish) - 3** **Moderators: Alper Sami Kunt, Habib Çakır, Özer Kandemir**
OP-093	Surgical Treatment of Aortoenteric Fistula İrem Demiray, Arda Sezen, Aysen Yaprak Engin, Ümit Kahraman, Osman Nuri Tuncer, Serkan Ertugay, Emrah Oğuz, Anil Ziya Apaydin, Hakan Posacıoğlu, Yuksel Atay, Mustafa Ozbaran
OP-082	Comparison Between Polytetrafluoroethylene (PTFE) and Propylene Suture Materials In Expanded Polytetrafluoroethylene (ePTFE) Grafts Hakkı Tankut Akay, Okay Karslioglu, Deniz Sarp Beyazpınar, Denizhan Akpınar, Ecem Tuğba Yamaç, Elshad Mansimzada, Zoukou Mariefrancedominique Seri, Endri Balla, Bahadir Gultekin, Atilla Sezgin
OP-062	22 Years of Carotis Endarterectomy Experience Without Insciation of Internal Carotis Artery: No Shunt No Patch Technique Necmeddin Yakut, Tevfik Güneş, Engin Tulukoğlu, Harun Evrengül, Abdürrezzak Börekçi, Ali Gürbüz
OP-099	Popliteal aneurysms: a posterior surgical technique and single center outcomes Cigdem Tel Ustunisik, Ergida Albrahimi, Berk Arapi, Ozan Onur Balkanay, Suat Nail Omeroglu
12:30 - 13:30	**LUNCH BREAK**
13:30 - 14:30	**Oral Presentations (Turkish) - 4** **Moderators: Burçin Abud, Alpaslan Telli, Suat Karaca**
OP-060	Funnel technique for wide necks: Mid-term results Bahadır Aytekın, Naim Boran Tumer, Servet Turgut, Sinan Özçelik, Murat Gevrek, Enis Burak Gül, Baran Karadeniz, Huseyin Bayram, Hakkı Zafer Iscan
OP-092	In-situ fenestration TEVAR treatment for supra-aortic branch involving thoracic aorta pathologies. Salih Anil Boga, Evren Ozcinar, Levent Yazicioglu, Emre Can Celebioglu, Sadık Bilgic, Nur Dikmen, Mehmet Cahit Saricaoglu, Cagdas Baran, Mustafa Bahadir Inan, Mustafa Şırlak, Serenay Ersoy, Onur Buyukcakir
OP-097	Critical analysis of the outcomes of patients needed reintervention after open surgery or endovascular treatment for abdominal aorta aneurysm. Yusuf Çorbacıoğlu, Mehmet Cahit Sarıcaoğlu, Nur Dikmen, Evren Ozcinar, Levent Yazıcıoğlu
OP-066	Current management options and outcomes of acute limb ischemia in pediatric population: Prompt surgery or conservative treatment to achieve limb salvage? Nur Dikmen, Evren Ozcinar
OP-049	Effect of Caffeic Acid Phenethyl Ester (CAPE) in Doxorubicin İnduced Descending Aorta Damage. Olcay Murat Disli, Nevzat Erdil, Barış Akça, Onural Ozhan, Merve Durhan, Azibe Yıldız, Yilmaz Çiğremiş
15:15 - 15:30	**COFFEE BREAK**
15:30 - 16:30	**Oral Presentations (Turkish) - 5** **Moderators: Adnan Yalçınkaya, Davut Azboy, Kadir Kaan Özsin**
OP-098	Result of venous stent and balloon in deep venous thrombosis patients Murat Eroğlu, Yeşim Güner, Ibrahim Fevzi Özdomaniç, Abdulkerim Özhan, Engin Akgül, Ali Ihsan Parlar, Ahmet Çekirdekçi
OP-084	Our Long-Term Results in Patients Who Had Pharmacomechanical Thrombectomy Due to Acute Iliofemoral Deep Vein Thrombosis Saygın Türkyılmaz, Ali Aycan Kavala, Gülsüm Türkyılmaz, Utku Çelik
OP-090	The successful complete radiofrequency ablation of saphenous vein insufficiency in 4438 patients, Ege University experience of 13 years Aysen Yaprak Engin, Deniz Can Başaran, Ümit Kahraman, Emrah Oğuz, Karya Islamoglu, Fatih Islamooğlu
OP-063	The balance of thiol disulfide in venous insufficiency Enis Burak Gül, Bahadır Aytekin, Gokay Deniz
OP-086	Comparison of Paclitaxel-Coated Balloon Angioplasty with Femoropopliteal Bypass Surgery in Treating Femoropopliteal Lesions Ali Aycan Kavala, yusuf kuserli, Saygın Türkyılmaz, Selim Tümkaya, Zakir İbrahim Kılınç
16:30 - 19:30	**Opening Ceremony**

GÖBEKLİTEPE HALL

13:30 - 14:45	**Industry Sponsored Workshop ELVeS® Radial® Laser-ablation "Can one type fit all veins?"** **Instructor: Suat Doğancı**
15:30 - 16:30	**HEALTH 247 Workshop** **Instructor: Ahmet Barış Durukan**
16:30 - 19:30	**Opening Ceremony**

HALL 1 (OP ENGLISH)

08:20 - 09:15	**Oral Presentations (English) - 6** **Moderators: Sadettin Dernek, Sefer Usta**
OP-030	Preoperative and postopertive vascular characteristics changes on ultrasound in patients undergoing arteriovenous fistula surgery Anh Tuan Vo
Attendance was not achieved	Vascular access complications following transfemoral transcatheter valve implantation (TAVI) with suture-mediated closure system Adele Hwee Hong Lee, Sara Qi, Jason Chuen
09:15 - 10:15	**Oral Presentations (English) - 7** **Moderators: Gökhan İpek, Cevdet Uğur Koçoğulları**
Attendance was not achieved	Effects of abdominal aortic aneurysm on long-term survival in lung cancer patients Hyangkyoung Kim, Tae Won Kwon
OP-103	Comparable amputation free survival by endovascular surgery in TASC D femoropopliteal critical limb ischemia Skyi Yin Chun Pang, Rosanna Yin Ting Chow, Tiffany Ho Yi Chan Ronald On Ho Tse, Stephen WingKeung Cheng
Attendance was not achieved	Intravascular lithotripsy and DCB as an option in treatment of calcified common femoral artery lesions - our experience Davor Mrda, Jovana Lalatović
Attendance was not achieved	Preoperative artery and vein size to predict radio-cephalic arteriovenous fistula maturation in indonesian population Ivan Joalsen Mangara Tua, Gita Permatasari
OP-104	The rationale of using stent graft to treat new "Stent Graft-Vein Junction" stenosis for dysfunctional arteriovenous graft: a retrospective comparison study in a single center in Taiwan Mingli Levin Li, Yun Ting Lee, Yu Ling Hsu, Ching Feng Wu, Yi Chun Lin, Chih Hsiang Hsu, Chih Chung Ting, You Cian Lin
OP-105	Effectiveness of scoring balloon angioplasty versus high pressure balloon angioplasty ın native haemodialysis access stenoses: A randomized controlled trial Firdaus Raduan, Jazree Jamaluddi, Rafizi Hariz Ramli, Eric Chung, Ng Wei Lin, Chan Kin Wong, Ramzi Yusuff, Zeti Rahayu Karim

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10:15 - 10:45	**COFFEE BREAK**
10:45 - 11:45	Oral Presentations (English) - 8 Moderators: Ümit Arslan, Murat Özeren
OP-01	The association between D-dimer level after EVAR and aneurysm expansion in patients with persistent type 2 endoleak Masayuki Sugimoto, Changi Li, Shuta Ikeda, Yohei Kawai, Kiyoaki Niimi, Hiroshi Banno
OP-081	Characteristic of hemodynamics in the area of proximal and distal anastomoses in various types of femoral-popliteal shunting Aslan Zakeryaev, Амирлан Созаев, Герей Хангереев, Tarlan Bakhishev, Viktoriya Derbilova, Sultan Butaev, Aleksandr Baryshev, Roman Vinogradov, Vladimir Porkhanov
OP-08	Venous ulcer,any progress in treatment Mussaad Mohmmed Alsalman
OP-102	Identification and treatment of patients with concomitant chronic venous insufficiency and diabetes mellitus: a management algorithm using a modified Delphi method A. Kürşat Bozkurt, Marie Josee Van Rijn, Eliete Bouskela, Giacomo Gastaldi, Frederic Glauser, Hermann Haller, Juan Rosas Saucedo, Eberhard Rabe, Armando Mansilha
OP-013	Early results of cyanoacrylate closure for incompetent saphenous veins Xiaoning Tong
12:30 - 13:30	**COFFEE BREAK**
13:30 - 14:30	**Oral Presentations (English) - 9** **Moderators: Mustafa Bahadır İnan, Erdal Şimşek**
OP-106	Endovascular Treatment versus Hybrid Repair for Iliofemoral Occlusive Disease: a Prospective Randomized Trial Shoraan Saaya, Olesia Osipova, Alexey Cheban, Pavel Ignatenko, Starodubtsev Vladimir, Andrey Karpenko
OP-107	Treatment of pulsating hematomas and false aneurysms peripheral arteries of the upper and lower extremities Yulia Alexandrovna Vinogradova, Leonid Sergeyevich Kokov, Igor Petrovich Mikhailov
Attendance was not achieved	Clinical case of Iatrogenic damage of the right renal artery during complex stenting of lower extremity arteries. Alexey Pankov, Arman Davtyan, Viktor Barinov, Evgeniy Molokhoev, Evgeniy Barinov, Vardan Kirakosyan, Maxim Chernyavin, Igor Shrainer, Vladimir Ishmetov, Svetlana Salnikova, Anna Fedorova, Elena Knyazeva
15:15 - 15:30	**COFFEE BREAK**
15:30 - 16:30	**Oral Presentations (English) - 10** **Moderators: Suat Nail Ömeroğlu, Abdullah Özer**
OP-083	Staged Strategy of Zone Zero TEVAR in Treating Acute Aortic Dissection Non-A Non-B Type with Collapsed True Lumen A Case Report Ryan Prasdinar, Danang Himawan Limanto
Attendance was not achieved	Outcomes of prophylactic fasciotomy in patients with non-traumatic acute limb ischemia. Poon Apichartpiyakul
Attendance was not achieved	Is 90 the new 80? A comparison of outcomes of carotid endarterectomy from the Australian Vascular Audit. Adele Hwee Hong Lee, Mark Westcott, Domenic Robinson, Leonard Shan
OP-026	Extended Compression Decreases Hyperpigmentation Rate after Sclerotherapy in Patients with Spider Veins and Telangiectasias Askhat Sanbaev, Oksana Efremova, Rustyam Chabbarov, Alexander Pyatnitsky, Igor Zolotukhin
16:30 - 19:30	**Opening Ceremony**
HALL 2 (OP ENGLISH)	
08:20 - 09:15	**Oral Presentations (English) - 11** **Moderators: Çağatay Engin, Şahin Bozok**
OP-040	Hybrid approach to the treatment patients with acute ischemic stroke and tandem occlusion in anterior circulation Bulat I Zagidullin, Ramis A. Yakubov, Yulia S. Mukhamadieva, Marat F Mukhamadeev, Roman A. Dzhumabaev, Radik R. Khafizov, Dmitriy A. Ladykov, Artur I Khayrutdinov, Yuriy N. Markov, Evgeniy S. Dumanyan, Ilias R. Lakubov, Mikhail Yu Volodiukhin
OP-071	Type of arteriovenous fistula only predictive factor for development of cephalic arch stenosis: a retrospective study Sarah Jia Ern Chew, Joseph Tneoh, Limi Lee, Joshua Wibowo, Ming Yii
OP-073	Pseudoaneurysm temporary embolization: a new method for the management of catheter-related complication Temirlan Gamzatov, Aleksei Kebriakov, Alexei Svetlikov
09:15 - 10:15	**Oral Presentations (English) (45-49)** **Moderators: Yüksel Beşir, Ertekin Utku Ünal**
OP-108	Management strategies for visceral artery aneurysms from a Japanese single-center experience Hideaki Obara, Hideyuki Hayashi, Kentaro Matsubara, Masanori Hayashi, Masanori Inoue, Yuko Kitagawa
OP-109	Outcomes of surgical treatment for critical ischemia of lower limb at VietDuc university hospital Duong Ngoc Thang, Huu Uoc NGUYEN, DOAN Quoc Hung, Nguyen Quoc Hung
OP-110	Endovascular Interventions in a day care unit Muhammad Faisal Shaikh, Laszlo Papp
Attendance was not achieved	Maturation of Radio-cephalic Arteriovenous Fistula in elderly at Samarinda, Indonesia Ivan Joalsen Mangara Tua, Gita Permatasari
OP-111	Peripheral vascular injuries in children - experiences at Viet Duc university hospital Duong Ngoc Thang, Nguyen Huu Uoc, DOAN Quoc Hung
10:15 - 10:45	**COFFEE BREAK**
10:45 - 11:45	**Oral Presentations (English) - 12** **Moderator: Niyazi Görmüş**
OP-028	AAA Open Repair for Over 80 ages; A Retrospective single-center analysis Takanori Nishimura, Shintarou Ninomiya, Takafumi Akai, Takatoshi Furuya, Motoki Nagai
OP-029	Review of lower extremity peripheral arterial trauma in Northern Singapore Ken Chua, Julia Poh Hwee Ng, Chuo Ren Leong, Dexter Yak Seng Chan
OP-69	Spinal cord infarction in patients supported with Veno-arterial ExtraCorporeal membrane oxygenation: A Systematic Review Charis Tan, Alison Zhu, Yishay Orr
OP-075	Emergency TEAR in Blunt Thoracic Aortic Injury (BTAI): A SingleCentre's 7-yearExperience Firdaus Raduan, Jazree Jamaluddin, Zhafri Zulkifli, Afiq Amin, Sivakumar Krishnasamy, Ahmad Rafizi Hariz, Nora Julianna Osman, Suraya Othman

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12:30 - 13:30	**COFFEE BREAK**
13:30 - 14:30	**Oral Presentations (English) - 13** **Moderators: Şah Topçuoğlu, Murat Kadan**
OP-031	Enhancing surgical skills and confidence: the ımpact of an open thoracoabdominal cadaveric workshop in taiwan Chung Dann Kan, Wei Ling Chen
OP-076	First comparative results of long-term survival after elective surgery for infrarenal abdominal aortic aneurysm in Russia and Tajikistan Egan Kalmykov, Igor Suchkov, Nina Mzhavanadze, Okildzhon Nematzoda, Alidzhon Gaibov, Dzhavli Sultanov, Roman Kalinin
OP-077	Clinical experience with heparin-bonded expanded polytetrafluoroethylene graft for below-the-knee bypass in the era of endovascular surgery Yohei Yamamoto, Kazuki Tsukuda, Ai Kazama, Yoshiki Wada, Toru Kikuchi, Hiroki Uchiyama, Toshifumi Kudo
OP-018	The technical improvement of the Venaseal Closure for primary varicose vein Tomohiro Ogawa
OP-019	Markers of vein-specific inflammation in patients with varicose veins after endovenous saphenous vein ablation and pharmacotherapy Igor Suchkov, Roman Kalinin, Aleksey Kamaev, Nina Mzhavanadze
15:15 - 15:30	**COFFEE BREAK**
15:30 - 16:30	**Oral Presentations (English) - 14** **Moderators: Onursal Buğra, Volkan Yüksel**
Attendance was not achieved	First experience of endovascular treatment of aneurysm aorta rupture (rAA) and acute aortic dissection. Petr M. Lepilin, Madina R Kabardieva, Alexej E Komlev, Ivan V Kuchin, Dmitrij V Salichkin, Alexandr S Kolegaev, Merab A Shariya, Igor S Fedotenkov, Timur E Imaev, Renat S Akchurin
OP-09	Color duplex arteriography as first line imagine modality for decision making in diabetic lower limb arterial insufficiency-KKUH experience. Mussaad Mohmmed Alsalman
Attendance was not achieved	Vein diameter is not a predictor for recanalisation in treatment with radiofrequency ablation. Adele Hwee Hong Lee, Sara Qi, Jason Chuen
16:30 - 19:30	**Opening Ceremony**

02 DECEMBER 2023, SATURDAY

ASPENDOS HALL

08:30 - 09:45	**Aneursym Session** **Moderators: Kamuran Musayev, Bahram Mohebbi**	
	Blunt thoracic aortic injury - How I do it?	Kritaya Kritayakirana
	Abdominal aortic aneurysm with Associated Illness (AAA with AI)	Supatcha Prasertcharoensook
	Type a dissections? Is replacing ascending aorta enough?	Şeref Alp Küçüker
	Comparative treatment outcomes of infected abdominal aortic aneurysm between open and endovascular aneurysm repair	Khamin Chinsakchai
	Arguments to centralize training and performance of complex open aortic surgery	Michael Jacobs
	Discussion	
09:45 - 10:15	**BD - Satellite Symposium** **Think veneous: Covering whole spectrum of veneous disorders with BD** **Moderators: Houman Jalaie** **Speakers: Suat Doğancı, Mert Dumantepe**	
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Peripheral Arterial Disease Session** **Moderators: Tarun Grover, Nevzat Erdil, Alireza Kalantar Motamed, Emrah Uğuz**	
	Pedal bypass with deep venous arterialization for chronic limb threatened ischemia and non-reconstructable distal artery	Pramook Mutirangura
	How can we use artificial intelligence enhance in the diagnosis and treatment of vascular diseases?	Adil Polat
	Limb Salvage for Upper Extremity	Thomas Hoelzenbein
	The clinical impact of intravascular imaging (IVUS, OCT) for revascularization in CLTI patients	Saritphat Orrapin
	Treatment options for aortoiliac occusions (AIOD)	Loannis Passaloglou
11:45 - 12:30	**Pfizer - Satellite Symposium** **Current Information on Venous Thromboembolism** **Tankut Akay, Suat Doğancı**	
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**Peripheral Artery Session** **Moderators: Seung-Kee Min, Murat Sargın, Musaad El Salman, Hosein Hemmati**	
	Femoro-Femoral Crossover Bypass- indications and implications	Sandeep Raj Pandey
	Open Limb Salvage Techniques –upper extremity- state of art	Thomas Hoelzenbein
	Current management of Thromboangiitis Obliterans (TAO) in the Endovascular Era	Kamphol Laohapensang
	IVUS – Clinical implications and how to use it ?	Tarun Grover
	How to defeine which is the best treatment fot endograft infection - Conservative, drainage or graft removal	Clark Zeagbrets
	Atherectomy and drug technology for femoropopliteal lesion	Jin Hyun Joh
	Vascular Emergencies	Alexey Svetlikov
	When there is really no option in CLI	Hiroyoshi Komai
15:00 - 15:30	**COFFEE BREAK**	
15:30 - 16:15	**Advanced Treatment Techniques in Arterial and Venous Disorders (Supported by RD Global/Invamed)** **Moderators:A. Kürşat Bozkurt, Hüseyin Şaşkın, İbrahim Kara**	
	New Frontiers in Cardiovascular Surgery	A.Kürşat Bozkurt
	Endovascular approach in thoracoabdominal aneurysms and dissections	Özcan Gür
	The Importance of Catheters Used in Peripheral Arterial Treatments	Ahmet Okyay
	Endovascular iliac aproach	Ahmet Aksoy
	Endovascular SFA Treatments	Mustafa Etli
	Endovascular Below-Knee Treatments	Haluk Çağlar Karakaya
16:15 - 17:45	**Controversial Issues in Vascular Surgery** **Moderators:Serap Aykut Aka, Süha Küçükaksu, Erkan İriz, Muhammet Onur Hanedan**	
	Çok özel bir ameliyat grubu: Karaciğer nakli ve damar cerrahının yeri	Atilla Sezgin
	Aortoiliyak tıkayıcı hastalıklar cerrahi zamanlama	İsmail Yürekli
	Ekstra anatomik bypassların geleceği	Murat Yücel
	Kalp damar cerrahı bakış açısıyla vaskülitler	Emre Külahçıoğlu
	Distal bypassların uzun dönem sonuçları	Mustafa Hakan Zor

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CAPPADOCIA HALL

08:30 - 09:45	**Asian Venous Forum Session** **Moderators: Sriram Narayanan, Dong Ik Kim, Halit Yerebakan, Jalaludin Khoshnevis**	
	Operative management of lymphoedema	Deniz Çevirme
	Conservative treatment of lymphoedema and lipedema	Pınar Borman
	Venous malformation -Surgical treatment	Dong Ik Kim
	Treatment of marginal vein in Klippel Trenaunay syndrome	Nuttawut Sermsathanasawadi
	Complications of aesthetic sclerotherapy	Macid Moini
	CLACS - Early Turkish experience	A. Kürşat Bozkurt
	How to approach to venous malformations	Ravul Jindal
09:45 - 10:15	**Medtronic - Satellite Symposium** **New Balloon in Town: Sweet Solution with Chocolate Special Balloon** **Speaker: Selim Aydın**	
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Servier Session** **Chronic Venous Disease: Patient burden to clinical management** **Moderators: A. Kürşat Bozkurt, Mustafa Şırlak**	
	Prevalence & cardiovascular progression of CVD patients	Tankut Akay
	Diagnostic tools in early stages of CVD and its impact	Igor Zolotukhin
	Medical treatment of varicose veins - Indian approach	Ravul Jindal
	Current management of CVD	Sriram Narayanan
11:45 - 12:30	**RD Global/Invamed - Satellite Symposium (Vein)** **Moderators: A. Kürşat Bozkurt, Cengiz Köksal**	
	Embolizing Coils and Plugs for the Treatment of Pelvic Congestion and Varicocele	Selami Gürkan
	Current Approaches in the Treatment of Deep Vein Thrombosis	Hakan Parlar
	Glue and RF Ablation in venous insufficiency	Orçun Ünal
	Endovenous RF Ablation	Deniz Kaya
	Endovenous Chemical Ablation	Elmas Üreyen
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**Asian Venous Forum Session & Turkish Society of Phlebology Session - Compression and Deep venous disease** **Moderators: Jinsong Wang, Ravul Jindal, Nuttawut Sermsathanasawadi, Adnan Taner Kurdal**	
	Compression therapy in DVT	Ali Aycan Kavala
	Prevalence and predictors of combined >50% iliocaval venous obstruction and superficial venous reflux in chronic venous insufficiency patients with healed or active venous leg ulcer	Nuttawut Sermsathanasawadi
	Role of venoactive medications in patients with swollen legs and venous leg ulceration	Dilek Erer
	Theoretical improvements for venous stenting	Cees Wittens
	Defining patient groups who should not undergo venous stenting	Houman Jalaie
	Edited Case - Technical approach to venous stenting in PTS patient - From patient selection to post-procedure care	Wutthichai Sangprakai
	Edited case - Complex deep venous reintervention	Majid Moini
	Pathogenesis of venous ulceration	NC Liew
	Epidermal Growth Factor in Venous Ulcers	Shoaib Padaria
15:00 - 15:30	**COFFEE BREAK**	
15:30 - 16:15	**Angiodroid - Endomed - Scitech Satellite Symposium** **INNOVATIONS IN ENDOVASCULAR FIELD** **Moderator: Niyazi Görmüş**	
	Towards Zero Contrast Angiography with CO2 at Endovascular Era	Ertekin Utku Ünal
	Perugia experience with new generation Solaris Self Expandable Covered Stent	Gianbattista Parlani
16:15 - 17:45	**Asian Venous Forum & Turkish Society of Phlebology Session** **Venous thromboembolism and postthrombotic** **Moderators: Shenming Wang, Ufuk Demirkılıç, Alptekin Yasim, Niki Tadayon**	
	Risk assessment and thromboprophylaxis after superficial venous interventions	Lowell Kabnick
	Implement guideline of VTE prophylaxis in real practice	Nutsiri Kittitirapong
	What is the best options in acute DVT	Erdal Aslım
	Current treatment of superficial vein thrombosis	Yaser Jenab
	Conservative versus interventional treatment of PTS - a randomized trial	Houman Jalaie
	Tips and tricks for thrombolysis in acute DVT	Jinsong Wang
	5 years follow-up after endovenous glue ablation	Fatih İslamoğlu

EPHESUS HALL

08:30 - 09:45	**Peripheral Artery Diseases Session** **Moderators: Cengiz Türkay, Orhan Gökalp, Bilgin Emrecan, Cüneyd Öztürk**	
	Periferik arter hastalıklarında ideal medikal tedavi	Burak Erdolu
	Aortoiliyak tıkayıcı hastalıkda endovasküler yaklaşım ilk seçenek mi?	Evren Özçınar
	Aterektomi - Endikasyonlar, komplikasyonlar - Leriche sendromunda retrograd popliteal girişimle aterektomi	Ömer Tanyeli
	İliofemoropopliteal hastalıkta total oklüzyonlarda tedavi seçenekleri	Ali Baran Budak
	Pediatrik damar yaralanmaları	Olcay Murat Dişli
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Iranian Society of Vascular Surgeons & Turkish Society of Vascular and Endovascular Surgery joint Session** **Moderators: Mohammad Reza Zafarghandi, Serdar Bayrak, Mohamad Mozafar**	
	Single access technique for aorto-iliac occlusion: How I do it?	Majid Moini
	Angioplasty effect on systolic toe pressure in patients with chronic lower limb ischemia	Pejman Farshidmehr
	Fenestratred and branched endografts for thoracoabdominal aneurysms: Strategies and long term failures	Stephen Cheng
	Transcervical or transaxillary approach for thoracic outlet syndrome,which one you prefer	Hasan Ravari
	Hyperbaric oxygen treatment for diabetic foot ulcers	Shloaib Padaria

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12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**Challenging Aspects in Interventional Procedures** **Moderators: Ufuk Alpagut, Şenol Yavuz, Kıvanç Metin, Esat Akıncı**	
	TEVAR'da Spinal İskemi	Muhammed Bayram
	Anevrizmanın endovasküler tedavisinde zorlu olgular	İlker İnce
	Rüptüre AAA'da kötü prognoz belirteçleri	Emrah Oğuz
	Abdominal Kompartman Sendromunda Tanı ve Tedavi Stratejileri	Eren Günertem
	Enfekte Endogreftler	Emre Kubat
	Rüptüre AAA'da EVAR	İbrahim Duvan
15:00 - 15:30	**COFFEE BREAK**	
16:15 - 17:45	**Round Table Meeting - Vascular Access** **Moderators: Murat Özkan, Soner Sanioğlu, Ali Sarıgül**	
	Preoperatif değerlendirme	Selim Durmaz
	Yüksek debili fistül ve fistül anevrizmalarının yönetimi	Ferit Kasımzade
	Fistül greftleri	Ufuk Sayar
	Hemodiyaliz hastalarında fistül kurtarma prosedürleri	Canan Karakaya
	Fistül komplikasyonları ve tedavisi	Zerrin Pulathan
	Kalıcı kateterler - Zamanlama ve yöntem	Yüksel Dereli
TROYA HALL		
08:30 - 09:45	**NURSE WOUND CARE COURSE - 1** **Moderators: Mehmet Ceber, Özgür Ersoy, Emre Külahçıoğlu, Dürdane Şenol**	
	Kronik yara tanımı ve yara iyileşme mekanizmaları	Hasan Murat Arslan
	Yara bakım ilkeleri	Şamil Aktaş
	Pasif kapama ürünleri.	Hasan Murat Arslan
	Aktif kapama ürünleri.	Alper Erkin
09:45 - 10:15	**Nurse Workshop** **How and Why is Bandaging Done?** **Moderators: Emre ÖZKER**	
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**NURSE WOUND CARE COURSE - 2** **Moderators: Deniz Şerefli, Mehmet Özülkü, Sevim Ergün**	
	Alt ekstremite ülserlerine yaklaşım ve tedavi prensipleri	Alper Erkin
	Diyabetik ayakta tedavi prensipleri	Emre Özker
	Basınç yaralanması mekanizması ve tedavisi	Lale Ünsal
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**NURSE WOUND CARE COURSE - 3** **Moderators: Altay Nihat Acar, Sarper Türker, Kıymet Kaplan Yücel**	
	Yara bakımında doğanın eczanesinden bir tedavi LARVA	Emre Özker
	Hiperbarik oksijen tedavisi-Ne zaman? Ne kadar?	Şamil Aktaş
	Negatif basınçlı yara tedavisinin (VAK) püf noktaları?	Tünay Kurtoğlu
	Yara tedavisinde yeni tedaviler-ülkemizde neler var?	Hasan Murat Arslan

15:00 - 15:30	**COFFEE BREAK**	
16:15 - 17:45	**Cardiovascular Health** **Moderators: Dilek Erer, Şadan Yavuz, Oğuz Omay, Funda Yıldırım**	
	Tedavide dönüştürülemeyen sihirli parça: Yaşam tarzı değişikliği ne kadar etkili?	Zeynep Tartan
	Menopozal, hormon replasman tedavisi ve kardiyovasküler risk	Mustafa Atasoy
	Kardiyovasküler sistemde etkili fitoterapötikler	Gülçin Saltan İşcan
	Venöz sistem hastalıklarında etkili güncel fitoterapötikler	Nur Dikmen
AFRODISIAS HALL		
08:30 - 09:45	**Nasıl yapalım? - Uzmanına soruyoruz - 4** **Moderators: Haydar Yaşa, Nejat Sarıosmanoğlu, Habib Çakır, Ufuk Mungan**	
	Stripping	İlknur Günaydın
	Termal ablasyon	Deniz Sarp Beyazpınar
	Nontermal ablasyon	Mehmet Kirişçi
	Perforan cerrahisi	Sefa Sağlam
	Skleroterapi	Aslıhan Küçüker
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Nasıl yapalım? - Uzmanına soruyoruz - 5** **Damar Yaralanmaları Oturumu** **Moderators: Şevket Baran Uğurlu, Orhan Veli Doğan, Gökhan Gökaslan**	
	Boyun yaralanmaları	Gökhan Arslan
	Toraks yaralanmaları	Göktan Aşkın
	Abdominal yaralanmalar	Gökhan Erol
	Ekstremite yaralanmaları	Çetin Murat Songur
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**Nasıl yapalım? - Uzmanına soruyoruz - 6** **Moderators: Mehmet Cengiz Çolak, Kemal Uzun, Vedat Bakuy, Onur Sokullu**	
	Endovasküler tedavi temelleri - Hangi hastaya hangi malzeme	Adil Polat
	EVAR/TEVAR	Mustafa Seren
	Endoleak yönetimi	Kaptanıderya Tayfur
	Endovasküler girişimler - Aterektomi	Selim Aydın
15:00 - 15:30	**COFFEE BREAK**	
16:15 - 17:45	**European Vascular Surgeons in Training (ESVT) Session** **Moderators: Emrah Uğuz, Peter Zlatanovic, Mert Meriç**	
	Arif Okay Karslıoğlu, Burak Koçak, Berat Hasbal, Mehmet Ali Dala, Uğur Postal,>Defne Güneş Ergi, Merve Yakupoğlu, Ahmet Ozan Koyuncu, Enis Burak Gül, Alp Yıldırım, Nilgün Yazıksız, Alperen Kutay Yıldırım, Sedat Karaca, Nazenin Durak, Salih Anıl Boğa, Serenay Ersoy, Denizhan Akpınar	

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ZEUGMA HALL		
08:30 - 09:45	**Oral Presentations (Turkish) - 15** **Moderators: İlhan Gölbaşı, Saygın Türkyılmaz, Hasan İner**	
OP-058	COVID-19 vaccines and arteriovenous fistula failure	Fatih Avni Bayraktar, Betül Nur Keser, Abdulkerim Özhan, Cemal Kocaaslan, Mehmet Senel Bademci, Ahmet Oztekin, Sabahat Alisir Ecder, Ebuzer Aydin
OP-037	Short-term results of iatrogenic injuries to the abdominal surgeries	Mehmet Ali Yesiltaş, Yaşar Gökkurt, Melek Yılmaz, Merve Yakupoğlu
OP-039	Comparison of long-term results of patency rates of saphenous vein graft and ring graft used in subclavian artery injuries resulting from penetrating trauma	Hasan Toz
OP-085	Clinical Outcomes of Blunt Aortic Trauma in Traumatic Patients	Ali Aycan Kavala, Saygın Türkyılmaz, Selim Tümkaya, Zakir İbrahim Kılınç
OP-05	Comparison of cyanoacrylate embolization and radiofrequency ablation in the treatment of perforating veins	Oguz Arslanturk, Fatıh Gumus
OP-064	Mid-term results of combined medical and popliteal artery endarterectomy treatment in Buerger's disease	Ümit Kahraman, Sedat Karaca, Karya Islamoglu, Aysen Yaprak Engin, Fatıh Islamoglu
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Oral Presentations (Turkish) - 16** **Moderators: Serkan Burç Deşer, Tuğra Gençpınar, Hasan İlker Karal**	
OP-080	Comparison of preoperative and postoperative pain, depression and quality of life in patients with venous insufficiency treated with the classical stripping method and the EVLA method	Alper Selim Kocaoglu, İbrahim Çağrı Kaya
OP-095	A marphan syndrome nightmare. Multiple EVAR, TEVAR, debranching and renal ototransplantation	Hidayet Demir, Mehmet Altuğ Tuncer
OP-014	Aortic remodeling after elective endovascular aortic repair (EVAR)	Ferit Cetinkaya, Gokay Deniz, Mehmet Ali Turkcu, Zafer Iscan
OP-079	Surgical and endovascular management of coarctation of aorta: comparative results	Nur Dikmen, Evren Özçınar, Zeynep Eyileten, Levent Yazıcıoğlu
OP-088	Results of limb-sparing surgery with multidisciplinary approach in soft tissue sarcomas	Ümit Kahraman, Osman Nuri Tuncer, Hüseyin Kaya
12:30 - 13:30	**LUNCH BREAK**	
13:30 - 15:00	**Oral Presentations (Turkish) - 17** **Moderators: Şevket Baran Uğurlu, Orhan Veli Doğan, Kaan Kaya**	
OP-096	The predictive value of whole blood viscosity for the development of cerebrovascular events after carotid endarterectomy	Adem Reyhancan, Mürsel Büyükadalı, Gizem Gür, Salih Tüysüz, Orkut Güçlü, Serhat Huseyin, Suat Canbaz
OP-112	Aortic remodeling after elective Endovascular Aortic Repair (EVAR)	Ferit Cetinkaya, Gokay Deniz, Mehmet Ali Turkcu, Zafer Iscan
OP-015	Youtube as information source in A-V fistula surgery	Alp Yıldırım, Muhammet Sefa Sağlam, Serkan Mola, Ali Baran Budak
OP-038	Surgical Management of The Intra-abdominal Compression Syndromes	Volkan Burak Taban, Serkan Yildirim, Abdullah Güner, Özgür Altınbaş, Yüksel Dereli
OP-053	Pelvic congestion syndrome treatment with bilateral ovarian vein coil embolization: 6-month follow-up results	Serkan Ketenciler, Mehmet Ali Yeşiltaş, Ilhan Özgöl, Sedat Yıldız
OP-033	Evaluating intracerebral hemodynamics with ophthalmic artery pulse wave doppler in carotid artery stenosis	Hakan Guven, Temmuz Taner
15:00 - 15:30	**COFFEE BREAK**	
16:15 - 17:45	**CTEPH (Turkish)** **Moderators: Rıza Doğan, Ümit Kervan**	
	CTEPH - Diagnosis and prognosis	İpek Kıvılcım Oğuzülgen
	CTEPH - Radiologic findings	Koray Hekimoglu
	CTEPH - Medical treatment	Nesrin Öcal
	CTEPH - Catheter	Mesut Demir
	CTEPH - Surgery	Tankut Akay
PATARA HALL		
08:30 - 09:45	**Iranian Society of Vascular Surgery** **Moderators: Mohammad Raeeszadeh, Iraj Baghi, Saeed Yousefi**	
	Difficult caval filter retrieval tip and tricks	Mehrdad Vahedian
	Gonadal vein transposition &Saphenous vein by pass in nutcracker syndrome	Milad Sarrafi
	Cross-pubic venous bypass (palma procedure) in chronic iliac vein complete occlusion.A case based discussion and review of literature	Behzad Azimi
	Keynotes in duplex of lower limb varicose veins	Kambiz Farid Marandi
	Sonography challenge: A posterior thigh, subfascial long perforator mimicking thigh extension of small saphenous vein!	Marjan Ladan
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**RD GLOBAL/INVAMED (Turkish)** **Aortic, REBoA (Resuscitative Endovascular Balloon Occlusion of the Aorta) and peripheral Interventions ccourse** **Instructors: Özcan Gür, Selami Gürkan**	
12:30 - 13:30	**LUNCH BREAK**	

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13:30 - 15:00	**Iranian Society of Vascular Surgery** **Moderators: Mohamad Reza Zafarghandi, Gholam Hossein Kazemzadeh, Seyed Mansour Alamshah** **Discussant: Mohamad Mozafar, Mohamad Reza Sobhieh, Ardalan Soleymani**	
	Comprehensive review: Vascular aging and aortic aneurysm	Pouya Tayebi
	Long-term results of single port unilateral and bilateral sympathectomy for palmar hyperhidrosis	Hassan Ravari
	Autologous blood clot embolisation for femoral artery pseudo-aneurysm	Pouya Tayebi
	Hybrid distal venous arterialization, acceptable treatment for no option CLI	Hossein Hemati
	Aortoiliac occlusion; angioplasty and stenting through transbrachial approach	Abbas Sarookhani
	Role of self-expandable sent in the treatment of aortic coarctation	Parham Sadeghipour
	Delayed arterial revascularization in trauma patients and functional result	Meisam Refaie
15:00 - 15:30	**COFFEE BREAK**	
16:15 - 17:45	**Korean Session** **Nationwide registry and RCTs in Korea** **Moderators: Jin Hyun Joh, Jang Sang Park**	
	Launching the nationwide PAD registry (the KSVS DAMOEUM Registry)	Jin Hyun Joh
	A randomized, double blind, non-inferiority multicenter trial of vitis vinifera seed dried extract versus micronized purified flavonoid fraction in patients with chronic venous disease	Chris Taeyoung Chung
	Global, Post-Market, Prospective, Multi-Center, Randomized Controlled Trial of the VenaSeal™ Closure System vs. Surgical Stripping or Endothermal Ablation (ETA) for the Treatment of Early & Advanced Stage Superficial Venous Disease	Sun Cheol Park
	The department difference between cardiology and endocrinology in chronic kidney disease in terms of estimated glomerular filtration rate /td>	Lee Chan Jang
	Analysis of relationship between CKD classification and urine volume in 24-hour urine collection	Kwon Cheol Yoo
	Outcomes of open surgical and laparoscopic peritoneal dialysis catheter placement: A single center experience	Seonyeoung Ko
	Five-year extension outcomes of prospective, multicenter study of rotational atherectomy with antirestenotic therapy for infrainguinal arterial disease	Byeoung-Hoon Chung
	AVX Angiojet Thrombectomy for failed AV access	HaengJin Ohe

GÖBEKLİTEPE HALL

09:45 - 10:45	**Boston Scientific Workshop** **Instructor: Erdal Aslım**	
15:30 - 16:30	**Boston Scientific Workshop** **Instructor: Adil Polat**	

HALL 1 (OP ENGLISH)

08:30 - 09:45	**Oral Presentations (English) - 18** **Moderators: Levent Yazıcıoğlu, Cengiz Bolcal**	
OP-032	The hybrid approach for aortic disease - the role of procedure in Vietnam today Uoc Huu Nguyen, Son Tung Nguyen, Thang Ngoc Duong, Son Duy Hong Phung, Tien Nhat Le	
OP-011	Short-term and medium-term results of open and endovascular treatment of steno-occlusive lesions of the iliac segment (TASC II C, D) in a randomized clinical trial Shoraan Saaya, Olesia Osipova, Alexey Cheban, Pavel Ignatenko, Vladimir Starodubtsev, Andrey Karpenko	
OP-048	The influence of the non-rectilinear course of the common carotid artery on changes in local hemodynamics in the bifurcation area Victoria Pavlovna Derbilova, Roman Aleksandrovich Vinogradov, Yuriy Nikolaevich Zakharov, Vladimir Geraldovich Borisov, Elina Elbrusovna Kheteeva, Elvira Romanovna Vinogradova, Vladimir Anatolevich Gagin, Olga Michailovna Meshcheryakova	
OP-059	Photodynamic therapy of venous trophic ulcers Nikita Olegovich Somov, Boris Valentinovich Boldin, Vadim Yurievich Bogachev, Pavel Yurievich Turkin	
OP-094	Virtual vascular outpatient clinics! From pandemic to the norm Muhammad Faisal Shaikh, Lazslo Papp	
OP-089	MR lymphography of lymphatic complications in multifragmentary tibiotarsal fractures in patients with post-thrombotic disease Julia Kononova, Sergei Kolobov, Vasiliy Yarema, Victor Zuev, Natalya Serova, Mariana Lazechko, Nikolay Yarygin, Julia Kononova	
10:15 - 10:45	**COFFEE BREAK**	
10:45 - 11:45	**Oral Presentations (English) - 19** **Moderators: Öcal Berkan, Ferit Çiçekçioğlu**	
OP-034	Association between body mass index and outcomes of open abdominal aortic aneurysm repair Joon Kee Park, Shin Young Woo, Shin-Seok Yang, Dong Ik Kim, Young Wook Kim, Yang-Jin Park	
Attendance was not achieved	Factors affecting major amputation and mortality of diabetic foot patients with critical limb threatening ischemia (CLTI) one year after revascularization at Cipto Mangunkusumo Hospital Jakarta, Indonesia Budhi Arifin Noor, Akhmadu Muradi	
OP-052	Long-term results of hybrid and endovascular treatment of multilevel lesions of the brachiocephalic arteries Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Almaz Gafurovich Vanyurkin, Darya Viktorovna Chernova	
Attendance was not achieved	Photodynamic therapy in the treatment of venous trophic ulcers: results of the experimental study Nikita Olegovich Somov, Boris Valentinovich Boldin, Vadim Yurievich Bogachev, Pavel Turkin, Igor Suchkov	
OP-047	Management of pelvic venous disorders with an abnormal structure of the inferior vena cava Anastasia Akulova, Anastasia Akulova, Zaurbek Shugushev, Kirill Lobastov, Dmitry Bondarchuk, Aleksander Faibushevich	

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12:30 - 13:30	**LUNCH BREAK**
13:30 - 15:00	**Oral Presentations (English) - 20** **Moderators: Hasan Berat Cihan, Nurkay Katrancıoğlu**
OP-113	Management of aortic pathologies: TEVAR and EVAR experience Tariq Alanezi, Sultan Alsheikh, Mussaad Al Salman, Badr Aljabri, Mohammed Aldossary, Kaisor Iqbal, Abdulmajeed Altoijry
OP-114	Pedal arch quality vs direct angiosome: Which predicts better wound healing in ischaemic diabetic foot ulcers? Limi Lee, Stephen Thwaites, Ming Yii
OP-115	Almazov Centre experience in the treatment of Leriche syndrome Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Darya Viktorovna Chernova, Almaz Gafurovich Vanyurkin
OP-116	Junior doctors' perceptions of the barriers and facilitators in the implementation of evidence-based prescribing for peripheral artery disease Alison Zhu
OP-117	Efficacy of MPFF on Lower Limb Discomfort in Subgroups of Patients with Chronic Venous Disease: a post hoc Analysis of the CHEWY Trial A. Kürşat Bozkurt, Arnaud Lucien, Lucie Truffaut Chalet, Steven Quentzel, Armando Mansilha
OP-118	Treatment of anterior accessory saphenous venous insufficiency. Role of endothermal ablation in the treatment of the anterior accessory saphenous vein Le Nhat Tien, Nguyen Huu Uoc
Attendance was not achieved	Clinical case of stenting of the inferior vena cava and iliac veins in a patient with Ormond's disease and renal insufficiency Alexey S. Pankov, Arman Davtyan, Viktor Barinov, Evgeniy Molokhoev, Evgeniy Barinov, Vardan Kirakosyan, Maxim Chernyavin, Igor Shrainer, Ilya Schastlivtsev, Kirill Lobastov, Anna Fedorova, Elena Knyazeva
OP-119	Endeavor on realizing robotic vascular surgery in Japan Toshio Takayama, Takashi Endo
15:00 - 15:30	**COFFEE BREAK**
16:15 - 17:45	**Oral Presentations (English) - 21** **Moderators: Fuat Bilgen, Serkan Durdu**
Attendance was not achieved	Increased risk of stroke following upper extremity access for F/BEVAR Adele Hwee Hong Lee, Jason Chuen
Attendance was not achieved	Age is not a factor for early outcomes after fenestrated-branched endovascular aortic repair Adele Hwee Hong Lee, Sara Qi, Jason Chuen
OP-055	A comparative outcome study of infrainguinal vessel endovascular intervention by intravascular ultrasound-guided (IVUS) versus angiography-guided in patients with chronic limb-threatening ischemia at Phramongkutklao hospital, Thailand Chanarat Chokchaisamut, Wisit Kaewput, Sirapong Chokteerasawad, Kritsada Luangrungruang, Thatchawit Urasuk
OP-036	Venous Thromboembolism Risk Assessment Model for Asian Surgical Patients: A Lesson from Caprini Limi Lee, Ngoh Chin Liew
OP-041	Does the use of a double ring slim fiber for EndoVenous Laser Ablation of varicose veins make sense? Results of a physician-initiated study Jürgen Verbist, Fien Gryffroy, Wouter Van Den Eynde, Veerle Laeremans, Caroline Heerinckx
OP-06	Experience in performing 150 operations on the aorto-iliac-femoral segment using the DA VINCI robot Aslan Zakeryaev, Roman Vinogradov, Tarlan Bakhishev, Герей Хангереев, Амирлан Созаев, Sultan Butaev, Elvira Vinogradova, Aleksandr Baryshev, Vladimir Porkhanov
OP-016	The Da Vinci robot in the treatment of aorto-mesenteric tweezers Aslan Zakeryaev, Roman Vinogradov, Tarlan Bakhishev, Герей Хангереев, Амирлан Созаев, Sultan Butaev, Elvira Vinogradova, Aleksandr Baryshev, Vladimir Porkhanov
HALL 2 (OP ENGLISH)	
08:30 - 09:45	**Oral Presentations (English) - 22** **Moderators: Uğursay Kızıltepe, Mehmet Cengiz Çolak**
OP-050	A single centre review - Outcomes of open thoracoabdominal aneurysm repairs in the endovascular era Vidushi Lal, Samantha Peden, Samantha Peden
OP-012	Outcome of revascularization using bovine pericardial patch (xenosure) for occlusive lesions of the common femoral artery Hideyuki Hayashi, Hideaki Obara, Kentaro Matsubara, Tsunehiro Shintani, Susumu Watada, Shigeshi Ono, Naoki Fujimura, Taku Fujii, Yasuhito Sekimoto, Tatsuya Shimogawara, Keita Hayashi, Yuko Kitagawa
OP-087	The usefulness of intravascular ultrasound (IVUS) compared to computed tomography angiography (CTA) and angiography in the diagnosis and treatment of superficial femoral artery stenosis Hong Seok Han, Eunju Jang, Ki Yoon Moon, Seunghoon Lee, Sun Cheol Park, Sang Seob Yun, Jang Yong Kim
OP-54	Treatment of advanced varicose veins: combining endovenous techniques with surgery yields the best results Niaz Ahmed Choudhury, Abul Hasan Muhammad Bashar, Md. Mokhlesur Rahman, Shantonu Kumar Ghosh, Saffait Jamil
OP-022	Endovascular thrombectomy utilization in patients with deep vein thrombosis: Analysis of a tertiary hospital database Alexandr Kuperin, Evgeny Seliverstov, Igor Lebedev, Igor Zolotukhin
10:15 - 10:45	**COFFEE BREAK**
10:45 - 11:45	**Oral Presentations (English) - 23** **Moderators: Cengiz Köksal, Umut Serhat Sanrı**
OP-043	A clinical case of a multidisciplinary approach in the treatment of a large infectious aortic pseudoaneurysm with destructive lumbar spondylitis using a native donor aortic homograft Andrey Pletnev, Vyacheslav Zavatskii, Dmitriy Kondyukov, Oleg Reznik, Alexey Kutenkov
OP-02	Thoracoabdominal aortic rupture repair with surgically modified two-branched stent-graft: Case report Renat S Akchurin, Timur E Imaev, Petr M. Lepilin, Александр S Колегаев, Дмитрий V Саличкин, Alexey E Komlev
OP-100	Carotid endarterectomy in the very elderly: The long term prognosis Muhammad Faisal Shaikh, Mehdi Muhammadi, Saima Mukhtar, Matthew Metcalfe, Sadasivam Selvakumar
OP-07	Single-Center Experience with Catheter-Directed Thrombolysis and Balloon Angioplasty for Acute Upper-Extremity Deep Vein Thrombosis: A Case Series Study Yaser Jenab, Saeed Tofighi, Najme Sadat Moosavi, Houman Jalaie, Mohammad Esmaeil Barbati
OP-027	Treatment of reticular veins with a 1064 nm long-pulsed Nd:YAG laser Oksana Bukina
12:30 - 13:30	**LUNCH BREAK**
13:30 - 15:00	**Oral Presentations (English) - 24** **Moderators: Zafer İşcan, Altuğ Tuncer**

02 DECEMBER 2023, SATURDAY	
OP-046	Meta-Analysis of Outcomes in Open and Endovascular Repair for Descending Thoracic and Thoracoabdominal Aortic Aneurysms Danang Himawan Limanto, Rahardian Sigmawan
OP-042	Predicting outcomes following lower extremity endovascular revascularization using machine learning Mohammed Al Omran, Ben Li, Charles De Mestral, Muhammad Mamdani, Mohamad Hussain
Attendance was not achieved	Prevention of perioperative bleeding in patients with chronic limb threatening ischemia Daniil Maximkin, Vladislav Khalabuzar`, Zaurbek Shugushev, Alexander Chepurnoy, Aleksandr Faybushevich, Ekaterina Gitelzon
OP-068	Carotid dolichoarteriopathies and steroids Elina Kheteeva, Roman Vinogradov, Viktoriya Derbilova, Elvira Vinogradova
OP-020	Anticoagulant therapy in obese patients with COVID-19 Igor Suchkov, Roman Kalinin, Andrey Agapov, Nina Mzhavanadze, Vladislav Povarov, Aleksandr Nikiforov
OP-044	Robotic extravasal reinforcement of the left renal vein in Nutcracker Syndrome Dmitrii Ignatenko, Aslan Zakeryaev, Tarlan Bakhishev, Герей Хангереев, Elvira Vinogradova, Amirlan Sozaev, Sultan Butaev, Aleksandr Baryshev, Roman Vinogradov, Vladimir Porkhanov
OP-056	Outcomes of vascular closure device-assisted decannulation of peripheral extracorporeal membrane oxygenation: a systematic review Alison Zhu, Charis Tan
OP-067	Explantation of vascular allografts Chysty Andrei, Turomsha Uladzislau, Yudina Ol'ga, Rummo Oleg
15:00 - 15:30	**COFFEE BREAK**
16:15 - 17:45	**Oral Presentations (English) - 25** **Moderators: Kubilay Karabacak, Mehmet Ali Kaygın**
OP-051	Endovascular treatment of the aortic arch pathology - one centre expirience Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Almaz Gafurovich Vanyurkin, Darya Viktorovna Chernova,
OP-045	Endovascular Treatment Modalities and Lesion Characteristics in Peripheral Arterial Disease from a Real-World Registry: A Comparison between Intermittent Claudication vs Chronic Limb Threatening Ischemia Hye Young Woo, Sanghyun Ahn, Jin Hyun Joh, Taeseung Lee, Jin Mo Kang, Young Sun Yoo5, KSVS Investigators
OP-078	Isolated large,tortuous perforators and their incompetent territories,"treatment considerations" Marjan Ladan
Attendance was not achieved	Our experience of staged stenting iliac obstruction and embolization of the periprostatic venous plexus for pelvic pain in men Alexey S. Pankov, Alexander Kapto, Arman Davtyan, Evgeniy Molokhoev, Viktor Barinov, Vardan Kirakosyan, Maxim Chernyavin, Evgeniy Barinov, Igor Shrainer, Svetlana Salnikova, Anna Fedorova, Elena Knyazeva
OP-057	Down- and up-regulation of WNT/ β-catenin pathway genes in coronary artery and venous insuffiency patients Ulvan Ozad, Mahmut Cerkez Ergoren, Aya Badeea Ismail, Barcin Ozcem, Ozlem Balcioglu
Attendance was not achieved	Angiogenesis: mechanisms and treatment options for vascular pathology Yusef Chabbarov, Rustyam Chabbarov

03 DECEMBER 2023, SUNDAY		
ASPENDOS HALL		
09:30 - 11:00	**What Stays in Our Minds / Notes in Our Pockets - Round Table** **Moderators: Emrah Oğuz, Emrah Uğuz, Ömer Tanyeli, İlker İnce** **Panelists: Mustafa Yılmaz, Ahmet Bülent Sarıtaş, Nevzat Erdil, Yusuf Kuserli, Mehmet Adnan Celkan**	
CAPPADOCIA HALL		
09:30 - 11:00	**Expert Case Discussion** **Moderators: Atilla Saraç, Utku Alemdaroğlu**	
	Case 1	Erdinç Eroğlu
	Case 2	Orçun Ünal
	Case 3	Görkem Yiğit
	Case 4	Levent Altınay
	Case 5	Yasin Güzel
EPHESUS HALL		
09:30 - 11:00	**Olgularla KTEPH** **Oturum Başkanları: Rıza Doğan, Bahadır Gültekin, Tahir Yağdı**	
	Olgu 2	Murat Biçer
	Olgu 3	Mehmed Yanartaş
	Olgu 4	Hüseyin Kuplay

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ORAL PRESENTATIONS

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ORAL PRESENTATIONS NOMINATED FOR AN AWARD

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NURSING PRESENTATIONS

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POSTER PRESENTATIONS

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Oral Presentations

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OP-001

Which way to avoid complications of brachial artery access: Percutaneous or cut-down

Serenay Ersoy, Ismet Onur Taniyan, Ali Fuat Karacuha, Levent Yazicioglu, Cagdas Baran, Mehmet Cahit Saricaoglu, Nur Dikmen, Onur Buyukcakir, Salih Anil Boga

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Percutaneous endovascular treatment modalities become more and more important for aortic and peripheral arterial disease due to lower mortality and morbidity outcomes. Even though common femoral artery is the easiest and the most convinient access way; brachial, axiller and popliteal arteries are also chosen as an access point for certain cases. The object of this study is to compare the complication rates of cut down and percutaneus brachial artery accesses to each other. Retrospectively.

Material and Methods: From 2018 to 2022, 49 patients who had undergone endovascular treatment using only brachial arterial access were analysed retrospectively and included in this study. 2 patients with known coagulapathy disorders were excluded. Brachial artery access was performed 59.18% (29) via cut-down and 40.82% (20) percutaneously. Possible complications as an outcome were classified according to literature survey. Local and systemic infective complications were excluted because the main purpose was comparing the non-infective complication percentages. Bleeding, hematoma, surgical site disruption, thrombosis, pseudoaneurisym and vascular dissections were excepted as possible comlications. These comlications were also classified into two as minor and major comlications for more plain exhibition of results.

Results: Complication rate of brachial artery access was 30.6% (15). And 24.5% (12) of these complications were classified as minor. Both major and minor complications of brachial artery were seen less in cut down access rather than percutaneous punctures. Complication rate of cut-down brachial arter access was 17.2% (5) and all of them were minor. However, complication rate of percutaneous brachial arter access was 50% (12) and 35% (7) of these were minor complications. Also, as the cut down access site moves proximally along the brachial artery, more complications were seen.

Conclusion: Femoral artery is the most preferred access site and Brachial artey comes as second. Although percutaneous access is more practical in clinical use, it was seen as a result that complication rates and hospital stay time were lower for patients who undergone endovascular intervention via cut-down access than percutaneous access at brachial artery.

Keywords: Brachial artery access, peripheral arterial disease,endovascular treatment modalities

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OP-002

Thoracoabdominal aortic rupture repair with surgically modified two-branched stent-graft: Case report

Renat S Akchurin , Timur E Imaev, Petr M Lepilin, Александр S Колегаев , Дмитрий V Саличкин, Alexey E Komlev

National Medical Research Centre of Cardiology Named After Academician E.I.CHAZOV

Abstract

Introduction. Thoracoabdominal aortic aneurysm is a life-threatening condition with no other efficient treatment but surgical, especially in the setting of acute aortic syndrome. Herein we report a case of successful endovascular procedure using surgically modified endoprosthesis for thoracoabdominal aortic rupture with the formation of pseudoaneurysm and massive pleural effusion. A 81 year old woman was emergently admitted to cardiac surgery department with acute abdominal pain, dyspnea and severe hypotension. Angio-CT scan determined thoracoabdominal aortic rupture with pseudoaneurysm formation resembling Crawford type V and total left-side hemothorax. Multiplanar CT-scan reconstruction revealed that the celiac trunk originated from the false lumen and suprarenal 20mm long distal neck with maximal diameter of 18 mm was enough for sealing. After thorough evaluation by aortic team the decision was made to perform endovascular aortic replacement with surgically modified stent-graft. The tailored two-branched endoprothesis was manufactured on the table from bifurcated stent-graft with two additional peripheral stent-grafts sewn to the contralateral leg. After loading of modified endoprothesis to delivery system it was inserted via standard transfemoral access and the main body of the stent-graft was deployed in the suprarenal aorta. Later on the two neo-branches were elongated with covered stents to obtain proper connection with superior mesenteric artery and celiac trunk. Finally, the ipsilateral leg was deployed at distal landing zone. At postoperative CT-angiography the complete exclusion of the aneurysm and patent target visceral arteries was confirmed. Because of advanced patient`s age and comorbidities open surgery approach was excluded by aortic team. All commercially-available branched stent-grafts have the only possible configuration with 4 visceral branches which preclude endovascular procedure in case of narrow suprarenal neck that was seen in our patient. On-table modification of stent-graft is believed to be safe and effective option for emergency endovascular procedures in off-lable cases when open surgery is deemed contraindicated.

Keywords: Thoracic endovascular aortic repair, BEVAR, endovascular aorta treatment, stent-graft

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OP-003

Comparison of carotico-subclavian bypass requirement in TEVAR patients at our institution with the literature

Mete Kubilay Kasap, Ozgur Coban, Nazenin Durak

Adana City Training & Research Hospital, Adana, Türkiye

Abstract

Aim: Thoracic Endovascular Aortic Repair (TEVAR) has become a pivotal intervention for aortic pathologies. However, in some cases, concomitant Carotico-Subclavian Bypass (CSB) surgery is warranted to ensure optimal blood flow. This study aims to assess the frequency of CSB requirement in TEVAR patients at our institution and compare it with existing literature.
Material and Methods: We conducted a retrospective analysis of 90 TEVAR patients treated at our clinic. Among them, 2 patients underwent CSB in conjunction with TEVAR. Relevant data, including patient demographics, indication for TEVAR, and the need for CSB, were collected and analyzed.
Results: Our findings show that 2.2% of TEVAR cases require in addition CSB surgery. This rate is comparable with earlier research' findings of 1% to 3%. Indications for CSB include subclavian artery occlusion and a resulting requirement for revascularization.
Conclusion: The observed frequency of Carotico-Subclavian Bypass surgery in our TEVAR patients mirrors the reported rates in existing literature. This underscores the significance of a comprehensive assessment and collaborative decision-making in addressing aortic pathologies, ultimately leading to optimized patient outcomes.

Keywords: Thoracic endovascular aortic repair, carotico-subclavian bypass, aortic pathologies, vascular approach

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OP-004

Navigating aortoesophageal fistula treatment post-esophageal stenting: The role of TEVAR in a case analysis

Birol Akdogan, Nilgun Yaziksiz, Bessam Ali, Turkan Tansel

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Despite its rarity, aortoesophageal fistula (AEF) is clinically challenging to manage, particularly because of its poor prognosis. This condition can be seen in aneurysms or secondary to malignancy and foreign bodies. Although surgical intervention is the main approach for AEF, such invasive procedures may further complicate the process due to the low general conditions of many patients. As a current approach, clinicians may prioritize thoracic endovascular aortic repair (TEVAR), a less invasive technique, in such cases. In this article, we report on the management of TEVAR in the case of AEF after oesophagal stenting. A 62-year-old male, 60-pack/year smoker with known chronic renal failure, chronic obstructive pulmonary disease and oesophagal squamous cell malignancy, developed a benign stricture in the distal oesophagus after 20 sessions of radiotherapy. The patient, who had difficulty in food intake and vomiting, underwent oesophagal stenting twice. One week after the last stenting, he presented to the emergency unit with hematemesis and general condition disorder. The patient is consulted to our department and a contrast-enhanced computed tomography (CT) is planned. When the patient was admitted to the emergency department, the hemogram revealed a haemoglobin value of 3.8 g/dl and a haematocrit of 12%. The patient underwent contrast-enhanced CT, 2 previously applied esophageal stents were seen side by side and which revealed extravasation from a 5 mm diameter fistula in the thoracic aorta adjacent to the oesophagal stent into the intraesophageal space, and TEVAR was decided to be performed. Perop contrast-enhanced imaging performed after TEVAR showed successful closure of the AEF and no extravasation was observed. No haemoglobin decrease was observed in postop intensive care unit follow-up and the patient was followed up under broad-spectrum meropenem and vancomycin treatment. Postoperative follow-up revealed tracheoesophageal fistula and the patient was referred to the relevant department. Successful management of AEF is rare. Patients with haematemesis associated with oesophageal cancer or stenting should be checked by timely contrast-enhanced CT imaging. In this way, timely diagnosis of AEF is very important. In our case, TEVAR was found to be an effective approach for AEF caused by oesophageal cancer.

Keywords: Aortoeosophageal fistula, thoracic endovascular aortic repair, oesophageal cancer, oesophageal stent, fistula

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OP-005

Comparison of cyanoacrylate embolization and radiofrequency ablation in the treatment of perforating veins

Oguz Arslanturk[1], Fatih Gumus[2]

[1]Bülent Ecevit University, Faculty of Medicine, Department of Cardiovascular Surgery, Zonguldak, Türkiye
[2]Memorial Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The role and effect of perforator vein reflux treatment on ulcer healing is still a matter of debate. Current treatment options for perforator vein closure include the more popular minimally invasive techniques such as open perforator surgical repair, subfascial endoscopic perforator surgery (SEPS), radiofrequency ablation (RFA), and cyanoacrylate embolization (CE). The aim of this study was to investigate the effects of RFA and CE used in the treatment of perforating venous insufficiency.

Material and Methods: From January 2018 to June 2023, 118 patients with active ulcers (Clinical, Etiology, Anatomy, Physiology-CEAP clinical class 6) were retrospectively reviewed and analyzed with the leg. This retrospective analysis included 55 and 63 patients who underwent CE (group 1) and RFA (group 2), respectively. Duplex scanning for venous ulcer and perforating insufficiency was performed in all patients, and it was used to calculate healing rates at 1 month, 1 year and 2 year controls.

Results: At 1 month, occlusion rates were significantly lower for cyanoacrylate (CE) compared to 85% radiofrequency ablation (RFA) 90% (P=0.05). When the first and second year closure rates were examined, no significant difference was found as 81%, 76% in CE and 84% and 78% in RFA, respectively. However, deep vein thrombosis was detected in 5 patients who underwent CE (Group 1) and did not cause pulmonary embolism. Thrombus resolved in these patients after 3 months of anticoagulant therapy. All ulcers healed completely within three months.

Conclusion: Closure of perforator veins using minimally invasive techniques seems to predict wound healing with minimal morbidity. Radiofrequency ablation and cyanoacrylate embolization are increasingly used for perforating vein failure in venous ulcer healing. In terms of deep vein thrombosis, RFA is safer and one step ahead of CE.

Keywords: Perforator vein insufficiency, radiofrequency ablation, cyanoacrylate embolization

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OP-006

Experience in performing 150 operations on the aorto-iliac-femoral segment using the DA VINCI robot

Aslan Zakeryaev[1], Roman Vinogradov[1], Tarlan Bakhishev[1], Герей Хангереев[1], Амирлан Созаев[1], Sultan Butaev[1], Elvira Vinogradova[2], Aleksandr Baryshev[1], Vladimir Porkhanov[1]

[1]Scientific Research Institute-Regional Clinical Hospital, No.1 named after Prof. SV Ochapovsky, Krasnodar, Russia
[2]Kuban State Medical University, Krasnodar, Russia

Abstract

Aim: Evaluation of robotic surgery effectiveness for aneurysms, stenoses and occlusion of the abdominal aorta and iliac arteries.
Material and Methods: A prospective analysis of Lerish syndrome treatment (n=108), manifested by chronic arterial insufficiency III-IV stage according to Pokrovsky-Fontaine, and abdominal aortic aneurysm II-III type according to A.V. Pokrovsky (n=42). Surgical treatment indications: 1. Critical ischemia of lower extremities among patients with aorto-iliac segment occlusion (type C and D according to the TACS 2 classification); 2. Abdominal aorta calcification, lack of technical possibility of performing aorto-femoral bypass surgery (in cases of thoraco-femoral bypass surgery); 3. Aneurysm of the abdominal aorta and iliac arteries more than 4.5 cm (women) and 5 cm (men). The operations were performed using the daVinci Xi Robotic Surgical Complex (RSC). Patients got 4 trocars for RSC manipulators and 2 assistant trocars, then transferred to the Trendelenburg position for cranial intestinal movement. Thoraco-femoral bypass surgery (n=17), aorto-femoral bifurcation bypass surgery (n=21), linear aorto-femoral bypass surgery (n=70) were performed among patients with Lerish syndrome. Patients with abdominal aortic aneurysm underwent aorto-femoral quadrifurcation prosthetics (n=2), aorto-femoral bifurcation prosthetics (n=22), linear aortic prosthetics (n=14), prosthetics of the common iliac artery (n=4).
Results: Postoperatively, intercostal artery bleeding(n=1) and trocar opening bleeding (n=1), thromboembolism of lower extremities arteries (n=4) were observed. One case of fatal outcome was recorded after performing toracofemoral bypass surgery. The results of this method of treatment were confirmed by triplex scanning of the arteries of the lower extremities and control CT angio.
Conclusion: 1. Da Vinci RSC in vascular surgery allows to preform reconstructions of abdominal aorta and iliac arteries, thereby reducing traumatization, risks of infection, blood loss volume and reduces the hospitalization period and improves the rehabilitation. 2. Due to the short learning curve, the duration of robotic operations on the aorto-iliac segment and the time of compression of the aorta and arteries does not exceed those for open reconstructive operations. 3. The blood loss volume in patients after performing robot-assisted operations is significantly lower than with open interventions. 4. The disadvantages of this method include the lack of tactile feedback and the high initial cost.

Keywords: Robotic surgery, vascular surgery, Lerish syndrome, abdominal aorta, iliac arteries

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OP-007

Single-center experience with catheter-directed thrombolysis and balloon angioplasty for acute upper-extremity deep vein thrombosis: A case series study

Yaser Jenab[1], Saeed Tofighi[1], Najme Sadat Moosavi[1], Houman Jalaie[2], Mohammad Esmaeil Barbati[2]

[1]Tehran Heart Center, Cardiovascular Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran
[2] University Hospital Aachen, Department of Vascular and Endovascular Surgery, Aachen, Germany

Abstract

Aim: Effective treatment of upper extremity deep vein thrombosis (UEDVT) is crucial to prevent further complications. However, no prospective study has yet favored any of these treatments. This study presents a review of our experience with CDT followed by balloon venoplasty in patients with acute primary UEDVT.

Material and Methods: We enrolled all patients diagnosed with acute UEDVT from January 2020 to June 2021. Subjects with UEDVT due to secondary causes were excluded. CDT was performed through brachial vein access, using a perfusion catheter, and rt-PA administration. Balloon venoplasty was performed if the treated segment had severe stenosis >50% after CDT. Patients were followed up at the vein clinic for any signs and symptoms in the upper extremity and lifestyle changes. Follow-up ultrasonography was done 12 months after discharge.

Results: Twelve patients with a mean age of 41.08±14.0 years were included in the study. The mean duration of CDT was 25.00±10.56 hours. After CDT, all patients had a remaining occlusion, with seven having more than 50% remaining occlusion after CDT, all patients had more than 50% stenosis, with seven having total occlusion. However, after balloon venoplasty, no patient had significant (more than 50%) stenosis. There was no serious complication after both procedures. Patients were followed up for a mean duration of twelve months after their admission, with a mean time of maintenance anticoagulation was 10.73±5.77 months. Only one patient had recurrent symptoms in his target limb which required a decompression surgery, while the rest were free of symptoms in their treated extremity. No subject developed pulmonary emboli (PE) during admission or the follow-up period. There was no evidence of hospital readmission for any reason. Upper extremity color-doppler sonography of the patients at twelve months after their procedure showed normal venous flow without any significant stenosis in 8 (66.7%), and partially normal flow with patent target vein in 4 (33.3%) patients.

Conclusion: CDT followed by balloon venoplasty may be an effective treatment for selected patients with acute primary UEDVT, providing desirable long-term results and potentially avoiding the need for decompression surgery in the short or long term.

Keywords: Upper extremity deep vein thrombosis, balloon angioplasty, thrombolytic therapy

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OP-008

Venous ulcer, any progress in treatment

Mussaad Mohmmed Alsalman

King Saud University, Department of Surgery, Division of Vascular Surgery, Riyadh, Saudi Arabia

Abstract

The purpose of this review is to see if there is any change in the treatment of venous ulcer in the last three decades. In 1998, I reported the experience of the largest university hospital in Saudi Arabia, King Saud University of 90 patients (Int Angio 1998; 17: 108-12) in which the study covers the years between 1991-1997. The recommendation was to do surgical intervention to reduce the incidence of ulcer recurrence whenever superficial venous reflux is a prominent component of abnormal venous function. This constitutes 30% to 50 of cases. Most other centers reported the same. I revisited the new cases in my institute and review the clinical practice guidelines of the Society of Vascular Surgery and the American Venous Forum in addition to systemic review and meta-analysis of surgical interventions versus conservative therapy for venous ulcer from 1990-2022 which show same results and same recommendation. So in there any change, did the new modality of investigation and pharmacological therapy added any more progress in the venous ulcer treatment. All those developments will be discussed in this presentation.

Keywords: Chronic venous disease, venous ulcer, CVH

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OP-009

Color duplex arteriography as first line imagine modality for decision making in diabetic lower limb arterial insufficiency-KKUH experience

Mussaad Mohmmed Alsalman

King Saud University, Department of Surgery, Division of Vascular Surgery, Riyadh, Saudi Arabia

Abstract

Aim: Lower Limb Arterial Insufficiency is a common problem in Diabetic patients presenting with diabetic foot complications (Critical Limb Ischemia). Diagnostic Imaging characterizes the Distribution Location & Severity of Peripheral Arterial Disease & guides in management. Digital Subtraction Angiography is a Gold Standard, an invasive procedure associated with contrast-related complications in Diabetics. This study aims to determine the value of Color Duplex Arteriography for making decisions in the management of Diabetic Lower Limb Arterial Insufficiency & do the Color Duplex Arteriography replaced Digital Subtraction Angiogram as a First-Line Imaging Modality in our practice.

Material and Methods: We studied prospectively collected data of consecutive patients from 2011- 2022 with Diabetic Lower Limb Arterial Insufficiency. Pre-intervention Color Duplex Arteriography images with Digital Subtraction Angiography images obtained during therapeutic endovascular interventions were compared. The therapeutic intervention decision was based on Pre-intervention Color Duplex Arteriography.

Results: During the study period, 332 limbs with Diabetic Lower Limb Arterial Insufficiency were identified in 248 patients, with a mean age of 64.6yrs (range 34-90yrs), of which the majority were males. Diabetic Lower Limb Arterial Disease has the characteristic of affecting distal (below knee) arteries more. There were no significant differences between Color Duplex Arteriography & Digital Subtraction Angiography results in comparing the images. Overall Sensitivity, Specificity and Accuracy of Color Duplex Arteriography in the evaluation of lower limb arteries were respectively 99.82%, 97.45% and 98.58%, against Digital Subtraction Angiography as the gold standard

Conclusion: In our study Color Duplex Arteriography provides precise anatomical & physiological information about the peripheral arteries. It is considered optimal for first-line imaging modality in patients with Diabetic Lower Limb Arterial Insufficiency. It is adequate for arriving at an appropriate decision regarding management. Additionally, it reduces the rate of Digital Subtraction Angiography & the associated complications in Diabetic patients.

Keywords: Color duplex, diabetic arterial dis, arterial imaging

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OP-010

Comparison of long-term results according to localization of stenosis and occlusion in patients which atherectomy applied due to infrainguinal peripheral arterial disease

Onur Emre Satilmis, Ali Aycan Kavala, Saygin Turkyilmaz, Yusuf Kuserli

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Endovascular treatment is one of the effective treatment options in peripheral arterial disease, which is frequently seen and the incidence is increasing. The importance of vessel preparation methods in endovascular treatment is understood day by day and atherectomy, one of these methods, is frequently used. In this study, we aimed to compare the primary patency rates and long-term results of patients who underwent atherectomy for infrainguinal peripheral artery disease according to lesion localization.

Material and Methods: 120 patients who underwent atherectomy for infrainguinal peripheral artery disease between January 2014 and December 2018 in the Department of Cardiovascular Surgery of Bakırköy Dr. Sadi Konuk Education and Research Hospital were retrospectively analyzed. Patients were divided into three groups according to lesion localization as SFA, popliteal and infrapopliteal. Rotational atherectomy and drug-coated balloon angioplasty were performed in all cases. Comparisons were made between groups according to the 1st, 2nd and 5th year follow-ups after the procedure.

Results: Of the total 120 patients, 32.5% (n=39) were female and 67.5% (n=81) were male, and the average age was 68.75±7.44. The acute technical success rate was 95.83% (n=115). While the mean ankle/ brachial index was 0.60±0.10 before the procedure, it was 0.95±0.08 after the procedure and 0.95±0.11 at the 5th year follow-up. Rates of cases with <50% noncritical stenosis in Doppler ultrasonography controls; 100.0% in the SFA group, 100.0% in the popliteal group, 88.9% in the infrapopliteal group at 1st year; 95.0%, 93.0%, 80.6% at 2nd year respectively, and 89.2%, 84.0%, 75.0% at 5th year respectively. The rate of noncritical stenosis <50% in all cases was 96.5% at 1st year, 89.6% at 2nd year, and 82.8% at 5th year.

Conclusion: Vessel preparation and atherectomy which is one of the vessel preparation methods, should be kept in mind in the endovascular treatment of infrainguinal peripheral arterial disease. We can say that the technical success rates of atherectomy and subsequent complementary drug-coated balloon angioplasty are high, and the restenosis rates and complication rates due to peripheral arterial disease are at an acceptable level with the preservation of lifestyle changes and regular application of medical treatment after the procedure.

Keywords: Atherectomy, peripheral arterial disease, vessel preparation

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OP-011

Short-term and medium-term results of open and endovascular treatment of steno-occlusive lesions of the iliac segment (TASC II C, D) in a randomized clinical trial

Shoraan Saaya, Olesia Osipova, Alexey Cheban,
Pavel Ignatenko, Starodubtsev Vladimir, Andrey Karpenko

Novosibirsk Research Institute of Circulation Pathology, Department of Vascular and Hybrid Surgery, Novosibirsk, Russia

Abstract

Aim: Endovascular treatment of iliac occlusive lesions (TASC II C, D) is an alternative method of open surgical reconstruction. Aorto-femoral bypass is the "gold standard" for steno-occlusive lesions of the iliac segment. However, there are currently few randomized trials comparing both treatment modalities for patients with steno-occlusive iliac disease.

Material and Methods: The randomized study was registered on the ClinicalTrials.gov (NCT02209350) 202 patients were randomized 1:1 to endovascular treatment (STENTING) and aorto-femoral bypass (AFB) groups. All the patients of both groups were investigated with duplex ultrasonography, ankle-brachial pressure index (ABI) measurements and computed tomographic angiography. The postoperative follow-up visits were at 1, 12 and 24 months.

Results: The average hospital stay was shorter in STENTING (6.1±4.2 days vs 14.1±6.9 days AFB, $p<0.001$). In STENTING, technical success was 97%, in AFB was 100%. 30-day perioperative morbidity rate was 5% in STENTING vs 17% in AFB group ($p=0.01$). The primary patency at 24 months was 82% in STENTING and 94% in AFB ($p=0.01$). Secondary and assisted primary patency were 97% and 96% in STENTING, 99% and 98% in AFB, respectively ($p=0.32$ and $p=0.33$). The limb salvage rates were 97% (STENTING) vs 98% (AFB), $p=0.64$. The 2-year survival rate was 98% in STENTING versus 94% in AFB group, ($p=0.15$).

Conclusion: The results of this randomized study support the safety of endovascular treatment for patients with iliac occlusive disease. Stenting group patients demonstrated shorter length of stay with reduced perioperative morbidity, but lower medium-term patency rates.

Keywords: Atherosclerosis, aorto-femoral bypass, endovascular treatment

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OP-012

Outcome of revascularization using bovine pericardial patch (Xenosure) for occlusive lesions of the common femoral artery

Hideyuki Hayashi[1], Hideaki Obara[1], Kentaro Matsubara[1], Tsunehiro Shintani[2], Susumu Watada[3], Shigeshi Ono[4], Naoki Fujimura[5], Taku Fujii[6], Yasuhito Sekimoto[7], Tatsuya Shimogawara[8], Keita Hayashi[9], Yuko Kitagawa[1]

[1]Keio University School of Medicine, Department of Surgery, Tokyo, Japan
[2]Shizuoka Red Cross Hospital, Department of Vascular Surgery, Shizuoka, Japan
[3]Kawasaki Municipal Hospital, Department of Surgery, Kawasaki, Kanagawa, Japan
[4]Tokyo Dental College Ichikawa General Hospital, Department of Surgery, Tokyo, Japan
[5]Saiseikai Central Hospital, Department of Vascular Surgery, Tokyo, Japan
[6]Saitama Municipal Hospital, Department of Surgery, Saitama, Japan
[7]National Hospital Organization Tokyo Medical Center, Department of Surgery, Tokyo, Japan
[8]Saiseikai Yokohamashi Tobu Hospital, Department of Vascular Surgery, Yokohama, Japan
[9]Hiratsuka Municipal Hospital, Department of Surgery, Hiratsuka, Japan

Abstract

Aim: Bovine pericardial patches (Xenosure) are now available in Japan as a material for patch plasty in endarterectomy (EA) for the femoral artery. This is expected to be more useful than existing materials for patch plasty, because it can easily be made from a large enough piece of tissue. However, there are still few studies on the outcomes of wound complications, especially surgical site infection (SSI), lymphorrhoea, and posterior hemorrhage when this heterologous material is used in the femoral artery. We herein report the short-term results of a multicenter prospective observational study to evaluate the safety and efficacy of the revascularization using Xenosure for occlusive lesions of the common femoral artery.

Material and Methods: The current study included 47 patients who underwent patch plasty with Xenosure at the site of EA for occlusive lesions of common femoral arteries between August 2021 and October 2022 in our institution and 8 affiliated institutions. Wound complications within 30 days after the procedure were prospectively evaluated as the primary endpoint.

Results: The median age was 73 years old and 36 patients were male. Twenty seven patients had intermittent claudication, and 20 patients had critical limb ischemia. The surgical procedures were EA alone in 16 cases, EA with endovascular therapy (EVT) in 29 cases, EA with bypass in 1 case, and EA with both EVT and bypass in 1 case. The site of patch formation was common femoral artery (CFA) alone in 10 cases, CFA with superficial femoral artery (SFA) in 22 cases, CFA with deep femoral artery (DFA) in 7 cases, and CFA with both SFA and DFA in 8 cases. The median patch length was 55 mm. Three patients (6.4%) had wound complications within 30 days after the procedure, including one superficial SSI (2.1%) and three lymphorrhoea (6.4%). One patient (2.1%) had restenosis of the EA in the long term, and EVT was performed.

Conclusion: Short-term results of revascularization with Xenosure for occlusive lesions of the femoral artery were generally favorable. The incidence of perioperative wound complications was comparable to previous reports, but a trend toward a higher incidence of lymphorrhoea was suggested.

Keywords: Xenosure, bovine pericardial patch, common femoral artery

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OP-013

Early results of cyanoacrylate closure for incompetent saphenous veins

Xiaoning Tong

Osaka Vein Clinic, Osaka, Japan

Abstract

Aim: Cyanoacrylate closure for saphenous veins is a relatively new modality, which was introduced to Japan as a treatment covered by national health insurance in 2019. Compared to EVLA and RFA, CAC is a NTNT modality. TLA and thermal-associated complication can be avoided. However, Hypersensitivity reaction (HSR) is reported as a distinctive complication of CAC. We report early clinical results and patient satisfaction outcomes after intervention.

Material and Methods: 100 patients (138 limbs; 144 truncal veins) with incompetent saphenous veins were underwent CAC at a single session between January and December 2022. Post-procedure evaluations were performed at 2 days, 4 weeks and 12 weeks, including Numerical Rating Score, revised Venous Clinical Severity Scores, recanalization and HSR.

Results: There were 32 male and 68 female patients (mean age 54.3±14.1 years). Treated veins included 90 great saphenous veins, 34 small saphenous veins, and 20 accessory saphenous veins. Mean diameter of saphenous veins was 7.3±0.2mm. Mean treated length was 39±5.8cm. Postoperative pain score was 2.9. By day 3, 95 (95%) of 100 patients resumed daily activities, whereas 76 (76%) had returned to work. At 4 weeks, GSV, SSV and ASV were completely occluded in 90 of 90, 34 of 34 and 20 of 20, respectively. At 3 months, rVCSS improved from 6.98 to 1.33. HSR was found in 11 of 138 (8.0%) legs, which occurred 8.2±0.7 days after CAC. All HSR symptoms were mild, resolved within 5.7±3.5 days with medication of NSAIDs and Histamine H1-receptor antagonist. All patients with HSR had suprafascial saphenous veins located close to the skin. Patients` tracking rate was 100%, and mean tracking period was 91±12 days.

Conclusion: CAC has a high safety profile and is an effective way to block refluxing saphenous veins in patients at early follow-up. Patients are highly satisfied and report low postoperative pain. The occurrence of HSR was 8.0%, of which the risk factors were suprafascial saphenous veins. From the fact that all HSR cases were resolved, prophylactic administration of Histamine H1-receptor antagonist could be expected as a prospective study. Early results are encouraging, but we await further prospective long-term follow-up from the study.

Keywords: Cyanoacrylate, varicose veins, hypersensitivity reaction

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OP-014

Aortic remodeling after elective endovascular aortic repair (EVAR)

Ferit Cetinkaya[1], Gokay Deniz[2], Mehmet Ali Turkcu[2], Hakki Zafer Iscan[2]

[1]Ağrı Education and Research Hospital, Department of Cardiovascular Surgery, Ağrı, Türkiye
[2]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: EVAR treatment in abdominal aortic aneurysms is becoming increasingly common nowadays. In this study, it was aimed to determine the change in the structure of the aneurysm sac and neck in the mid-term follow-up after EVAR treatment.
Material and Methods: 180 patients with infrarenal abdominal aortic aneurysm who were admitted to our hospital treated electively between June 2016 and January 2021, had at least one year of follow-up and who had preoperative and postoperative CTA data were included.
Results: The median aneurysm diameter decreased from 61.0 mm to 57.5 mm ($p<0.001$). The median of diameter A increased from 24.0 mm to 26.0 mm ($p<0.001$). The median of diameter B increased from 24.0 mm to 26.0 mm ($p<0.001$). The median of the infrarenal neck angle decreased from 35.0º to 30.0º ($p<0.001$). The mean aneurysm length decreased from 131.6±18.5 mm to 130.5±18.6 mm ($p<0.001$).
Conclusion: This study showed that after EVAR treatment, the aneurysm neck diameter enlarged by an average of 2 mm due to the radial power of the endograft, the infrarenal neck angulation was improved by an average of 5 degrees, the neck length did not change, and the aneurysm length measured between the infrarenal level and the aortic bifurcation could shorten by about 1 mm. As a result, it has been observed that the aneurysm sac shrinks over the years after successful EVAR, and the infrarenal neck angle of the aneurysm decreases and the neck diameter expands depending on the radial power of the endograft.

Keywords: Endovascular aneurysm repair, abdominal aortic aneurysm, endovascular, stent-graft, morphology, remodelling

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OP-015

Youtube as information source in A-V fistula surgery

Alp Yildirim[1], Muhammet Sefa Saglam[2], Serkan Mola[1], Ali Baran Budak[3]

[1]Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Niğde Training and Research Hospital, Department of Cardiovascular Surgery, Niğde, Türkiye
[3]Liv Hospital Ulus, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Chronic renal failure (CKF) is a serious problem that concerns many patients around the world. The most optimal treatment for hemodialysis treatment is arteriovenous fistula (AVF) surgery. Today, internet video sites are frequently used as a source of information. In this study, it is aimed to evaluate the content quality and accuracy of the information that can be obtained from Youtube about AVF surgery.

Material and Methods: The study is a cross-sectional study, and a search was made on YoutubeTM (http:www.youtube.com) with the keyword "arteriovenous fistula". The first 200 videos were evaluated and arranged in order of relevance. The number of views of the videos, the upload date, who published them (state organ, non-profit association, physician,private health institution),video content (general information, surgical and medical treatment, symptoms, etc.) were examined. This review evoluated according to the vascular access guideline published by ESVS in 2018. The quality of the videos was evaluated according to the DISCERN and JAMA Benchmark criteria.

Results: A total of 187 results were included in the evaluation.140 (78.6%) videos were uploaded by physicians and 39 (20.8%) videos were uploaded by health institutions. None of the videos have been uploaded by the government facilites. The most common video content was general information about the disease and surgical treatment methods. The JAMA score was 2.41 on average, and the mean score was 33.72 in the DISCERN scoring. According to the DISCERN classification, 35.9% of the videos were very bad, 21.3% bad, 25.1% mediocre, 11.2% good and 6.4% excellent. Videos with a JAMA score of ≥3 were evaluated, 33.3% of them fell into this range. DISCERN score is significantly higher in videos uploaded by physicians. There is a significant correlation between the length of the video and DISCERN safety,treatment,quality,total score and JAMA scoring ($p<0.001$).

Conclusion: Considering the JAMA and DISCERN scores, it was evaluated that the majority of the videos were of low quality. It was seen that the majority of quality videos were uploaded by physicians. There was a positive correlation between the length of the videos and the JAMA and DISCERN scores. Although the quality of the information available on Youtube for AVF surgery today is variable, it is recommended that patients who want to obtain information from this source prefer videos that are uploaded by the physician and that are not short for quality and accurate information.

Keywords: Arteriovenous fistula, vascular access, Youtube

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OP-016

The Da Vinci robot in the treatment of aorto-mesenteric tweezers

Aslan Zakeryaev[1], Roman Vinogradov[1], Tarlan Bakhishev[1], Герей Хангереев[1], Амирлан Созаев[1], Sultan Butaev[1], Elvira Vinogradova[2], Aleksandr Baryshev[1], Vladimir Porkhanov[1]

[1]Scientific Research Institute - Regional Clinical Hospital № 1 named after Professor S.V. Ochapovsky ", Krasnodar, Russia
[2]Kuban State Medical University, Krasnodar, Russia

Abstract

Aim: Evaluation of the effectiveness of surgical treatment of patients with extravasal compression of the left renal vein (aorto-mesenteric tweezers) using the da Vinci Xi robot.

Material and Methods: A prospective analysis of the treatment of patients with extravasal compression of the left renal vein (LRV) using the da Vinci Xi robotic surgical complex (RSC) was made. Surgical treatment treatment: 1. Pain in the lumbar region; 2. Hematuria; 3. Pelvic venous fullness syndrome; 4. Pressure gradient >3 mmHg between the LRV and the inferior vena cava according to phlebography; 5. Increase in the prestenotic diameter of the LRV by 5 times according to MSCT.

The operations were performed using the da Vinci Xi robot. Patients with compensatory enlargement of the gonadal vein and failure of its valves underwent transposition into the iliac veins (n=2), inferior vena cava (n=1). Patients without gonadal vein dilation underwent LRV bypass surgery into the internal iliac vein by autovena (n=1), LRV transposition into the inferior vena cava (n=1), LRV bandaging (n=4).

Results: In one case, shunt thrombosis was detected after 3 months in renal intra-iliac bypass surgery with an autovena. The results of these methods of treatment were confirmed by the control MSCT. The duration of the surgical intervention was: LRV banding 78.5±10.5 min, LRV transposition into the inferior vena cava 183 min, renal intra-iliac bypass of autovena 201 min, gonadal vein transposition into the iliac veins 120±22 min, gonadal vein transposition into the inferior vena cava 129 min. The blood loss volume was 155±10 ml. Hospitalization time was 4±1 day.

Conclusion: 1. Currently there is no optimal method of surgical treatment of aorto-mesenteric tweezers. 2. The da Vinci robot is a safe treatment method that is an alternative to open surgery. 3. The RSC makes it possible to reduce the amount of blood loss, the length of the patient's stay in the hospital, reduces surgy traumatism and improves the rehabilitation period. 4. Due to the short learning curve, the use of robotics is a promising method of treating patients with compression syndromes.

Keywords: Aorto-mesenteric tweezers, robotic surgery, Da Vinci robot

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OP-017

The association between D-dimer level after EVAR and aneurysm expansion in patients with persistent type 2 endoleak

Masayuki Sugimoto, Changi Li, Shuta Ikeda, Yohei Kawai, Kiyoaki Niimi, Hiroshi Banno

Nagoya University Graduate School of Medicine, Division of Vascular and Endovascular Surgery, Nagoya, Japan

Abstract

Aim: Recent studies suggested that intrasaccular clot renewal plays a central role in sac enlargement after EVAR. We previously suggested that aneurysm expansion was unlikely if the 1-year D-dimer level (DDL), a marker of fibrin turnover and fibrinolysis, was low enough in patients with persistent type 2 endoleak (T2EL). However, the longitudinal significance of DDL was not considered This study analyzed our patients with persistent T2EL (pT2EL) confirmed at 1 year to estimate the impact of annual DDL on diameter change after EVAR.

Material and Methods: A retrospective review of elective EVAR for infrarenal abdominal aortic aneurysm performed between June 2007 and January 2021. Patients with >2 years of follow-up, isolated pT2ELs confirmed at 1 year, and DDL data at any annual follow-up during 5 years were included. Patients with any reintervention within 1 year were excluded. Aneurysm enlargement (AnE) was defined as ≥5 mm expansion and was monitored with annual CT study up to 5 years. Sequential association between DDL and sac diameter change up to 5 years was analyzed.

Results: Among 558 patients with >2 years follow-up, 148 had isolated pT2ELs at 1year. Among them, 109 patients were enrolled with DDL data at 288 time points. During a median follow-up of 49 months [31-60, IQR], 43 AnE were observed. The cumulative AnE rates were 9.2, 35.0, and 42.6% at 1, 3, and 5 years. In patients free from AnE at 1 and 2 years (N=77 and 56), low DDLs were associated with a low likelihood of future AnE (p=0.03 and 0.01). ROC curve analysis indicated that the optimal cut-off points were 5.4 and 5.3 µg/mL (AUC=0.651 and 0.702). However, this association was not statistically confirmed at later time points. Our results proposed a preliminary protocol to omit annual imaging study in patients with stable aneurysms and DDL <5.3 µg/mL. If applied to the study cohort, this protocol might have missed 1 AnE but spared 30 imaging studies compared to real-world follow-up.

Conclusion: Low DDL at 1 and 2 years can potentially predict freedom from AnE within 5 years in patients with pT2EL. DDL monitoring may help to skip imaging studies.

Keywords: endovascular aneurysm repair, type 2 endoleak, D-dimer

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OP-018

The technical improvement of the Venaseal Closure for primary varicose vein

Tomohiro Ogawa

Fukushima Daiichi Hospital, Department of cardiovascular surgery, Fukushima, Japan

Abstract

Aim: Venaseal Closure is the one of promising non thermal, non tumescent endovenous ablation for varicose veins. In the clinical results of Venaseal closure, most concerned adverse events are phlebitis, hypersensitivity reaction (HSR) includes systemic allergy. Although the major cause of HSR may be the leak of cyanoacrylates from inside vein to subcutaneous tissues, there is not hot discussion to prevent leakage of cyanoacrylates from inside vein. The purpose of this study is to show the clinical results especially adverse events of Vena Seal Closure with arranged IFU in our institute.

Material and Methods: 83 cases (total 100 legs, 93 GSV, 7 SSV) were able to be followed up more than 1 month in 118 consecutive cases (140 legs) underwent Venaseal Closure for primary saphenous varicose vein from October 2020 to January 2023, is participated in this study. The distribution of CEAP C class distribution was C2: 48%, C3: 39%, ≥C4: 13%. Arranged procedural points of Vena Seal Closure is the below, 1. Prevention of veinous wall injury during placement of venous sheath under ultrasound guide. 2. To compress of vein after Cyanoacrylates drop using the probe under ultrasound guide without compress delivery catheter for the prevention of attaching cyanoacrylates to the catheter. 3. To confirm the space between end of closure vein and the tip of delivery catheter before dropping Cyanoacrylates. Clinical results were evaluated from physical examination, the clinical assessments using VCSS, Aberdeen varicose vein questionnaire (AVVQ), and duplex ultrasound examination

Results: The saphenous closure rate of Venaseal Closure was 95% for average 7 months follow up. The rate of residual varicose vein was 13% at post 1 months. In regard with adverse events, Phlebitis like reaction: 8% (25% of legs with phlebitis like reaction were needed anti-inflammatory medicine), HSR: 4% (50% of legs with HSR were needed anti allergic medicine), thrombophlebitis: 4%, Endovenous induced thrombus extension (EIGT more than III) which are spontaneously resolved: 2%, and no VTE.

VCSS and AVVQ after operation improved significantly until postoperative 1 month.

Conclusion: Technical procedural improvement of Venaseal Closure may contribute to more safe and effective treatment for varicose vein.

Keywords: Venaseal closure, primary varicose vein, enodvenous ablation

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OP-019

Markers of vein-specific inflammation in patients with varicose veins after endovenous saphenous vein ablation and pharmacotherapy

Igor Suchkov, Roman Kalinin, Aleksey Kamaev, Nina Mzhavanadze

Ryazan State Medical University, Ryazan, Russia

Abstract

Aim: Varicose veins are among the most prevalent vascular disorders. To assess the level of parameters associated with vein-specific inflammation and endothelial dysfunction in patients with varicose veins undergoing endovenous saphenous vein ablation (EVLA) and pharmacotherapy.

Material and Methods: A single-center prospective cohort study included 64 patients with varicose veins, clinical class C2-C3 (CEAP). All subjects were divided into 3 groups: 1 – patients who underwent EVLA, 2 – patients who received micronized purified flavonoid fraction on top of EVLA, 3 – patients who received sulodexide on top of EVLA. Venoactive drugs were given for 2 months. Levels of E-selectin, MCP-1, VEGF, MMP-2, and MMP-9 were assessed in peripheral blood samples using ELISA at baseline and 2 months after treatment. We additionally assessed the quality of life (QoL) using CIVIQ-20 questionnaire.

Results: There were 42 females and 22 male patients, median age 41 (35-51). There was a decrease in E-selectin level in group 1 patients by 2 months (51.7±2.8 ng/ml at baseline vs. 44.5±1.9 ng/ml at 2 months, p=0.04), MCP-1 level (207.4±13.2 pg/ml vs 163.9±12.4 pg/ml, p=0.02), and MMP-2 level (342.5±14.8 ng/ml and 243.2±12.1 ng/ml, p<0.001); there were no statistically changes in VEGF and MMP-9 levels. There was a decrease in E-selectin, MCP-1, and MMP-2 levels as well as VEGF level (109.6±10.1 pg/ml at baseline vs 52.6±7.3 pg/ml at 2 months, p<0,001) in group 2 patients. Along with a decrease in E-selectin, MCP-1, and MMP-2 levels, there was a decrease in MMP-9 level (12.5±1.9 ng/ml at baseline vs. 6.1±1.4 ng/ml at 2 months, p=0.04) in group 3 patients. Additionally, there was an improvement in QoL in all three groups, especially in groups 2 and 3.

Conclusion: EVLA in combination with pharmacotherapy was characterized by statistically significant changes in E-selectin, MCP-1, VEGF, MMP-2, and MMP-9 levels as well as improvement of QoL.

Keywords: Endovenous saphenous vein ablation, micronized purified flavonoid fraction, sulodexide, vein specific inflammation

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OP-020

Anticoagulant therapy in obese patients with COVID-19

Igor Suchkov[1], Roman Kalinin[1], Andrey Agapov[2], Nina Mzhavanadze[1], Vladislav Povarov[1], Aleksandr Nikiforov[1]

[1]Ryazan State Medical University, Ryazan, Russia
[2]Ryazan Regional Cinical Hospital, Ryazan, Russia

Abstract

Aim: Obese patients require special attention when treated for COVID-19 due to increased risks of venous thromboembolism (VTE). To evaluate the safety of therapeutic-dose anticoagulation strategy and prophylactic-dose anticoagulation strategy in obese patients with COVID-19.

Material and Methods: The study involved 370 patients with COVID-19 who were hospitalized to a regional hospital in 2021 - 2022. All participants who were divided into 2 groups: group 1-151 (40.8%) subjects with obesity, median age 63 (56-69), and group 2 (control) - 219 (59.2%) subjects without obesity, median age 63 (51.5-71). All patients underwent physical examination, laboratory testing, ultrasonography of the lower extremity veins. All subjects received anticoagulation. Thrombotic and hemorrhagic complications were assessed within one year since the onset of the study.

Results: The groups were comparable in age. The number of female patients with obesity was higher than that of males: 108 (71.5%) and 43 (28.5%), accordingly ($p=0.008$). Patients with obesity were diagnosed with very severe COVID-19 more often as compared to subjects without obesity (20.5% and 4.6%, accordingly, $p<0.001$). Patients in group 1 had a higher prevalence of previous myocardial infarction ($p=0.024$), diabetes mellitus ($p<0.001$), and chronic venous disease ($p=0.002$). Obese patients required treatment in the ICU more often as compared to those without obesity (35.8% and 18.7%, accordingly, $p<0.001$); mechanical ventilation was associated with a poor prognosis. 77.5% of obese patients received therapeutic dose anticoagulation. VTE incidence was comparable in both groups. Rates of hemorrhagic complications were higher in group 1 patients as compared to group 2 (10.6% and 4.7%, accordingly $p<0.045$). Lethality rates were 28.9% in group 1 patients, 16.9% in group 2 patients ($p=0.011$).

Conclusion: The use of therapeutic-dose anticoagulation strategy in obese patients did not lead to a decrease of VTE rates but was rather associated with increased rates of hemorrhagic complications.

Keywords: Anticoagulation, obesity, COVID-19

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OP-021

Negative pressure wound therapy for fasciotomy closure after vascular trauma

Sedat Karaca, Zehra Unlu, Islam Yalic, Ece Pala, Umit Kahraman, Yaprak Engin, Cagatay Engin, Tahir Yagdi

Ege University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

One of the most common causes of admitted to emergency department patients with vascular trauma is sharps injury. Compartment syndrome can be one of its complications and it is defined as the inability of the fascia surrounding the compartments in the extremities to stretch despite edema and hemorrhage, and the development of secondary circulatory defects. Negative pressure wound therapy (NPWT) has been used successfully for recurrent wounds and healing defects that persist after surgery. The purpose of this study is to present compartment syndrome in a patient with multiple sharps injuries and its surgical treatment with negative pressure wound therapy. A 35-year-old male patient was brought to the emergency department by ambulance in poor general condition after a sharps injury. Computed tomography angiography of the patient showed no arterial circulation. Physical examination of the patient revealed that the arm was contracted, complete motor and sensory deficits were present, and no pulse could be obtained. The patient underwent emergency surgery and intraoperative assessment revealed that the patient's brachial artery was completely transected. The brachial artery was repaired by saphenous vein graft interposition. After surgical treatment, it was observed that the radial and ulnar pulses could not be obtained at the level of the wrist with increased pressure in the forearm. Examination revealed an appearance in the forearm compartments compatible with compartment syndrome, and a fasciotomy was decided upon. On 3rd postoperative day, NPWT was started as the wound edema decreased. After 3 sessions of NPWT it was decided that skin pressure would allow wound closure as the granulation tissue settled. The wound lips were debrided of granulation tissue and closed with 2/0 polypropylene sutures. No tissue tension was observed after wound closure. Compartment syndrome is one of serious clinical entity that can be a complication of vascular trauma. The emergent fasciotomy is needed after it is diagnosed. The wound closure after fasciotomy can take long time and it has a high risk for infections. NPWT can be one of the treatment options for closure for fasciotomy wound.

Keywords: Negative pressure wound therapy, vascular trauma, fasciotomy

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OP-022

Endovascular thrombectomy utilization in patients with deep vein thrombosis: Analysis of a tertiary hospital database

Alexandr Kuperin[1], Evgeny Seliverstov[1], Igor Lebedev[2], Igor Zolotukhin[1]

[1]Pirogov Russian National Research Medical University, Pirogov First City Hospital, Moscow, Russia
[2]Pirogov Russian National Research Medical University, Moscow, Russia

Abstract

Aim: The aim of the study was to assess the utilization of endovascular thrombectomy in patients with deep vein thrombosis (DVT) of the lower extremities in a tertiary care setting.
Material and Methods: We conducted a retrospective analysis of a tertiary hospital database from January to December, 2022. All records of patients admitted for DVT were extracted. The collected data included general patient's information, results of physical examination, duplex ultrasound, etc. Indications and contraindications for endovascular thrombectomy were thoroughly assessed.
Results: 1287 patients with DVT were referred to hospital. 469 (36%) were recommended to receive anticoagulation on an out-patient basis. 818 (64%) were admitted to hospital. Of them, 726 had proximal DVT, 92 had distal DVT. After analyzing of medical records, we found only 55 (4%) cases that could be potentially eligible for endovascular thrombectomy considering all possible indications and contraindications.
Conclusion: In a tertiary hospital setting only 4% of referred patients are potentially eligible for endovascular thrombectomy.

Keywords: Deep venous thrombosis, endovascular thrombectomy, postthrombotic syndrome, catheter-directed thrombolysis

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OP-023

Pinch-off syndrome, a rare and serious complication of subcutaneous port catheters: A case series

Nadide Ors Yildirim[1], Alperen Kutay Yildirim[2]

[1]Sincan Research and Training Hospital, Department of Anesthesiology and Reanimation, Ankara, Türkiye
[2]Gazi University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Subcutaneous port catheters (SPC) are an increasingly preferred type of vascular access in all chronic patients, who need long-term venous catheters for various treatments such as parenteral nutrition, antibiotic therapy, and chemotherapy. The use of SPC also brings some complications. Pinch-off syndrome (POS) is a quite rare (1-1.5%) but a dangerous complication because of the consequences it can produce. In literature, it is defined as the rupture of the subclavicular venous catheter as a result of compression between the first rib and the clavicle. More than 100 SPCs are implanted in our clinic. In this case series, we report four different cases of POS and our successful management. All patients had SPCs due to the necessity for long-term chemotherapy treatment following oncological surgery. In all patients, the common complaint was sudden and severe pain in the shoulder area. Although blood could not be taken from the catheter, fluid injections were done without any problem. It was found that catheters were completely dismantled and embolized at various locations in three patients. SPC was displaced to the right ventricle in two cases. In one of these cases, embolized SPC fragments caused cardiac arrhythmia. In literature it was also reported that embolization of catheter pieces into the ventricle can be fatal in patients by causing malignant arrhythmias. Moreover, embolization to the pulmonary artery was occurred in one case. Three cases belong to grade 3, involving a transection or fracture in SPC. However, in one case, we were able to diagnose POS in an early grade without any embolization by using fluoroscopy and contrast injection through SPC. According to these cases, it can be suggested that contrasted fluoroscopy imaging is necessary for the early diagnosis of POS in patients who are clinically suspected. The detection of patients in mild forms and early asymptomatic periods is important in order to avoid embolization of catheter parts and further morbidities. In the presence of clinical suspicion, all patients should be examined with contrasted fluoroscopy imaging. Although POS could not be confirmed with venography or radiological imaging, all catheters suspected of POS should be removed before any life-threatening embolization.

Keywords: Vascular access, subclavian vein, subcutaneous port catheters, pinch-off syndrome, embolism

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OP-024

Hybrid approach to thoraco-abdominal aortic aneurysm: A case report

Osman Eren Karpuzoglu, Murat Bastopcu, Berat Hasbal, Ahmet Demir, Kagan Usca

Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Hospital, Departmant of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Thoracoabdominal aortic aneurysms still require a difficult treatment process despite current technological advances. Hybrid treatment modalities using surgical and endovascular techniques together increase the spectrum of treatable patients and reduce mortality and morbidity. The patient is a thirty-nine-year-old male with a Marfan syndrome history and ascending, arcus, and descending aorta replacement due to acute Type A aortic dissection in 2021. CT angiography revealed an aneurysm of the descending and abdominal aorta. TEVAR was performed with a stent graft overlapping the distal 5 cm of the surgical graft to the proximal abdominal aorta. The day after, open surgical abdominal debranching to both renal arteries, Coeliak trunk, and SMA using Dacron Y grafts anastomosed to right distal CIA. Then EVAR was performed. On postoperative day 3, CTA revealed endoleak from the right accessory renal artery, proximal Coeliac trunk, and SMA. A GSV graft was interposed between the right accessory renal artery and the Dacron Y graft, proximal abdominal branches were suture ligated. The cerebrospinal drainage catheter was inserted before the TEVAR and actively drained for 72 hours postoperatively to lower the pressure. Unfortunately, paraplegia and urine inconsistency occurred. The patient was discharged to a rehabilitation center on postoperative day. Paraplegia is one of the most feared complications in this type of surgery. Spinal cord ischemia is observed 20% of the time. While thoracic spinal arteries can be partially preserved in open surgery, they are closed by endovascular technique. Therefore, CSF pressure should be kept low, as in our case, to ensure adequate spinal perfusion pressure. Mean arterial pressure and hematocrit values should also be kept at optimal levels. Both endovascular, open surgery and hybrid surgical methods should be evaluated to find the optimal technique for each patient. As it was a redo case, we preferred a hybrid operation because the aneurysm had severe adhesions to the surrounding tissue, inflamed and structurally weak. Thoracoabdominal aortic aneurysm repair operations are very complex and specialised operations. Performing such operations in centres equipped and experienced in surgical and endovascular intervention will help achieve low mortality and morbidity.

Keywords: Hybrid, thoracoabdominal, aortic, aneurysm

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OP-025

Which access is safer in EVAR: Open or percutaneous?

Osman Okan Ozocak, Yasin Yilmaz, Gulden Sari, Rifat Ozmen, Aydin Tuncay

Erciyes University, Faculty of Medicine, Department of Cardiovascular Surgery, Kayseri, Türkiye

Abstract

Aim: Endovascular aortic repair is commonly used nowadays for the treatment of thoracal and abdominal aortic pathologies.During endovascular aortic repair procedure open surgical cutdown and percutaneous acces performed for vascular access.The aim of this study is to compare the open surgical and percutaneous access for endovascular aortic repair regarding complications.

Material and Methods: Patients undergoing endovascular aortic repair for abdominal and thoracal aortic aneurysm between January 2017 and January 2023 were included. The patients were divided into two groups based on vascular access mehtod, namely percutaneous (pEVAR) and cutdown (cEVAR). Patient characteristics, perioperative and postoperative datas, and postoperative complications related to vascular access were recorded retrospectively.

Results: A total of 90 (155 acesses) patients (6 female, 84 male) was included. The mean age was 69.5±8.48 years. 67 patients underwent EVAR and 23 patients TEVAR. 41 patients and 68 acesses site in cEVAR group, 49 patients and 87 acesses site in pEVAR group were included. 28 patients EVAR and 13 TEVAR performed in cEVAR group, while 38 patients EVAR and 10 TEVAR performed in pEVAR group. The length of hospital stay (3.24–4.31 days) and the operating time (58±16.7–136±28 min) were shorter in the pEVAR group compared to the cEVAR group. In the postoperative period rate of decrease in plasma hemoglobin level (1.91–1.36 g/dL) and blood replacement requirement (1.34–0.43 U) were more in pEVAR group. Vascular access-related complications such as hemorrhage, hematoma, pseudoaneurysm and embolism were more in the pEVAR group (n=13, 16.1%) than in the cEVAR group(n=4, 7.3%). In addition, two patients in the pEVAR group occured hemorrhagic shock and one of them died.

Conclusion: Although percutaneous access for endovascular aortic repair have advance shorter operating time and shorter hospitalizing time, open surgical acces more safer for vascular access-related complications.

Keywords: Endovascular aortic repair, vascular access, surgical cutdown, percutaneous, complications

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OP-026

Extended compression decreases hyperpigmentation rate after sclerotherapy in patients with spider veins and telangiectasias

Askhat Sanbaev[1], Oksana Efremova[2], Rustyam Chabbarov[1], Alexander Pyatnitsky[1], Igor Zolotukhin[2]

[1]Omega Clinic LLC, Saratov, Russia
[2]Pirogov Russian National Research Medical University, Moscow, Russia

Abstract

Aim: To compare short-term and extended compression after sclerotherapy in patients with reticular varicose veins and telangiectasias.
Material and Methods: A comparative non-randomized study included 72 patients with C1 disease. All patients underwent sclerotherapy with 0.5% and 1% polidocanol. In the 1st group, compression was prescribed for day and night wearing for 3 days after each procedure. Between the procedures and until the end of the follow-up patients did not use compression. In the 2nd group regimen for the first 3 days was the same. Between procedures and during follow-up patients used class 2 compression stockings for at least 5 days a week. Incidence and severity of skin hyperpigmentation, incidence of telangiectatic matting 4 months after the first session.
Results: No significant differences in patient characteristics between groups were registered. At 4 months incidence of hyperpigmentation in group 1 (short-term compression) was 29%, in group 2 (long-term compression) — 6% (p=0.011). Telangiectatic matting was found in 17.6 and 2.8% patients, resp. (p=0.052). Hyperpigmentation severity measured by 4-point scale was 0.53±0.8 and 0.08±0.36, resp. (p=0.041). Long-term compression was well tolerated by patients with no cases of interruption of compression. In both groups significant cosmetic improvement was registered. There was also a significant improvement in the quality of life in both groups.
Conclusion: Incidence and severity of hyperpigmentation and the rate of matting after sclerotherapy in C1 patients significantly decreased with the use of compression for 4 months compared with no compression.

Keywords: Reticular varicose veins, spider veins, telangiectasias, sclerotherapy, hyperpigmentation, compression

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OP-027

Treatment of reticular veins with a 1064 nm long-pulsed Nd:YAG laser

Oksana Bukina

Derzhavin Tambov State University, Tambov, Russia

Abstract

Aim: Sclerotherapy is the gold-standard treatment for reticular veins. However, this method is invasive and has a high frequency of long persistent hyperpigmentation. It is a reason to find another method of treatment. The aim of our study was the efficacy assessment of a 1064 nm long-pulsed Nd:YAG laser for the treatment of reticular leg veins and analysis of frequency along with duration of hyperpigmentation.

Material and Methods: This is a pilot study. The inclusion criterion was female volunteers aged between 30 and 67 years with reticular veins in C1 patients who were treated with the Nd:YAG laser with a wavelength of 1064 nm, a 7 mm spot, pulse length of 50 msec and fluency 140 J/cm2. Assessment of vessel clearing and side effects was conducted one, two and six months using before and after photographs of the leg vessels using a six-point scale from 0 (no change) to 5 (100% cleared).

Results: A total of 7 women completed the 6-month follow-up. The median score of the vessels clearing (interquartile range) was 5 (3–5) after six months. Hyperpigmentation was observed in 6 patients (86%) after one month and in 4 patients (57%) after six months. By analyzing the severity of hyperpigmentation after the treatment we determined that the skin tone was rather dark after one month. But there was a very slight hyperpigmentation at the end of the follow-up period. Telangiectatic matting developed in one patient. We did not find other side effects.

Conclusion: Reticular veins of the lower extremities can be successfully treated with the Nd:YAG laser. But hyperpigmentation occurs frequently and persists during six months and more, same as with sclerotherapy. A comparative study of the 1064 nm Nd:YAG long pulse laser with sclerotherapy alone and combined treatment of the 1064 nm Nd:YAG long pulse laser and sclerotherapy needs to be carried out.

Keywords: Reticular veins, long-pulsed Nd:YAG laser, hyperpigmentation

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OP-028

AAA open repair for over 80 ages; A retrospective single-center analysis

Takanori Nishimura, Shintarou Ninomiya, Takafumi Akai, Takatoshi Furuya, Motoki Nagai

Asahi General Hospital, Department of Surgery, Chiba, Japan

Abstract

The world's population is aging rapidly, and this trend is evident particularly in Japan. Endovascular aneyrysm repair is often selected due to age. Therefore, it has become necessary to perform conversion surgery considering the years after surgery. Although we have always preferentially selected open surgery for elderly patients who have maintained their ADL, there is little research on the surgical outcomes of open surgery for abdominal aortic aneurysm in elderly patients. Therefore, we conducted a retrospective study of surgical outcomes in our hospital to evaluate whether avoiding open surgery due to patients' age is appropriate. The records of 353 consecutive patients who underwent open surgery for abdominal aortic aneurysms at the Asahi General Hospital from January 2012 to August 2023 were retrospectively reviewed. We divided the patients into two groups according to their age: the patients under the age of 80 as a young group (n=250), and 80 or over as an elderly group (n=101). There were 96 octogenarians and 5 nonagenarians. There was a tendency for a higher proportion of elderly female patients. Clinical features were compared between two groups. In the elderly group, two patients (1.96%) died within 30 days after surgery. Both two patients, 91 and 83 years old, had urgent and emergent surgery. One died from disseminated intravascular coagulopathy, the other died from aspiration pneumonia. In the younger group, two patients (0.80%), 79 and 70 years old, died within 30 days after elective surgery due to aspiration pneumonia and cerebral infraction. Although there was a significant difference in the elderly group in terms of longer surgical time, there were no statistically significant difference in bleeding and transfusion volume, transfusion rate, and length of hospital stay. In the elderly group, 56 patients (54.9%) were discharged within a week after surgery, and 84 patients (83.2%) within ten days. In conclusion, patients over 80 can safely undergo elective open surgery, and most of the elderly patients can be discharged from our hospital within 10 days after open surgery.

Keywords: Abdominal aortic aneurysm, open surgery, elderly

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OP-029

Review of lower extremity peripheral arterial trauma in Northern Singapore

Ken Chua, Julia Poh Hwee Ng, Chuo Ren Leong, Dexter Yak Seng Chan

Khoo Teck Puat Hospital, Department of General Surgery, Vascular Surgery, Singapore

Abstract

Aim: Traumatic peripheral artery injury (PAI) carries a high morbidity rate and amputation rate. A consensus regarding diagnostic and treatment algorithms for PAI is still not clear. We describe our experience with the surgical management of lower extremity PAI secondary to blunt trauma in a regional hospital in Singapore.

Material and Methods: A retrospective study was done of all patients who presented to our institution with lower extremity PAI secondary to trauma fron January 2014 to May 2023. Patients were clinically assessed to have possible PAI to the lower limb with further confirmation on computed tomography (CT) peripheral angiograms.

Results: Nine patients sustained a total of 5 popliteal artery injuries, 2 superficial femoral artery injuries, 1 common femoral artery injury and 1 anterior tibial artery injury in the 9-year study period, with a mean age of 46.8 years (21-69 years). 77.7% had concomitant adjacent orthopaedic fractures, while 11.1% had contralateral limb fractures. 22.2% of patients underwent bovine patch repair, 55.5% underwent bypass grafting with harvesting of the ipsilateral saphenous vein, and 22.2% underwent an end-to-side / end-to-end primary anastomosis repair. Time to repair was within 10 hours for 66.6% of patients. All patients with adjacent orthopaedic fractures underwent external fixation of the orthopaedic injury prior to vascular repair. Intra-operative fasciotomy was performed in 66.6% of patients. 30-day limb amputation rate was zero.

Conclusion: We advocate the use of CT angiography where possible when suspecting a vascular injury. Early involvement and collaboration between both orthopaedic and vascular teams is crucial, though the sequence of management remains controversial. Expedient repair with minimal tension and narrowing of the vessel is key in the surgical management of PAI. Endovascular repair should be reserved for hemodynamically stable patients with minor arterial injuries or concomitant traumatic injuries. Prophylactic fasciotomy is recommended as early fasciotomy is an independent predictor of limb salvage with significantly fewer wound infections. Prompt recognition of an “at-risk” limb, expedient diagnosis, early multidisciplinary involvement and vascular repair are all paramount to optimizing limb salvage rates in patients with traumatic lower extremity PAI.

Keywords: Peripheral artery injury, blunt trauma, vascular repair, popliteal artery injury, femoral artery injury

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OP-030

Preoperative and postopertive vascular characteristics changes on ultrasound in patients undergoing arteriovenous fistula surgery

Anh Tuan Vo

Dong Nai General Hospital, Department of Thoracic and Cardiovascular Surgery, Dong Nai, Viet Nam

Abstract

Aim: Early postoperative vascular ultrasound can predict the maturity of arteriovenous fistulas as well as detect complications. To present the characteristics of upper extremity vessels on ultrasound prior to AVF surgery and to analyze the changes in vessel size and flow rate postoperatively.

Material and Methods: We prospectively describe 80 cases of AVF formation at Dong Nai General Hospital from April 2022 to April 2023. Vascular ultrasound evaluations were conducted preoperatively and at 1 day, 2 weeks and 6 weeks postoperatively to evaluate the diameter and the blood flow of vessels used to create AVFs.

Results: Eighty patients underwent AVF surgery (median age 61 (48–65) years; 50% male; 81.25% forearm AVFs). In forearm AVFs, the median diameter of the feeding artery and the draining vein were 2.12 (1.83–2.5) mm and 3.38 (2.9–3.80) mm, respectively. In upper-arm AVFs, the median diameter of the feeding artery and the draining vein were 3.67 (3.45–3.99) mm and 4.0 (3.64–4.05) mm, respectively. The percentage of AVFs without events during the study period was 81.25%. The draining vein flow rate showed a strong correlation with the brachial artery flow rate (R2=0.94, correlation coefficient=0.88). The diameter and flow rate of the draining vein at 6 weeks post-surgery displayed significant correlations with their respective values at 2 weeks post-surgery, with correlation coefficients of 0.92 (R2=0.66) and 1.04 (R2=0.86), respectively. After 6 weeks post-surgery, non-diabetic patients exhibited larger draining vein diameters and higher flow rates compared with diabetic patients.

Conclusion: The study highlighted the predictive potential of vascular ultrasound at the 2-week postoperative mark for AVF maturation. The brachial artery flow rate can serve as a reliable indicator of AVF flow rate. Given the tendency for diabetic patients to exhibit smaller draining vein diameter and lower AVF flow rate than non-diabetic patients, particular caution is recommended when performing preoperative ultrasound mapping in this patient population.

Keywords: Arteriovenous fistula, vasular characteristics, mapping echography

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OP-031

Enhancing surgical skills and confidence: The impact of an open thoracoabdominal cadaveric workshop in Taiwan

Chung Dann Kan[1], Wei Ling Chen[2]

[1]National Cheng Kung University Hospital, College of Medicine, Department of Surgery, Division of Cardiovascular Surgery, National Cheng Kung University, Tainan City 70101, Taiwan; Taiwan Society of Vascular Surgery
[2]Taipei Veterans General Hospital, Department of Biomedical Engineering, Taipei, Taiwan

Abstract

Aim: With the increasing prevalence of endovascular therapy for aortic lesions, the practice of open thoracoabdominal surgery has significantly declined. This shift has raised concerns about the limited opportunities for young vascular surgeons to acquire proficiency in open surgical techniques. In this era dominated by endovascular therapy, it is crucial to address the potential decline in confidence and skill levels among surgeons in performing open thoracoabdominal surgery. To tackle this challenge, the Taiwan Society of Vascular Surgery (TSVS) has successfully organized and conducted a cadaveric workshop for three consecutive years, aimed at providing young surgeons with the opportunity to learn and master these surgical skills. These cadaveric teachers provide an immersive experience, akin to real surgery, allowing surgeons to gain invaluable practical insights.

Material and Methods: Participants attended a comprehensive 2-day cadaveric workshop focused on open thoracoabdominal aortic surgery, encompassing theoretical knowledge and practical simulations. Participants completed written tests evaluating their procedural knowledge and assessed their self-perceived confidence and procedural competence.

Results: In 2022, 23 trainees successfully completed the workshop. Key participant characteristics revealed that 75% were affiliated with medical centers, 58.3% held the title of attending physician, and 66.7% had <5 years of experience. The workshop significantly improved familiarity with the disease process, operative confidence, and self-perceived competency (all $p<0.001$). Young surgeons benefited more, and job attributes did not influence post-workshop evaluations. Trainees from non-medical center backgrounds showed greater progress. 95.4% expressed satisfaction with the workshop. An overwhelming 95.4% of participants expressed satisfaction with the overall workshop experience.

Conclusion: Now in its third year, the cadaveric workshop, with international instructors and innovative teaching methods, consistently enhanced clinical surgeons' confidence and skills in thoracoabdominal aortic open surgeries. We invite surgeons across Asia to participate in the TSVS Open Thoracoabdominal Cadaveric Workshop in July 2024 in Hualien, Taiwan. This cadaveric workshop organized by TSVS. This study received support from NSTC 112-2410-H-006-071-MY2 and the MOE Teaching Practice Research Project, Taiwan PMN1120940.

Keywords: Cadaveric workshop, thoracoabdominal surgery, surgical skills

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OP-032

The hybrid approach for aortic disease - the role of procedure in Vietnam today

Uoc Huu Nguyen, Son Tung Nguyen, Thang Ngoc Duong, Son Duy Hong Phung, Tien Nhat Le

Viet Duc University Hospital, Cadiovascular and Thoracic Center, Hanoi, Vietnam

Abstract

Aim: Hybrid is a treatment solution for aortic pathology in the arch and suprarenal areas, which has been strongly developed in Vietnam for more than 10 years. With the development of Chimney technique, fenestration and branches-stent in the world today, where is the role of Hybrid? That is the main purpose of this report.
Material and Methods: Overview report based on the results of treatment of aortic pathology from 2012 to August 2023, at a center with the earliest and highest number of cases applying the Hybrid method in Vietnam – Viet-Duc hospital.
Results: There were 191 cases of aortic arch disease, and 12 cases of suprarenal aortic disease. The period of strongest growth was from 2015 to 2020, then it tended to decrease due to the COVID-19 epidemic and the development of FET technique (from 2019, 120 cases), fenestration for LCA (from 2020, 55 cases); There were only 3 Chimney cases for TABC, with 1 case of cerebrovascular accident – with arches pathology. For suprarenal and thoraco-abdominal aortic disease, Hybrid still has the advantage in safety (12 cases), while there are only 1-2 cases of fenestration and 1 case of branch-stents. A developed vascular surgical basis is an important criterion to ensure the success of the Hybrid method.
Conclusion: If there is good vascular surgery expertise, Hybrid is still an effective solution for treating aortic diseases in the arche and suprarenal areas. Fenestration helps reduce the Hybrid rate if only LCA recanalization is required. FET is a good solution when many arteries in the base of the neck need to be revascularized and the patient's general condition allows for severe open-heart surgery.

Keywords: Hybrid, aortic disease, Viet Duc hospital

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OP-033

Evaluating intracerebral hemodynamics with ophthalmic artery pulse wave doppler in carotid artery stenosis

Hakan Guven[1], Temmuz Taner[2]

[1]Heart and Arrythmia Hospital, Department of Cardiovascular Surgery, Bursa, Türkiye
[2]Bursa City Hospital, Department of Cardiovascular Surgery, Bursa, Türkiye

Abstract

Aim: Atherosclerotic carotid artery disease stands as a significant contributor to the occurrence of ischemic strokes and transient ischemic attacks. Cerebral blood flow after stenotic area is important for the blood supply of the brain. Blood flow in the extracranial segment of the carotid artery can be detected by Doppler USG, but in measuring intracranial blood flow measuring systems are highly invasive and carry the risk of infection and complications. In our study, we investigated ophthalmic artery Pulse Wave Doppler USG measurement as a non-invasive method to assess intracerebral blood flow in patients with carotid artery stenosis.

Material and Methods: The flow velocities of both ophthalmic arteries were measured using transorbital pulse wave Doppler ultrasonography (USG) in 22 patients with over 70% asymptomatic stenosis in a unilateral internal carotid artery, while no stenosis was detected in the other carotid artery by Doppler USG. To evaluate the ophthalmic artery (OA), the depth setting of the Doppler sample volume ranged from 20 to 60 mm. Ophthalmic artery measurements on the stenotic side were compared to those on the normal side.

Results: Internal carotis artery peak systolic velocity in normal side to be 112.4±14.3 cm/sec, while in carotid artery stenosis, it was 245.6±19.1 cm/sec ($p<0.001$). Ophthalmic artery peak systolic velocity in normal eye was found to be 32.1±7.3 cm/sec, while in eye with carotid artery stenosis, it was -15.9±27.2 cm/sec ($p<0.001$). There was a positive and strong correlation between ICA and ophthalmic artery PSV in patients with carotid artery stenosis ($r=0.00755$).

Conclusion: In carotid artery stenosis, ophthalmic artery flow measurement may be useful to determine the intracerebral flow of the stenotic carotid artery in the grey areas of the indication for intervention. This may be particularly meaningful in hard plaque stenoses. In addition, it can be investigated as a method that can be used to decide the necessity of shunting in future studies.

Keywords: Carotid artery stenosis, ophtalmic artery, peak systolic velocity

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OP-034

Association between body mass index and outcomes of open abdominal aortic aneurysm repair

Joon Kee Park[1], Shin Young Woo[1], Shin-Seok Yang[1], Dong Ik Kim[1], Young Wook Kim[2], Yang-Jin Park[1]

[1]Sungkyunkwan University School of Medicine, Samsung Medical Center, Department of Surgery, Division of Vascular Surgery, Seoul, Korea
[2]Incheon Sejong Hospital, Department of Surgery, Division of Vascular Surgery, Incheon, Korea

Abstract

Aim: To evaluate the association between body mass index (BMI) and postoperative outcomes in open abdominal aortic aneurysm (AAA) repair.

Material and Methods: We reviewed the vascular surgery database of a single tertiary referral center for all patients who underwent open AAA repair due to degenerative etiology from 1996 to 2021. To analyze the effect of BMI, patients were classified into four groups according to the Asian-Pacific classification of BMI: underweight (UW) (<18.5 kg/m^2), normal weight (NW) (18.5–22.9 kg/m^2), overweight (OW) (23–24.9 kg/m^2), and obese (OB) (≥25 kg/m^2). The $\chi 2$, Fisher's exact, and Kruskal-Wallis tests were used to compare demographics, comorbidities, radiologic findings, surgical details, and 30-day and one-year mortality rates between the four groups. Cox's proportional hazards model was performed to determine factors associated with mortality. A Kaplan-Meier survival analysis was performed, and the differences were analyzed by a log-rank test.

Results: Among a total of 678 patients, 22 were classified as UW (3.2%), 200 as NW (29.5%), 183 as OW (27.1%), and 273 as OB (40.1%). Higher serum albumin level was associated with decreased 1-year mortality (hazard ratio [HR], 0.3; 95% confidence interval [CI], 0.15–0.63; P=0.001). UW patients had a higher 1-year mortality rate than NW patients (HR, 3.67; 95% CI, 1.02–13.18; P=0.046). OB patients had a lower overall mortality rate than NW patients (HR, 0.73; 95% CI, 0.53–1; P=0.05).

Conclusion: Low BMI (<18.5 kg/m^2) and low serum albumin level were associated with poor 1-year survival after elective open AAA repair. These patients also need more careful preoperative intervention, like weight gain or nutritional support, for better outcomes. The obesity paradox existed in our study; high BMI (≥25 kg/m^2) was associated with better overall survival after elective open AAA repair.

Keywords: Abdominal aortic aneurysm, open surgical repair, body mass index, treatment outcome

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OP-035

Results of thoracic endovascular aortic repair in >7 cm isolated thoracic aortic aneurysm: Early term, single center experience

Serkan Ketenciler, Mehmet Ali Yesiltas, Ilhan Ozgol, Cihan Yucel, Seran Gulbudak

İstanbul Prof. Dr. Cemil Tascioglu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Considering the mortality of surgical treatment of thoracic aneurysms, its use has become increasingly widespread with the use of thoracic endovascular aortic repair (TEVAR) However, unique problems during the follow-up period (endoleak, need for additional stents, continuation of aneurysm dilatation, etc.) continue in the patient group who underwent TEVAR. Additional pathologies are more common during the follow-up period, especially in thoracic aneurysms >7cm.In this study, we conducted in our own clinic in this patient group. We aimed to share our TEVAR follow-up results.

Material and Methods: We retrospectively screened patients who applied to our clinic with thoracoabdominal aneurysm between January 2012 and January 2022. When all patients were screened, there were 212 patients. Conditions such as timing (emergency/elective), etiology (aneurysm, traumatic, septic), anatomical location and diameter of the aneurysm, suitability for TEVAR were taken into consideration, and 38 of these patients were included in our study.

Results: The average age of the patients was 70±10.5 years. 8 patients were female and 30 patients were male. The patients' BMI was 27.4±3.9. 33 patients had hypertension. The aneurysm diameter of the patients was 7.7±0.9. Additional TEVAR grafts were used in 5 patients, and two additional TEVAR grafts were used in 2 patients. Cardiac complications developed in 2 patients and vascular complications developed in 3 patients. Renal failure developed in 5 patients after the procedure. The intensive care unit stay was 2±3.2 days. After the procedure, endoleak developed in 3 patients. Since it was not advanced, it was followed up and the endoleak resolved spontaneously in 2 patients. An additional stent was required in 1 patient. In 1 patient who did not have an endoleak, an endoleak developed in the 6th month and an additional stent was placed.Hospital mortality occurred in 2 patients with cardiac complications.There was mortality in 2 patients during follow-up.

Conclusion: TEVAR is associated with relatively low early morbidity and mortality and can be performed in large thracic aortic aneurysm.Regular follow-ups should be performed in the medium and long term, and additional intervention should be performed if any endoleak develops. Longer-term follow-up should be done with a larger number of patients.

Keywords: Thoracic endovascular aortic repair, thoracic aneurysm, aortic aneursym, endovascular treatments

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OP-036

Venous thromboembolism risk assessment model for Asian surgical patients: A lesson from Caprini

Limi Lee[1], Ngoh Chin Liew[2]

[1]Monash Health, Department of Vascular Surgery, Clayton, Australia
[2]Universiti Putra Malaysia, Faculty of Medicine and Health Sciences, Department of Surgery, Serdang, Malaysia

Abstract

Aim: Rising trend of venous thromboembolism (VTE) incidence in Asia has called for improved risk assessment and thromboprophylaxis. Caprini risk assessment model (RAM) validation in Asia is contentious due to differing incidence. We created a new RAM, adopting Caprini model based on local factors with aim to compare VTE risk predictability between both models.
Material and Methods: VTE risk factors were retrospectively identified for 4206 Asian surgical inpatients. Logistic regression was used to compute the risk factors and levels odds ratios (OR) for VTE within 90 days of hospitalization. Receiver operating characteristics curves were performed to determine the area under curve (AUC) for both RAMs.
Results: Incidence of VTE was 0.5%; by risk level: Caprini RAM–low, 0.16%; moderate, 0.37%; high, 2.12%; New RAM–low, 0.09%; moderate, 1.91%; high, 3.47%. Age 40-60 (OR=11.39; 1.93–67.08), age >60 (9.12; 1.46–57.04), pregnancy (118.83; 8.78–1608.4), obesity, BMI ≥30 (18.06; 2.91–112.20), history of prior VTE (172.34; 37.05–801.52) and thrombophilia (714.12; 7.62–66886.4) were significantly associated with VTE. Caprini high risk level (5.97; 2.13–16.69), new RAM moderate (16.49; 4.45–61.17) and high (18.27; 3.79–87.98) were highly associated with VTE. Only 279 patients received VTE prophylaxis. AUC difference between Caprini (0.795) and new RAM (0.849) was statistically significant, P=0.004.
Conclusion: VTE incidence in Asian surgical patients is low. Thromboprophylaxis is suboptimal in this region. Our RAM has higher VTE risk predictability than Caprini's. This study supports use of our individual RAM with recommendations from Asian VTE guidelines.

Keywords: Venous thromboembolism, venous thrombosis, pulmonary embolism, risk assessment

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OP-037

Short-term results of iatrogenic injuries to the abdominal surgeries

Mehmet Ali Yesiltas, Yasar Gokkurt, Melek Yilmaz, Merve Yakupoglu

İstanbul Prof. Dr. Cemil Tascioglu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Although rare, vascular injuries are encountered in elective abdominal or pelvic surgeries. When encountered, any problem in the relevant artery/vein (occlusion, stenosis, dissection, pseudoaneurysm or arteriovenous fistula) is associated with mortality and morbidity in both the short and long term. We aimed to share our treatment approach and short-term results in vascular injuries in elective cases.

Material and Methods: In this study, patients who were elective abdominal and pelvic surgery carried out by a vascular surgeon in iatrogenic vascular injury between January 2018 and July 2023 were examined retrospectively. All patients with noniatrogenic vascular injuries were excluded from the study.

Results: In the study, a total of 72 patients had iatrogenic vascular injuries and underwent vascular surgery. The average age of the patients is 50.8±14.6 years. 28 (38.8%) of the patients were male and 44 (61.1%) were female. Iatrogenic vascular injury occurred in 21 surgeries (29.2%) in which urological surgical interventions were performed, in 35 cases (48.6%) in which gynecological surgical treatments were performed, and in 16 cases (22.2%) in which abdominal surgery was performed. 29 patients had isolated arterial injuries, 37 patients had isolated venous injuries, and 6 patients had both arterial and vein injuries. Embolectomy was performed in 24 patients. Primary suturation was performed in 22 patients, end-to-end anastomosis was performed with vein graft in 13 patients, and end-to-end anastomosis was performed with dacron/PTFE in 11 patients. In 10 patients, native vein end-to-end anastomosis was performed. Considering the 30-day follow-up, it was observed that 3 patients had arterial occlusion and 2 patients had venous thrombosis. There was no mortality either in hospital or during 30-day follow-up.

Conclusion: Vascular injuries occur rarely in elective abdominal and pelvic surgeries. Preoperative, multidisciplinary evaluation will minimize vascular complications, especially in mass excisions and lymph node dissections with close vascular proximity.

Keywords: Iatrogenic vascular trauma, iatrogenic injuries, abdominal surgeries

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OP-038

Surgical management of the intra-abdominal compression syndromes

Volkan Burak Taban[1], Serkan Yildirim[2], Abdullah Guner[3], Ozgur Altinbas[4], Yuksel Dereli[2]

[1]Şırnak State Hospital, Department of Cardiovascular Surgery, Şırnak, Türkiye
[2]Necmettin Erbakan University, Meram Medical Faculty, Department of Cardiovascular Surgery, Konya, Türkiye
[3]Beyhekim Training and Research Hospital, Department of Cardiovascular Surgery, Konya, Türkiye
[4]Gaziantep University, Vocational School of Health Services, Department of Operating Room Services, Gaziantep, Türkiye

Abstract

Aim: Intraabdominal compression syndromes are congenital vascular pathologies that occur when vascular structures in abdomen and pelvis are compressed by next anatomical structures and can cause serious morbidities. Although these are difficult to diagnose,the development of dynamic imaging methods such as ct angiography has increased diagnostic possibilities and vascular surgeons frequently encounter these syndromes today.

Results: Intraabdominal compression syndromes encountered in our clinic in the last 10 years were retrospectively analyzed.12 patients were diagnosed as Nutcracker syndrome, 1 patient as median arcuate ligament syndrome (MALS), 1 patient as superior mesenteric artery syndrome (known Wilkie's syndrome) and 1 patient asspontaneous SMA pseudoaneurysm. The mean age was 22.8±11 years. Only 1 patient had hypertension as a comorbidity. Of the 12 patients with Nutcracker syndrome, 7 (58%) had hematuria and 8 (66%) had proteinuria on urinalysis. In patients with MALS syndrome, Wilkie's syndrome and SMA pseudoaneurysms, no significant laboratory findings were observed and most important symptom in all patients were persistent pain after meals.

Conclusion: Vascular compression syndromes are the most challenging group of diseases in vascular surgery that can severely impair quality of life of usually young and healthy individuals. However diagnostic approach for any of them not yet standardized. Nutcracker syndrome refers to compression of left renal vein most commonly between the abdominal aorta and superior mesenteric artery. Its symptoms can range from asymptomatic hematuria-proteinuria to severe pelvic congestion. Most of our patients presented with abdominal pain and hematuria-proteinuria. Another syndrome is median arcuate ligament syndrome (MALS), which describes clinical picture associated with direct compression of the celiac artery by the median arcuate ligament and characterized chronic abdominal pain. The presenting symptom of our patient was persistent pain. Superior mesenteric artery syndrome is characterized by abdominal pain and vomiting caused by compression of the third part of the duodenum by the SMA. Spontaneous SMA pseudoaneurysm is often asymptomatic, which usually occurs after trauma,infection and surgery. It is a rare clinical entity that can cause persistent abdominal pain as it occurred in our patient. Abdominal compression syndromes are rare and one of the most complicated conditions that vascular surgeons deal with. Considering that widespread use of diagnostic methods has increased the frequency of encounters in recent years,largecale descriptive studies are needed to increase the awareness of vascular surgeons about these syndromes.

Keywords: Vascular surgery, nutcracker syndrome, median arcuate ligament syndrome, superior mesenteric artery syndrome, Wilkie's syndrome, vascular compression syndromes

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OP-039

Comparison of long-term results of patency rates of saphenous vein graft and ring graft used in subclavian artery injuries resulting from penetrating trauma

Hasan Toz

İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Subclavian artery injury is a rare trauma with high mortality and morbidity in case of injury.In this study, we retrospectively examined graft patency rates according to the graft used in patients with penetrating trauma subclavian artery injury.
Material and Methods: In this study, patients who were admitted to Bakırköy Dr. Sadi Konuk Training and Research Hospital due to penetrating subclavian artery injury between January 2012 and January 2022 were evaluated.The general condition of the patients when they arrived at the hospital, demographic data, injury type, vascular repair, peroperative and postoperative data were analyzed. Postoperative patency rates of vascular repair options, length of hospital stay, and complications were recorded.
Results: A total of 73 patients with subclavian artery injuries due to penetrating trauma were retrospectively examined.These patients were divided into 2 groups.In the first group, 38 (52%) patients' injuries were repaired with saphenous vein graft.In the second group, 35 (47.9%) patients' injuries were repaired with ring-shaped polytetrafluoroethylene (PTFE) graft.Patients who underwent subclavian artery primary repair were not included in the study.15 (20.5%) patients underwent emergency surgery without any imaging due to hypovolemic shock.Other surgical patients were examined with computed tomographic angiography (CTA).Graft patency rates were evaluated with thoracic and upper extremity CTA at the 1st and 2nd years.At the end of the first year, the graft was fully patent in 38 (100%) patients who underwent saphenous vein graft interposition.In the second group, the graft was open in 31 (88.5%) patients. In one patient in the second group, an above-elbow amputation was performed because the tissue defect was large and reinfections continued.Mortality did not occur in either group.
Conclusion: The risk of subclavian artery injury is rare in penetrating traumas.Once detected, revascularization should be performed immediately.Although grafts will be used in revascularization, we think that autologous grafts should be used primarily because infection rates are lower and patency rates are higher.

Keywords: Subclavian artery, vascular trauma,vein graft

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OP-040

Hybrid approach to the treatment patients with acute ischemic stroke and tandem occlusion in anterior circulation

Bulat I Zagidullin[1], Ramis A Yakubov[1], Yulia S Mukhamadieva[1], Marat F Mukhamadeev[1], Roman A Dzhumabaev[1], Radik R Khafizov[1], Dmitriy A Iadykov[1], Artur I Khayrutdinov[1], Yuriy N Markov[1], Evgeniy S Dumanyan[1], Ilias R Iakubov[2], Mikhail Yu Volodiukhin[3]

[1]Regional Emergency Medical Center, Naberezhnye Chelny, Republic of Tatarstan, Russia
[2]Kazan State Medical University, Kazan, Republic of Tatarstan, Russia
[3]Interregional Clinical Diagnostic Center, Kazan, Republic of Tatarstan, Russia

Abstract

Aim: Tandem lesion - severe stenosis or occlusion of the extracranial part of internal carotid artery (ICA) accompanied with ipsilateral intracranial occlusion and can present among approximately 15-28% of patients with ischemic stroke. Treatment of such group of patients is challenging due to poor prognosis, severe disability, and increased mortality in comparison to single occlusions. To evaluate the efficacy and safety of mechanical thrombectomy in combination with carotid endarterectomy (CEA) in tandem lesions of the carotid arteries in acute ischemic stroke.

Material and Methods: 7 hybrid interventions were performed on acute stroke patients with tandem lesions of the ICA from January 2023 to June 2023. The age of the patients was 57±8 years in average. All patients were presented to hospital within a therapeutic window of <6 hours with ASPECTS 10, NIHSS 12±6. 5 patients received thrombolytic therapy prior to interventions. ICA occlusion with intracranial large vessel artery occlusion (LVO) was observed in 5 cases, subtotal occlusion of the ICA with LVO was presented in 2 cases. The strategy of "proximal-distal-proximal" treatment with an assessment of invasive blood pressure monitoring was used in all cases. All patients were treated with thrombectomy from the cerebral arteries with CEA.

Results: Blood flow was successfully restored (mTICI2b - 3) in all cases. The average time of operation was 118±12 min. The average duration of hospitalization was 14±3 days. CT control 24 hours after operations showed intracerebral hemorrhage (ICH) HI2 (ECASS) with small ischemic foci in the blood supply zone of the affected artery in 2 cases, PI1 in 1 case, ischemic foci and ICH were absent in 2 cases, small foci of ischemia without symptomatic intracerebral hemorrhage (sICH) were found in 2 cases. All patients experienced regression of symptoms to an average of NIHSS <4 after 24-48 hours. All patients had mRS at 90 days of 0-2 points. Mortality was 0% during the presented period at 90 days.

Conclusion: Primary result showed that hybrid approach in the treatment of acute ischemic stroke and tandem lesion of the ICA is effective and safe. Further research is required to reliably prove the effectiveness of this technology.

Keywords: Acute ischemic stroke, tandem lesion, internal carotid artery, hybrid interventions

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OP-041

Does the use of a double ring slim fiber for EndoVenous Laser Ablation of varicose veins make sense? Results of a physician-initiated study

Jurgen Verbist[1], Fien Gryffroy[1], Wouter Van Den Eynde[1], Veerle Laeremans[2], Caroline Heerinckx[2]

[1]Imelda Hospital, Department of Thoracic and Vascular Surgery, Bonheiden, Belgium
[2]Jessa Hospital, Department of Vascular Surgery, Hasselt, Belgium

Abstract

Aim: Fiber tip carbonization used to be the Achilles' heel of EndoVenous Laser Ablation (EVLA), as it leads to unwanted side-effects. The use of 1470 nm diode-lasers in combination with radial fibers signified an important improvement. Developing a double ring radial fiber, was considered the next step to further reduce the risk of fiber tip carbonization. This should result in even better clinical results, especially concerning postoperative pain. However, data specifically on double ring fibers were lacking. The objective of this physician-initiated study was to investigate the safety, effectiveness and durability of a double ring slim fiber.

Material and Methods: A prospective, multicenter, non-randomized, observational study was set up to evaluate procedural details/outcomes, post-operative adverse events and re-interventions up to 12 months in 150 patients. Clinical success, anatomic success and postoperative pain were assessed using the Venous Clinical Severity Score (VCSS), duplex ultrasonography and a Visual Analog Scale (VAS) respectively. Fiber integrity was evaluated at the end of the procedure.

Results: From June 2019 to March 2020 231 limbs were treated in 107 women and 43 men. Depending on duplex findings the greater saphenous vein (GSV), smaller saphenous vein (SSV), anterior accessory saphenous vein (AASV) and posterior accessory vein (PASV) were treated (n=230, n=22, n=85 and n=74 respectively). Mean number of veins treated per patient was 2.7 with a mean total vein length of 806.6 mm. Technical success rate was 100%. Mean pain level at 1 week was low (5.77±10.09/100). Occlusion rate at 12 months was 98.3%. Clinical improvement was significant with reduced VCSS at 1 month (P<.0001) and 12 months (P<.0001) compared to pre-operation. Fiber integrity was preserved throughout the operation in all patients. Most common adverse events were hematoma or persisting bruising at 1 month (13/150 patients) and numbness (13/150 patients). No major procedure- or device-related complications were observed.

Conclusion: The results of this study show that a double ring slim fiber, in combination with a 1470 nm laser, is safe and effective with excellent clinical outcome in EVLA and confirms the durability of the particular fiber.

Keywords: Endovenous laser ablation, varicose veins, double ring fiber, results, clinical outcome

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OP-042

Predicting outcomes following lower extremity endovascular revascularization using machine learning

Mohammed Al Omran[1], Ben Li[2], Charles De Mestral[2], Muhammad Mamdani[3], Mohamad Hussain[4]

[1]Department of Surgery, King Faisal Specialist Hospital and Research Center, Kingdom of Saudi Arabia; Department of Surgery, University of Toronto, Canada

[2]Division of Vascular Surgery, St. Michael's Hospital, Unity Health Toronto, University of Toronto, Canada; Department of Surgery, University of Toronto, Canada

[3]Temerty Centre for Artificial Intelligence Research and Education in Medicine (T-CAIREM), University of Toronto, Canada; Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto, Canada

[4]Brigham and Women's Hospital, Harvard Medical School, Division of Vascular and Endovascular Surgery and the Center for Surgery and Public Health, United States

Abstract

Aim: Lower extremity endovascular revascularization is an increasingly common treatment option for advanced peripheral artery disease that carries non-negligible peri-operative risks; however, outcome prediction tools remain limited. Using machine learning (ML), we developed automated algorithms that predict 30-day outcomes following lower extremity endovascular revascularization.
Material and Methods: The National Surgical Quality Improvement Program (NSQIP) targeted vascular database was used to identify patients who underwent lower extremity endovascular revascularization (angioplasty, stent, and/or atherectomy) for chronic atherosclerotic disease between 2011-2021. Input features included 38 pre-operative demographic and clinical variables. The primary outcome was 30-day post-procedural major adverse limb event (MALE; composite of untreated loss of patency, major reintervention, or major amputation) or death. Data were split into training (70%) and test (30%) sets. Using 10-fold cross-validation, 6 ML models were trained using pre-operative features with logistic regression as the baseline comparator. The primary model evaluation metric was area under the receiver operating characteristic curve (AUROC). Model robustness was evaluated with calibration plot and Brier score. Variable importance scores were calculated to determine the top 10 predictive features. Subgroup analysis was conducted to assess model performance based on age, sex, race, ethnicity, symptom status, procedure type, and urgency.
Results: Overall, 21,886 patients were included. The primary outcome of 30-day MALE or death occurred in 1,964 (9.0%) patients. Our best performing model for predicting 30-day MALE or death was XGBoost, achieving an AUROC (95% CI) of 0.93 (0.92-0.94). In comparison, logistic regression had an AUROC (95% CI) of 0.72 (0.70-0.74). The calibration plot showed good agreement between predicted and observed event probabilities with a Brier score of 0.09. The top 3 predictive features in our algorithm were 1) chronic limb threatening ischemia, 2) tibial intervention, and 3) congestive heart failure. Model performance remained robust on subgroup analyses of all demographic and clinical populations.
Conclusion: Our newer ML models accurately predict 30-day outcomes following lower extremity endovascular revascularization using pre-operative data, performing better than logistic regression. They have potential for important utility in guiding risk mitigation strategies for patients being considered for lower extremity endovascular revascularization to improve outcomes.

Keywords: Prediction, outcomes, lower extremity endovascular revascularization, machine learning

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OP-043

A clinical case of a multidisciplinary approach in the treatment of a large infectious aortic pseudoaneurysm with destructive lumbar spondylitis using a native donor aortic homograft

Andrey Pletnev[1], Vyacheslav Zavatskii[1], Dmitriy Kondyukov[1], Oleg Reznik[2], Alexey Kutenkov[2]

[1]Alexander Hospital, Department of Vacular surgery, St. Petersburg, Russian Federation
[2]Pavlov University, Department of Transplantology and Organ Donation, St. Petersburg, Russian Federation

Abstract

Treatment of infected aneurysms of the aortoiliac segment is a complex task, both tactically and technically. If an obvious or potential source of infection remains in the retroperitoneal space, the task of a favorable resolution of the clinical case becomes even more difficult. In May 2023, a 61-year-old man was hospitalized in the department of vascular surgery of the Alexander Hospital, who had urological sepsis 2 years ago. A CT scan revealed a complex shape pseudoaneurysm of the terminal aorta measuring up to 11.5x6.5 cm involving the left lumbar muscle, a secondary aneurysm of the bifurcation of the left common iliac artery, and destruction of the L-IV vertebral body. The patient had signs of systemic inflammation: fever, increased levels of WBC, C-peptide and procalcitonin. Blood cultures for sterility revealed the growth of *Staphylococcus epidermidis*. A multidisciplinary team of urologists, neurosurgeons and vascular surgeons performed the following surgery: resection of aneurysms of the aortic bifurcation and left common iliac artery with prosthetics with a native donor homograft, resection of the L-IV vertebral body with replacement with a graft from the iliac crest and anterior corporodesis with a titanium pin. The used native unfrozen donor aortic homograft is an excellent plastic material that retains resistant properties to active infection in the retroperitoneal space. Despite the targeted antibacterial therapy, a control CT scan 2 weeks after surgery revealed multiple abscesses in the retroperitoneal space near the L-IV vertebra damaged by osteomyelitis. As well as the formation of a pseudoaneurysm of the left distal anastomosis. Which in turn required repeated sanitizing intervention. Unfortunately, we were not confident in eliminating the infectious process in the spine, so we were forced to ligate the left iliac arteries and perform a right-to-left cross femoral bypass. Subsequently, normalization of the patient's condition and laboratory parameters was noted, and the patient was discharged. Thus, the treatment of infectious aneurysms of the aortoiliac arterial segment is a complex, not fully resolved problem. The world community still has to find a convenient material for replacing the resected arterial section and develop reliable antibacterial programs for a long period of treatment.

Keywords: Aortic pseudoaneurysm, infected aneurysm, donor human aortic homograft

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OP-044

Robotic extravasal reinforcement of the left renal vein in Nutcracker Syndrome

Dmitrii Ignatenko[1], Aslan Zakeryaev[1], Tarlan Bakhishev[1], Герей Хангереев[1], Elvira Vinogradova[2], Amirlan Sozaev[1], Sultan Butaev[1], Aleksandr Baryshev[1], Roman Vinogradov[1], Vladimir Porkhanov[1]

[1]Scientific Research Institute - Regional Clinical Hospital № 1 named after Professor S.V. Ochapovsky, Krasnodar, Russia
[2]Kuban State Medical University, Krasnodar, Russia

Abstract

Aim: Nutcracker syndrome (NS) is one of the most common, non-thrombotic obstructive venous disease. The age reference of patients varies from 3 to 70 years, the true prevalence has not been accurately studied. So far, the transposition of the left renal vein (LRV) by open surgery is considered to be standard surgical treatment of this condition. However, due to the large surgical trauma and complications, other minimally invasive surgical alternatives, including endovascular, have been offered. However, a large number of late complications after endovascular procedures forces surgeons to return to open surgery in a minimally invasive variant. To develop a new method of extravasal correction of LRV stenosis by reinforcing it with a rigid vascular prosthesis.

Material and Methods: The study is prospective, single-center, longitudinal. Included 4 patients (n-2 women; n-2 men) with NS, who underwent extravasal reinforcement with a rigid synthetic prosthesis using the Da Vinci Xi robot. A prospective analysis of the early postoperative period was made. After positioning and installing ports (three robotic ports, one assistant) the LRV was exposed and isolated along the circumference up to the confluence with the inferior vena cava. The distance between the mouth of the LRV and the adrenal vein was measured. Reinforcement was made of two polytetrafluoroethylene prosthesis (D10 mm), cut along into parts. The edges were fixed to each other with 3/0 polypropylene threads, the prosthesis itself was sewn with separate nodular sutures to the paravasal fiber of the upper mesenteric artery.

Results: The average operation time was 63±20 min. Intraoperative blood loss was 50-100 ml. The average length of the graft used was 2.5±0.5 cm. Hospitalization did not exceed 5 days. There were no complications. CT phlebography showed the patency of the structure. A decrease in phlebohypertension can be said on the basis of the clinic – no complaints of pain; laboratory data – no hematuria, as well as on the basis of computer phlebography – a decrease in the diameter of the LRV.

Conclusion: Robotic extravascular reinforcement of LRV in case of NS appears to be safe and highly effective surgery.

Keywords: Robotic surgery, extravascular reinforcement, Nutcracker syndrome

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OP-045

Endovascular treatment modalities and lesion characteristics in peripheral arterial disease from a real-world registry: A comparison between intermittent claudication vs chronic limb threatening ischemia

Hye Young Woo[1], Sanghyun Ahn[1], Jin Hyun Joh[2], Taeseung Lee[3], Jin Mo Kang[4], Young Sun Yoo[5], KSVS Investigators[6]

[1]Seoul National University Hospital, Departement of Surgery, Seoul, Republic of Korea
[2]Kyung Hee University Hospital, Department of Surgery, Seoul, Republic of Korea
[3]Seoul National University Bundang Hospital, Department of Surgery, Seongnam, Republic of Korea
[4]Gachon University, College of Medicine, Department of Surgery, Incheon, Republic of Korea
[5]College of Medicine, Chosun University, Department of Surgery, Gwangju, Republic of Korea
[6]Korean Society for Vascular Surgery, Seoul, Republic of Korea

Abstract

Aim: The anatomical distribution, characteristics of lesions, and treatment modalities are diverse in peripheral arterial disease. Patient with this condition should be referred for endovascular revascularization, if they have intermittent claudication or chronic limb threatening ischemia. We aimed to investigate the endovascular devices used to manage this condition by comparing patients with peripheral arterial disease, who were referred for endovascular revascularization, that had intermittent claudication with those that had chronic limb threatening ischemia.

Material and Methods: We identified patients who enrolled in the DAMOEUM registry, which was an ongoing multicenter PAD registry from 2020 to 2022. From the available 736 patients in registry, 95 underwent open surgery and 636 received endovascular treatment at the time of the study. After excluding 130 with missing data, we analyzed the data of 506 patients, that had intermittent claudication or chronic limb threatening ischemia. The patients' and target lesion's characteristics, the endovascular device data (type, length, and balloon diameter), and stent were examined. The procedure outcomes of the aortoiliac, femoropopliteal, and below-the-knee lesions were analyzed.

Results: Patients with chronic limb threatening ischemia were more likely to have diabetes mellitus, below the knee interventions, and multilevel peripheral arterial disease than the other group (63.9%, 63.6%, and 57.4% vs 47.7%, 23.8% and 43.9%, respectively; p<.001, p<.001, and p =.002, respectively). Patients with intermittent claudication had more frequent aortoiliac artery and atherectomy interventions than the other group (63.2% and 61.1% vs 39.7% and 40.6%, respectively; p <.001), In patients with femoropopliteal lesions, those with chronic limb threatening ischemia were more revascularized with stents than the other group without significant difference (35.3% vs 29.1%, p=.161).

Conclusion: Korean patients with peripheral arterial disease and intermittent claudication and those with chronic limb threatening ischemia significantly differed in baseline and lesion characteristics, endovascular strategies, and short-term follow-up outcomes. Our study findings can contribute to a better understanding the characteristics of peripheral arterial disease lesion characteristics in the Korean patient population and aid in the establishment of more effective treatment strategies.

Keywords: Peripheral artery disease, intermittent claudication, chronic limb threatening ischemia, endovascular treatment, vascular registry

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OP-046

Meta-analysis of outcomes in open and endovascular repair for descending thoracic and thoracoabdominal aortic aneurysms

Danang Himawan Limanto, Rahardian Sigmawan

Airlangga University, Dr. Soetomo General Academic Hospital, Departement of Cardiothoracic and Vascular Surgery, Surabaya, Indonesia

Abstract

Aim: Endovascular repair is extensively used in Descending Thoracic and Thoracoabdominal Aortic Aneurysms. However, the outcome compared to open surgical repair remains unclear. In view of such a development, this study aimed to present outcomes of these two repair methods and compare them through a systematic study.

Material and Methods: Systematic searches were conducted on databases recording outcomes of Open and Endovascular Repair for Descending Thoracic and Thoracoabdominal Aortic Aneurysms to obtain relevant studies in the last decade. The databases include reputable sources, such as PubMed, ScienceDirect, and Cochrane. The search targeted at studies that applied the two repair methods, then highlighted the studies' key information on overall mortality, reintervention, Spinal Cord Injury (SCI), renal failure, stroke, and pulmonary complication rate. The Cochrane Q-Test and I2 statistics test were employed to evaluate the heterogeneity over the returned studies. Random effect heterogeneity analysis was then conducted using Review Manager 5.4 to produce odd ratio (OR) results with a 95% Confidence Interval (CI).

Results: A total of 5.868 patients from 11 studies were identified, 3094 individuals underwent open repair, while 2774 patients operated for endovascular repair. Pooled analysis showed that the overall mortality was significantly lower in Endovascular group (OR=1.82; 95% CI: 1.30–2.54), Reintervention was higher in endovascular group (OR=0.34; 95% CI: 0.23–0.51), and SCI was higher in open repair group (OR=1.47; 95% CI: 1.14–1.90). Postoperative stroke was similar in both groups (OR=1.41; 95% CI: 0.94–2.11). Pulmonary complications and renal failure were higher in open repair group (OR=4.8; 95% CI: 3.64–6.34), (OR=1.82; 95% CI: 1.59–2.10), respectively.

Conclusion: The current meta-analysis reveals that endovascular repair of Descending Thoracic and Thoracoabdominal Aortic Aneurysms provides improved perioperative outcomes, despite the fact that the reintervention rate is better in open repair groups and the long-term prognosis is still undetermined. To provide a better understanding of comparing these two procedures after five years of follow-up, long-term data and studies are required.

Keywords: Aneurysm, descending thoracic aneurysm, thoracoabdominal aneurysm, endovascular repair, open surgery

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OP-047

Management of pelvic venous disorders with an abnormal structure of the inferior vena cava

Anastasia Akulova[1], Zaurbek Shugushev[2], Kirill Lobastov[3], Dmitry Bondarchuk[4], Aleksander Faibushevich[1]

Airlangga University, Dr. Soetomo General Academic Hospital, Departement of Cardiothoracic and Vascular Surgery, Surabaya, Indonesia

Abstract

Aim: Left-sided inferior vena cava (IVC) is rare and reported in 0.2–0.5% of patients. Aplasia of the hepatic segment of IVC that continues into the azygos vein may be found in 0.6%. From a clinical perspective, these abnormalities under unfavorable conditions (trauma, surgery, pregnancy) may manifest with deep vein thrombosis, chronic venous disease of lower limbs, and pelvic venous disorders.

Material and Methods: We present a case series of four patients who seek medical care at the Central Clinical Hospital of Russian Railways with complaints of pelvic congestion syndrome. CT venography or MRI venography of abdominal and pelvic veins revealed abnormalities of IVC with its transposition (n=2) or aplasia (n=2). Multidisciplinary discussion was used to choose the best treatment approach.

Results: Embolization with coils of the right ovarian vein (ROV) was performed in one patient with a situs inversus totalis with good technical and clinical outcomes. In the other patient with a partial transposition of IVC and its compression between the aorta and superior mesenteric artery coil embolization of the ROV resulted in good short-term technical outcome although the ROV was suggested as a main outflow route. In the last two patients with IVC aplasia conservative treatment with micronized purified flavonoid fraction was preferred with significant relief of symptoms.

Conclusion: In patients with pelvic venous disorders, IVC abnormalities are rare but impact the treatment planning. A multidisciplinary approach is required to assess the role of gonadal veins in the blood outflow from the pelvis and to choose appropriate management. Coil embolization of ovarian veins may be safe and effective in IVC transposition. In IVC aplasia, conservative treatment may be preferred.

Keywords: Pelvic venous disorders, chronic venous disease, embolization of ovarian veins

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OP-048

The influence of the non-rectilinear course of the common carotid artery on changes in local hemodynamics in the bifurcation area

Victoria Pavlovna Derbilova[1,2], Roman Aleksandrovich Vinogradov[1,2], Yuriy Nikolaevich Zakharov[3,4], Vladimir Geraldovich Borisov[3,4], Elina Elbrusovna Kheteeva[1,2], Elvira Romanovna Vinogradova[2], Vladimir Anatolevich Gagin[1], Olga Michailovna Meshcheryakova[1]

[1]Research Institute - Regional Clinical Hospital № 1 Ministry of Health of The Krasnodar Territory, 350086, Krasnodar, Russia
[2]Kuban State Medical University of Ministry of Healthcare of the Russian Federation, 350063, Krasnodar, Russia
[3]Kemerovo State University, 650000, Kemerovo, Russia 1,
[4]Federal Research Center for Information and Computing Technologies, 630090, Novosibirsk, Russia 2.

Abstract

It is known that atherosclerotic plaques most often arise near bifurcations and bends of arteries. Changes in local hemodynamics in these areas play an important role in the development and progression of atherosclerosis. General signs of the atherosclerotic plaque formation are exceeding the critical values of certain hemodynamic parameters distributed on the inner wall of the artery. We calculated the following hemodynamic parameters OSI (Oscillatory Shear Index), TAWSS (Time-Averaged Wall Shear Stress), RRT (Relative Residence Time). The RRT index was put behind the main one, because it depends on the fluctuations of the parietal blood flow and on the shear stress. However, hemodynamic indices are not only affected by the geometric shape of the bifurcation but also by the symmetry or asymmetry of the flow at its inlet. To build a geometric model, we used computed tomography data from patients examined for reasons other than atherosclerosis. All models of bifurcation of the common carotid artery are divided into two groups. The first group included patients with centrally symmetric blood flow at the inlet, the second group included patients with asymmetric flow. The entrance for blood flow is the common carotid artery. The shape of the entrance is determined by the cross section of the common carotid artery proximal to the bifurcation. For each model with asymmetric flow, an alternative model of the common carotid artery, which has a symmetrical input flow, was constructed. Physiologically asymmetrical flow on average demonstrates better performance compared to symmetrical flow. In almost all cases hemodynamic indicators were worse in alternative models. The difference in the RRT_int indicator between the symmetrical flow models and alternative models groups is less than 6 percent - this indicates that we built the alternative models correctly. Consequently, the hemodynamic indices obtained on simpler models with symmetric flow at the bifurcation inlet can be considered an upper estimate of the indices of the corresponding models with natural flow. Conflict of interest: no conflict of interest. Acknowledgments: The research is carried out with financial support from the Kuban Science Foundation within the framework of scientific project No. NIP-20.1.

Keywords: Atherosclerosis, carotid endarterectomy, bifurcation of the common carotid artery, computational fluid dynamics

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OP-049

Effect of Caffeic Acid Phenethyl Ester (CAPE) in doxorubicin induced descending aorta damage

Olcay Murat Disli[1], Nevzat Erdil[1], Baris Akca[1], Onural Ozhan[2], Merve Durhan[3], Azibe Yildiz[4], Yilmaz Cigremis[3]

[1]İnönü University, Faculty of Medicine, Department of Cardivascular Surgery Malatya, Türkiye
[2]İnönü University, Faculty of Medicine, Department of Pharmacology, Malatya, Türkiye
[3]İnönü University, Faculty of Medicine, Department of Medical Genetics, Malatya, Türkiye
[4]İnönü University, Faculty of Medicine, Department of Histology and Embryology, Malatya, Türkiye

Abstract

Doxorubicin, a chemotherapeutic agent used in cancer treatment, can cause cardiotoxicity as an adverse effect. In this study, potential protective effect of Caffeic acid phenethyl ester (CAPE), a well-known antioxidant agent, was investigated in doxorubicin induced aortic damage model. Total of 28 adult Wistar albino rats were equally divided into four groups as: Control, DOX, CAPE+DOX, CAPE. Accordingly, 10 µmol/kg CAPE for 10 days and/or 10 mg/kg doxorubicin for 3 days was given intraperitoneally. Control group received saline and ethanol as the vehicles of doxorubicin and CAPE, respectively. GSH, MDA, CuZn-SOD and CAT levels in descending aorta were investigated as the oxidative stress markers and histopathological changes were evaluated. GSH level was significantly higher in CAPE group as compared to the other groups ($p<0.05$) while there were no significant differences in MDA, CuZn-SOD and CAT levels among the groups ($p>0.05$). In microscopic view, tunica media of aorta was significantly thinner in DOX group as compared to CAPE group. Tunica media thickness significantly increased in CAPE+DOX group as compared to DOX group. The results indicated that CAPE can be protective against doxorubicin induced aortic vessel damage.

Keywords: Caffeic acid phenethyl ester, doxorubicin, aorta, Ra

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OP-050

A single centre review - Outcomes of open thoracoabdominal aneurysm repairs in the endovascular era

Vidushi Lal[1], Samantha Peden[2]

[1]Royal Brisbane and Women's Hospital, QLD Australia
[2]The Prince Charles Hospital, QLD Australia

Abstract

Aim: To assess the outcomes of open thoracoabdominal aneurysm repairs in the endovascular era at The Prince Charles Hospital over the last 10 years.

Material and Methods: We present the preliminary data of open thoracoabdominal aneurysms from the Australasian Vascular Audit (AVA) at the Prince Charles Hospital over the last 10 years (2013-2023). We hope to gain further data to present from the Operating Room Management Information System (ORMIS) due to limitations of AVA. Primary outcomes included mortality. Secondary outcomes included re-intervention, morbidity and length of stay (LOS).

Results: 14 patients were identified from AVA (M: F, 10:4) with a median age of 67 (Age Range: 23-74). All operations involved a cardiothoracic surgeon, vascular surgeon, cardiac anaesthetist and routine post operative ICU admission. 1 patient was done emergently due to rupture, 3 others were done semi-urgently due to pain. There were two mortalities identified: 1 related to major stroke post operatively and another secondary to circulatory arrest. Only two patients had Marfan's. There was a total of 4 re-interventions. Immediate re-intervention included return to theatre for pericardial haematoma and post operative bleeding from the distal anastomosis. Delayed re-intervention included a patient 8-years post initial repair requiring aortic arch debranching, frozen elephant trunk, left subclavian to left common carotid bypass for increased size of penetrating aortic ulcer with aortic intra-mural haematoma. Another patient 12 months post repair required a two-vessel fenestrated endovascular repair for an aneurysmal abdominal aortic aneurysm. 4 patients had renal failure requiring dialysis. The average amount of blood loss was 3L. 9 patients had routine spinal drain placement preoperatively. 1 patient had T7 paraplegia related to spinal cord infarction, no spinal drain was used in this case. The average LOS was 28 days (LOS range: 9-63 days).

Conclusion: Open repair of the thoracoabdominal aorta has been largely replaced by endovascular treatment, although remains a viable option for patients at risk for fatal aneurysm rupture. These operations are challenging and are associated with early death and morbidity. Understanding these risks is fundamental for patient selection. These operations require coordinated multidisciplinary approach with cardiothoracic surgeons, vascular surgeons, ICU specialists and anaesthetists.

Keywords: Aneurysm, thoracoabdominal aneurysm, aortic aneurysm, rupture, open repair, endovascular

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OP-051

Endovascular treatment of the aortic arch pathology - One centre expirience

Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Almaz Gafurovich Vanyurkin, Darya Viktorovna Chernova

Almazov National Medical Research Centre, Department of Vascular and Endovascular Surgery, Saint-Petersburg, Russia

Abstract

Aim: To compare immediate and long-term results of endovascular and hybrid treatment of patients with pathology of the aortic arch.
Material and Methods: For the period from January 2020 to June 2023 in the Almazov National Medical Research Centre surgical treatment of aortic arch pathology was performed in 88 patients: 45 patients underwent total endovascular treatment; 43 patients underwent hybrid treatment. The mean age was 71.3±13.2 and 69.8±9.5 in these groups respectively. All patients in endovascular group underwent implantation of a stent graft using various fenestration methods and stenting of the fenestration zone. In the hybrid group aneurysm isolation was performed by performing various types of debranching with aortic arch endoprothesis.
Results: Technical success was achieved in both groups in 100%. No statistically significant difference was found in survival at 18 months of follow-up (100% vs 96.9%, p=0.082), in the incidence of neurological complications (6.2% vs 9.4%, p=0.315 for stroke; 3.1% vs 0%, p=0.73 for TIA), in the frequency of respiratory disorders (3.1% vs 3.1%, p=0.267) and kidney damage (3.1% vs 6.2%, p=0.58) in the frequency of early and late endoleaks (3.1% vs 0%, p=0.73; 3.1% vs 6.2%, p=0.115). 1 death (3.1%) was reported in the hybrid treatment group due to a non-aortic cause. There was a statistically significant difference in the incidence of cardiovascular complications (0% vs 3.1%, p=0.027) and late reinterventions (3.1% vs 12.5%, p=0.041).Reinterventions in the early postoperative period in the endovascular treatment group were associated in 1 case with a complication at the access site, in the second case with the development of stroke. Reintervention in the long-term period in the group of endovascular treatment were associated with endoleaks, in the group of hybrid intervention were diagnosed 2 cases of endoleaks and 2 cases of restenosis of the anastomoses. Overall survival according to Kaplan-Meier after 24 months was 100% and 96.9% in endovascular and hybrid group respectively.
Conclusion: Based on the data obtained and analyzed, it can be argued that aortic arch endoprothesis with intraoperative fenestration is a safe and effective treatment option for high risk patients with aortic arch pathology.

Keywords: Aortic arch pathology, endovascular treatment, hybrid treatment, fenestration

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OP-052

Long-term results of hybrid and endovascular treatment of multilevel lesions of the brachiocephalic arteries

Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Almaz Gafurovich Vanyurkin, Darya Viktorovna Chernova

Almazov National Medical Research Centre, Department of Vascular and Endovascular Surgery, Saint-Petersburg, Russia

Abstract

Aim: To compare the immediate and long-term results of hybrid and endovascular treatment in asymptomatic patients with multilevel lesions of the brachiocephalic arteries.

Material and Methods: The results of treatment of 40 patients were analyzed for the period from 2017 to 2021 in the clinic of vascular surgery of the Almazov Centre. Endovascular treatment of two-level lesions (group I) was performed in 17 patients, hybrid treatment (group II) in 23 patients. The average age of patients in both groups was 74.2 years. All patients were asymptomatic. In all cases, the ipsilateral ICA stenosis was more than 70%, as well as the stenosis of the CCA and IA.Immediate results were assessed by the presence of clinical stroke and TIA after surgery. Long-term results – the absence of stroke, TIA and death from stroke in the area of the operated carotid artery over a follow-up period of up to 36 months.

Results: Immediate technical success after hybrid interventions was 96%, during endovascular treatment - 92.9%. The duration of the hybrid operation was 70.6±11.3 minutes, endovascular - 42.3±4.6. In the postoperative period, stroke occurred in 1 case in each group. After hybrid treatment, 1 patient experienced MI, which required stenting of the infarct-related artery. The duration of hospital treatment in group I was 4.6 days, while in group II it was 1.2 days. Overall one-year survival rate was 96% and 100% in groups I and II, respectively. During the observation period, restenosis of the reconstruction zone was diagnosed in 4 cases in 2 patients in each observation group. Death occurred in 2 patients as a result of AMI not associated with surgery.

Conclusion: A comparative analysis of the immediate and long-term results of hybrid and endovascular treatment of tandem stenoses of the brachiocephalic arteries in asymptomatic patients did not reveal any significant differences. Stroke in the revascularized area, as well as associated death, were not observed in both groups. In comorbid patients at high cardiac risk, endovascular treatment was the preferred treatment method.

Keywords: Carotid tandem stenosis, hybrid treatment, endovascular treatment

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OP-053

Pelvic congestion syndrome treatment with bilateral ovarian vein coil embolization: 6-month follow-up results

Serkan Ketenciler, Mehmet Ali Yesiltas, Ilhan Ozgol, Sedat Yildiz

İstanbul Prof. Dr. Cemil Taşçıoğlu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Ovarian vein embolization with coil is one of the treatment methods used in the treatment of pelvic congestion syndrome. Patients with severe pelvic pain are treated with bilateral coil embolization by passing to the contralateral ovarian vein in a single session. In this study, we aimed to share the results of this group of patients during hospitalization and our 6-month patient follow-up.
Material and Methods: Between January 2021 and January 2023, patients who applied to our clinic due to pelvic congestion syndrome and underwent coil embolization were screened. Among these patients, patients who underwent contralateral transfer from the left ovarian vein to the right ovarian vein were included in the study. All patients underwent coil embolization. Post-procedure complications were recorded for 6 months to check whether symptoms and re-interventions were performed.
Results: A total of 65 patients underwent coil embolization due to pelvic congestion. Of these, the number of patients meeting our criteria is 18. The average age was 43.7±8 years. Among these patients, 10 patients had complaints of abdominal heaviness, 6 patients had dyspareunia, and 1 patient had dyspepsia. Access was made through the right common femoral vein in 17 patients, and through the right jugular vein in only 1 patient. No complications occurred during the procedure and hospitalization. In 2 patients, a re-intervention was planned because the complaints of abdominal pain still persisted even though there was a decrease in the 3rd month follow-up.
Conclusion: In patients with pelvic congestion syndrome, bilateral coil embolization to the ovarian veins with contralateral passage reduces the rate of re-intervention. Performing the procedure in a single session eliminates the need for re-hospitalization.

Keywords: Coil embolization, pelvic congestion syndrome, ovarian vein, venous disease

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OP-054

Treatment of advanced varicose veins: Combining endovenous techniques with surgery yields the best results

Niaz Ahmed Choudhury[1], Abul Hasan Muhammad Bashar[2],
Mokhlesur Rahman[3], Shantonu Kumar Ghosh[3], Saffait Jamil[2]

[1]National Heart Foundation and Research Institute, Department of Vascular Surgery, Dhaka, Bangladesh
[2]Bangladesh Specialized Hospital Limited (BSHL), Department of Vascular Surgery, Dhaka, Bangladesh
[3]National Institute of Cardiovascular Diseases & Hospital (NICVD), Department of Vascular Surgery, Dhaka, Bangladesh

Abstract

Aim: In Bangladesh, early varicose veins are often ignored which results in increased number of patients presenting in advanced stages of the disease (C4-6). With the introduction of endovenous technologies, treatment of varicose vein has changed. Today, in Bangladesh, a patient with varicose vein is more likely to be treated by endovenous techniques than by open surgery. While the appeal for minimally invasive procedure is understandable, the outcome in patients with advanced varicose veins in a situation of resource constraints demands a critical reappraisal.

Material and Methods: This prospective randomized study was conducted over the period of July 2021 through June 2023. A total of 155 limbs of 140 patients aged 18-70 years (mean 35±6) with advanced varicose veins (C4-6) were assigned into 3 groups; Group A comprised 56 limbs that were treated by Endovenous Laser Ablation (EVLA) or Radio Frequency Ablation (RFA), Group B comprised 54 limbs treated by conventional surgery and Group C comprised 45 patients in whom endovenous procedures were combined with surgery utilized to address large varicosities and perforator incompetence. Sclerotherapy was a common adjunct in all 3 groups. Outcome was assessed against the following parameters; mean hospital stay, cost, freedom from residual/recurrent varicosities, ulcer healing, freedom from pain and induration, freedom from repeat procedures, cosmesis and overall patient satisfaction scored on a scale of 1-10. Mean follow-up duration was 9.5 months (3-15 months).

Results: All patients were operated under spinal anesthesia and were discharged on the next day. Cost was similar in groups A and C which was significantly higher compared with group B ($P<0.05$). Procedure led to ulcer healing in all 3 groups. In terms of freedom from residual/recurrent varicosities, pain and induration and freedom from repeat procedures, Group C fared significantly better than groups A and B. Overall patient satisfaction was highest in group C.

Conclusion: Combining surgery with endovenous procedure in the treatment of advanced varicose veins did not increase cost and resulted in low short-term recurrence rates as well as better outcome in terms of relief from pain and induration and high degree of patient satisfaction compared with surgery or endovenous strategy alone.

Keywords: Varicose veins, endovenous techniques, developing country

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OP-055

A comparative outcome study of infrainguinal vessel endovascular intervention by intravascular ultrasound-guided (IVUS) versus angiography-guided in patients with chronic limb-threatening ischemia at Phramongkutklao Hospital, Thailand

Chanarat Chokchaisamut[1], Wisit Kaewput[3], Sirapong Chokteerasawad[2], Kritsada Luangrungruang[2], Thatchawit Urasuk[2]

[1]Fort Surasakmontri Hospital, Department of Surgery, Lampang, Thailand
[2]Phramongkutklao Hospital, Department of Surgery, Bangkok, Thailand
[3]Phramongkutklao College of Medicine, Department of Military and Community Medicine, Bangkok, Thailand

Abstract

Aim: Chronic limb-threatening ischemia (CLTI) is the most common cause of limb loss in worldwide population. Successful treatment for CLTI is important. Nowadays, the paradigm of treatment is shifted to endovascular treatment-first strategy (EVT) as a preferrable method and intravascular ultrasound (IVUS) is playing important role in the field. IVUS provides real time details in specific vessel pathology. This comparative outcome study compare the endovascular treatment outcome of CLTI using IVUS guided versus conventional angiographic guided method in Phramongkutklao hospital.

Material and Methods: Single center, retrospective cohort study was created. Data were collected from January 2018 to December 2022. CLTI patients underwent endovascular surgery were included in the study. The study population were separate into 2 groups: IVUS guided and angiographic guided endovascular intervention. The outcome focused are major adverse limb events (MALE) in 6 month and major adverse cardiac events (MACE) in 30 days. Chi-square test using SPSS program was used for statistical analysis.

Results: 98 limbs of 90 patients were included. 29 limbs were treated with IVUS guided whilst 69 limbs were treated with angiographic guided method. There were no statistical differences in patient baseline characteristic and severity of disease. Overall technical success rates was 100%. The study found that 6 month MALE was statistically equal in both groups (angiography 14.5% vs IVUS 10.3%; p=0.964). Similar outcome was also found in 30 day MACE analysis (angiography 8.7% vs IVUS 10.3%; p=0.581).

Conclusion: In this study IVUS and angiographic guided endovascular method provide no statistical difference in short term CLTI treatment outcome (6 month MALE and 30 days MACE). However other benefit of IVUS over angiography such as post angioplasty dissection detection and accurate stent size selection should be study more.

Keywords: Chronic limb-threatening ischemia, intravascular ultrasound, endovascular intervention, major adverse limb event, major adverse cardiac event.

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OP-056

Outcomes of vascular closure device-assisted decannulation of peripheral extracorporeal membrane oxygenation: A systematic review

Alison Zhu, Charis Tan

Westmead Hospital, Department of Cardiothoracic Surgery, NSW, Australia

Abstract

Aim: Cannulation of the femoral vessels is common in peripheral extracorporeal membrane oxygenation (ECMO) for temporary mechanical circulatory support. Following weaning of ECMO support, removal of cannulas is traditionally by open surgical repair (OSR). This requires additional resources such as transfer to the operating theatre and additional staff to organise this. The use of a percutaneous vascular closure device (VCD) offers a minimally invasive alternative to OSR with potential for bedside application in the intensive care unit, reduction in hospital length of stay and reduction in the incidence of wound complications.

Material and Methods: A systematic review of Medline and Embase databases was conducted for studies comparing VCD-assisted decannulation with OSR following decannulation of peripheral ECMO. The primary endpoint was rate of post-procedural complications, namely wound infection and limb ischaemia. The secondary endpoint was in-hospital mortality.

Results: Five retrospective studies, with a total of 486 patients (64% male, n=311), met inclusion criteria. Fifty-two percent (n=251) of patients underwent VCD-assisted decannulation with remainder decannulated by OSR. Pooled analysis demonstrated that percutaneous closure with VCD is at significantly lower risk of overall complications than surgical repair (OR 3.20; 95% CI 1.84-5.56; P=0.003), particularly wound infections (OR 5.68; 95% CI 2.26-14.29; P=0.0002). There was no significant difference between the cohorts in in-hospital mortality.

Conclusion: Vascular closure device-assisted decannulation of peripheral ECMO offers a significantly reduced risk of complications. Vascular surgeons in ECMO centres should be trained in the deployment of VCD for percutaneous decannulation of ECMO. Future high-quality research is required to better elucidate the potential for reduced hospital length of stay and duration of surgery.

Keywords: Vascular closure device, extracorporeal membrane oxygenation, percutaneous

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OP-057

Down- and up-regulation of WNT/ β-catenin pathway genes in coronary artery and venous insuffiency patients

Ulvan Ozad[1], Mahmut Cerkez Ergoren[1], Aya Badeea Ismail[1], Barcin Ozcem[2], Ozlem Balcioglu[2]

[1]Near East University, Faculty of Medicine, Department of Medical Genetics, Nicosia, Cyprus
[2]Near East University, Faculty of Medicine, Department of Cardiovascular Surgery, Nicosia, Cyprus

Abstract

Wnt/β-catenin pathway is a prominent pathway for homeostasis. Previous studies indicated that Wnt pathway is an essential regulator for embryonic cardiac and vascular development. Despite, the role of β-catenin pathway genes in vascular development is not clear, absence of β-catenin genes results fragile vascular structure. This study aimed to investigate the exact role of WNT/β-catenin pathway genes (AXIN2, APC, DVL1, and CTNNB1) in varicose vein and coronary artery development. Thus, in the current study, the gene expression profiles were analysed for the samples collected from varicose vein and coronary artery bypass graft operations to gain an insight on the vascular pathophysiology. Great saphenous vein samples were collected from a total of 43 patients (10 control patients, 15 varicose vein patients and 18 coronary artery bypass graft patients). The results indicated that the APC gene expression was slightly significant (P=0.041) in Coronary artery bypass surgery (CABG) patients whereas the DVL1 gene expression was found as twice the size in the control group patients compared to samples of CABG patients with not statistically significant. There was no correlation between samples from CABG patient and varicose vein patient groups. APC and DVL1 genes were negatively correlated in samples from CABG patient and varicose vein patient groups. Overall, this study showed that APC gene expression was significantly lower in the group of varicose vein patients. This is the first study to investigate the role of APC gene in venous insufficient patients, therefore further studies will be essential to evaluate the exact role of the APC gene in these disorders.

Keywords: WNT/β-catenin pathway, APC, veins, coronary artery, venous insufficiency

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COVID-19 vaccines and arteriovenous fistula failure

Fatih Avni Bayraktar[1], Betul Nur Keser[1], Abdulkerim Ozhan[1], Cemal Kocaaslan[1], Mehmet Senel Bademci[1], Ahmet Oztekin[1], Sabahat Alisir Ecder[2], Ebuzer Aydin[1]

[1]İstanbul Medeniyet University Göztepe Prof. Dr. Süleyman Yalçın City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

[2]İstanbul Medeniyet University Göztepe Prof. Dr. Süleyman Yalçın City Hospital, Department of Nephrology, İstanbul, Türkiye

Abstract

Aim: Studies address the concern about safety as one of the major reasons for vaccine hesitation. Since thrombosis plays an important role in AVF failure, thrombosis-related events are critical for patients on maintenance dialysis. COVID-19 has been observed to be related to thromboembolic events, and the studies assessing whether vaccines are also associated with thromboembolism are being conducted. In this study we aimed to examine the relationship between COVID-19 vaccines and AVF failure.

Material and Methods: This retrospective study was conducted in our institute, our institute's dialysis unit and two other external dialysis units via scanning the patient records and applying a questionnaire to the patients. The patients who have undergone AVF creation operation in our clinic in the first half of 2019 during pandemic (Group 1- prepandemic era, n=104) and the patients who were receiving hemodialysis via AVF in predetermined dialysis centers in 2022 (Group 2- pandemic era, n=226) were included in the study. Sociodemographic and clinical features, histories of COVID-19 and COVID-19 vaccination, history of AVF failure are recorded. Statistical analysis was made using SPSS version 24 for Windows. A 1:2 propensity score matching (PSM) was performed and multiple logistic regression model was conducted to assess the predictive value of COVID-19 vaccination on AVF failure.

Results: A total of 330 patients were included in this study. After PSM, 95 and 190 patients from Group 1 and Group 2 were analyzed, respectively. AVF failure ratio was not seen to be increased in the pandemic era, when compared to pre-pandemic era. Neither COVID-19 nor vaccination for COVID-19 were found to be associated with AVF failure. Hospitalization due to COVID-19 and duration of hospitalization were also not related to AVF failure. History of previous AVF failure was found to be a risk factor for AVF failure ($p<0.001$).

Conclusion: To the best of our knowledge, this is the first study assessing the relationship between COVID-19 vaccines and AVF failure and our analysis revealed no association. Further studies with greater samples are needed to make a conclusion on whether patients on maintenance dialysis can get vaccinated without concern for the survival of their vascular accesses.

Keywords: AVF failure, COVID-19, COVID-19 vaccines, thromboembolic event, vaccine hesitation

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OP-059

Photodynamic therapy of venous trophic ulcers

Nikita Olegovich Somov , Boris Valentinovich Boldin, Vadim Yurievich Bogachev, Pavel Yurievich Turkin

Department of faculty surgery № 2, Moscow, Russia

Abstract

Material and Methods: Open controlled clinical trial with 6-year follow-up. The sample consisted of 213patients with venous ulcers randomly separated in two equal groups. In the trial group (100 patients), photodynamic treatment with hydroxyaluminium trisulfoophtalocianate was used along with wound sanitation. Control group had only conventional treatment without PDT (113 patients). We avoided systemic antimicrobial therapy and local antibiotic application intrial as well as in control. Microbial contamination of ulcer, size and cell infiltration assessed in both groups. In addition, we monitored wound healing rate, reoccurrence rate and life quality by CIVIQ-20 and SF-36 scales.

Results: After the PDT course, microflora growth was not detected in patients of the main group, while in patients of the control group, the level of bacterial contamination on day 10 was 10^5 CFU/g. PDT group vs control showed increased by 50% wound healing rate, decreased reoccurrence rate (5% vs. 25% in control) and better life quality. Data correlated with significant decontamination and active cell proliferation in trial group comparing with control.

Conclusion: Photodynamic therapy is novel and potentially beneficial method of venous ulcers treatment. It can shorten treatment time and improve results. In addition it improves patients life quality and decrease treatment cost.

Keywords: Trophic ulcer, venous ulcer, chronic venous insufficiency, photodynamic therapy

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OP-060

Funnel technique for wide necks: Mid-term results

Bahadir Aytekin, Naim Boran Tumer, Servet Turgut, Sinan Ozcelik, Murat Gevrek, Enis Burak Gul, Baran Karadeniz, Huseyin Bayram, Hakki Zafer Iscan

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: For endovascular procedures hostile neck anatomy is the main limitation. Wide or X-Large infrarenal aortic necks define a critical subgroup of aneurysm patients for all treatment choices. Large necks almost always together with endovascular complications like endoleaks or migration. In this patient cohort, standard endovascular aortic repair is not feasible as efficient oversizing is not possible over 34 mm of infrarenal aortic necks.

Material and Methods: Since 2018 we operated 22 patients endovascularly with funnel technique. Fifteen patients were symptomatic. 7 patients were operated on in elective and 6 in urgent manner. All patients were male. The mean age was 72.6 years (62-86 years), 4 patients were under cancer therapy, average infrarenal aortic diameter was 38,7 mm (36-41 mm) and average max aneurysm diameter 83,2 mm (69-117 mm). All patients operated by the same cardio-endovascular surgeon team.

Results: There was no early mortality, and the technical success was 100%. Median follow-up 31.3±15.6 (8-62) months, there was no endovascular complication or infrarenal aortic neck diameter enlargement. Succesfull aneurysm sac shrinkage was achieved after 6 months. Three patient died, one cardiac mortality at the 28 month, one cancer mortality at the 14th month an done from graft infection at the 42 month after open surgical repair because of sepsis on the third postoperative day.

Conclusion: Lowest renal artery to aortic bifurcation distance is the main limitation of the technique. However with the mid term results of Funnel technique is effective and safe for this strict group of comorbid patients with wide-XL infrarenal neck diameter.

Keywords: Funnel technique, hostile neck, aneurysm

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OP-061

Surveillance of EVAR with USG in a special group of paitents

Elshad Mansimzada[1], Muhammet Kursat Simsek[2], Ozgur Ozen[2], Tolga Zeydanli[2], Okay Karslioglu[1], Ecem Tugba Yamac[1], Denizhan Akpinar[1], Hakki Tankut Akay[1]

[1]Başkent University, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Başkent University, Department of Interventional Radiology, Ankara, Türkiye

Abstract

Aim: We aimed to analyze the results of ultrasonography follow-up in patients who underwent elective endovascular aneurysm repair (EVAR).

Material and Methods: Between September 2013 and October 2022, a total of 46 patients underwent elective EVAR, mostly under local anesthesia were enrolled in the study among a total number of 96 patients. These patients were followed up with ultrasonography due to patient-related reasons such as renal failure, contrast material allergy, and claustrophobia. The ultrasonography was performed by the same group of radiologists at a single institution. Preoperative, postoperative, and follow-up serum creatinine and creatinine clearance, demographic data, risk factors, and ultrasonography findings were analyzed retrospectively.

Results: The final study population included 7 women and 39 men, and the mean age was 70 years (age range of 49–88 years). The aneurysm size increased in 37% of the patients who participated in the study (n=17). The average aneurysm size in these patients is 58.2 mm, and the duration of size increase is 3.3 years on average. Two patients with an increased size of the aneurysm underwent reoperation. In one of these patients, a stent was placed in the iliac part of the aneurysm. In the other patient, thrombin and histoacryl glue were injected by directly entering the aneurysm sac percutaneously.

Conclusion: Ultrasound is a safe and effective imaging method for follow-up aneurysm size in patients who have undergone EVAR and cannot undergo CT examination.

Keywords: Endovascular aneurysm repair, ultrasonography, computed tomography

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OP-062

22 years of carotis endarterectomy experience without insciation of internal carotis artery: No shunt no patch technique

Necmeddin Yakut[1], Tevfik Gunes[1], Engin Tulukoglu[1], Harun Evrengul[1], Abdurrezzak Borekci[1], Ali Gurbuz[2]

[1]Special Acute Cardiovascular Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye
[2]İzmir Katip Çelebi University, Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Traditional carotid endarterectomy operations (with patch or shunt) are performed with internal carotid artery incisions. Alternative methods developed together with traditiona lmethods could not reduce the mortality and morbidity rates after carotid endarterectomy operations below a certain rate. The aim is to end the longitudinal incision, shunt and patch use in classical endarterectomy and to minimize the mortality, morbidity and long-term restenosis caused by these methods.
Material and Methods: A total of 3152 patients were treated with this method between October 2000 and February 2023. Carotid lesions were divided into 2 groups as TypeA and TypeB according to their angiographic images, and into four subgroups as Type A1-Type A2, Type B1-Type B2. The operation technique was determined separately for each group. Early (30 days) neurological complications and mortality rates of the patients were reviewed.
Results: 3152 patients underwent endarterectomy. Endarterectomy incision was made towards the external carotid artery in 2806 (89.02%) patients. Classical eversion incision was performed in 346 (10.98%) patients. The mean clamp time was 7.2 minutes in incisions made towards the external carotid artery (Type A1 -Type B1 lesion) and 10.2 minutes in eversion (Type A2 - Type B2 lesion). Major neurological event and mortality rate is 0.6%. Based on the last five years, this rate is 0.4%.
Conclusion: With this method, the duration of cerebral ischemia is seen to be very short. Therefore, there is no need to use shunt, and shunt complications will be avoided. Since there is no internal carotid artery incision, there is no need for a patch, and there will be no bleeding, aneurysmatic enlargement and development of large scars due to the patch and wide incision. In addition, the integrity of the internal carotid artery is not impaired. It has been stated in many publications that neurological complications and mortality do not decrease below a certain level in carotid endraterectomy performed with the classical method or alternative methods. With the no patch no shunt method, we detected a significant decrease in this rate in the early period. Therefore, we think that the no patch no shunt method will replace the classical endarterectomy.

Keywords: Carotis endarterectomy, novel technique, no patch no shunt

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OP-063

The balance of thiol disulfide in venous insufficiency

Enis Burak Gul, Bahadir Aytekin, Gokay Deniz

Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Chronic venous insufficiency (CVI) is a common disease, which is initiated with increased oxidative stress. In some cases, the disease may affect unilaterally, and comparing the healthy leg can enlighten the personal redox potential and the stage of CVI. Our objective was to conduct a comparative analysis of oxidative stress biomarkers among selected patients regarding the study protocol.
Material and Methods: The research was conducted as a prospective controlled trial with individuals diagnosed with unilateral CVI and scheduled for radiofrequency ablation. Blood samples were collected from he brachial vein (Sample A), the affected leg (Sample B), and the control leg (Sample C) before the surgical procedure. According to Erel's method, the levels of sulfhydryl compounds were compared regarding paired samples and sources.
Results: The levels of oxidative stress biomarkers were figured out significantly higher in the samples of the affected leg compared to the controls (regarding the disulfide level: Paired Sample B>A, p=0.002; B>C, p=0.003). Besides, the ratios of disulfide/native thiol (Ds/nT) and disulfide/total thiol (Ds/Th) were significantly higher in Sample B (regarding Ds/nT; Paired Sample B>A, and B>C; for both p<0.001, regarding Ds/tT; Paired Sample B>A, and B>C; for both p<0.001). The ratio of native thiol/total thiol as a redox potential was higher in the control leg sample (regarding nT/TT: Sample C>A>B; p (C-A) =0.012, p (A-B) <0.001, respectively).
Conclusion: Oxidative stress impacts not only the affected leg but also the systemic blood values in CVI. The comparison of thiol components regarding paired samples may be a reliable approach for assessing oxidative stress. The methodology of the study may reveal promising in the determination of clinically therapeutic antioxidants by assessing the biomarker in CVI.

Keywords: Venous insufficiency, antioxidants, oxidative stress, sulfhydryl compounds, disulfides

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OP-064

Mid-term results of combined medical and popliteal artery endarterectomy treatment in Buerger's disease

Umit Kahraman[1], Sedat Karaca[1], Karya Islamoglu[2], Aysen Yaprak Engin[1], Fatih Islamoglu[1]

[1]Ege University, Department of Cardivascular Surgery, İzmir, Türkiye
[2]Ege University, Faculty of Medicine, Department of Cardivascular Surgery, İzmir Türkiye

Abstract

Aim: Our opinion is that surgical or medical treatment alone will be insufficient in Burger's disease, and the combination of the preoperative and postoperative period medical treatment, analgesic treatment, and appropriate surgical treatment will contribute to extremity perfusion and reduce amputation rates. Our aim in this article is to present the mid-term results of the best preoperative and postoperative medical treatment and analgesia treatment in patients with advanced Buerger's disease who underwent saphenous patchplasty and saphenous distal bypass after endarterectomy to the popliteal artery or trifurcation area.

Material and Methods: Between 2015 and 2023, we operated on 83 patients, diagnosed with Buerger's disease, who were in the chronic stage of the disease, and whose advanced imaging was performed. Preoperative, postoperative, and 1st year control evaluations were determined according to Rutherford, Fontaine classification, and Ankle-Brachial Indexes. Preoperative and postoperative pain evaluations of the patients were performed by the algology department and their treatments were organized. Medical treatments of the patients were organized by the vascular surgery team in the preoperative and postoperative periods. After determining the surgical approach strategy according to the imaging of the patients, saphenous patchplasty and anatomical bypass were performed.

Results: The mean preoperative ankle-brachial index was 0.305, the mean postoperative ankle-brachial index was 0.644, and the mean 1-year ankle-brachial index was 0.629 in 83 patients included in the study. Statistically significant improvements were observed in the Rutherford and Fontaine classifications. (p-value<0.001). It was observed that the need for analgesia treatment decreased in the postoperative period compared to the preoperative period. Amputation was performed in 9.6% of patients within 1 year. All patients who underwent amputation were smokers actively.

Conclusion: Good clinical results and limb salvage can be achieved with a combined medical and surgical treatment approach in advanced-stage patients who do not respond despite optimal medical treatment. Provided that patients quit smoking, advanced imaging in the preoperative period, good determination of the target surgical site, Saphenous patchplasty, and Saphenous distal bypass applied after endarterectomy in suitable patients are supported with good medical and analgesia treatment, the results will improve further.

Keywords: Buerger's disease, thromboangiitis obliterans, saphenous patchplasty, popliteal bypass

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OP-065

Triple application of radiofrequency ablation of great saphenous vein diameter of ≥10 mm; 6 months follow-up results

Ahmet Ozan Koyuncu[1], Mehmet Ali Yesiltas[2], Aysegul Aydin[1], Gorkem Can[1], Meryem Ertekin[1], Tolunay Toy[1], Zeynep Alkas[1]

[1]İstanbul University - Cerrahpaşa, Institute of Cardiology, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]İstanbul Prof. Dr. Cemil Tascioglu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Radiofrequency ablation (RFA) technique is a commonly preferred method in the treatment of saphenous vein insufficiency. The method basically works by radiofrequency waves making contact with tissue by producing electromagnetic energy. In this study, we aim to share our results of triple application of ablation in patient with great saphenous vein (GSV) diameter more than 10 mm.
Material and Methods: 48 patients presenting to our department with a great saphenous vein diameter exceeding 10 mm at the saphenofemoral junction between February 2019 and January 2022 were included in the study. All patients underwent triple application of RFA. Patients were followed up for 6 months and postoperative results and complications were recorded.
Results: 28 of the patients were female and 20 were male with the mean age of 53 years. Average of BMI was 28.3. We have applied three times of 25 W energy to the 2 cm proximal of saphenofemoral junction with local (puncture site) and tumescent anaesthesia (approximately 10cc/cm) delivered around the vein with ultrasound. There were recanalization in 4 patients during 6 months follow-ups. There were perforating vein leakage in 2 patients. The junction was observed to be 5-6 mm, with a fibrotic band around, but there was still reflux in 2 patients. There were no deep vein thrombosis or pulmonary embolism. Dyschromia has developed in one patient who also suffered with cellulitis and temporary paresthesia. Hematoma was reported in 3 patients. There were temporary and acceptable degree of ecchymosis in all patients.
Conclusion: Application the triple ablation in patients with GSV diameter exceeding 10mm seems to reduce recanalization without causing more complication in early term results. Long-term follow-up with larger number of patients should be studied.

Keywords: Radiofrequency ablation, great saphenous vein, venous insufficiency, recanalization

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OP-066

Current management options and outcomes of acute limb ischemia in pediatric population: Prompt surgery or conservative treatment to achieve limb salvage?

Nur Dikmen, Evren Ozcinar

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Acute limb ischemia (ALI) in pediatric population is an infrequent and potentially catastrophic event that may cause life-long complications and limb loss. This study analyses the consequences of medical and surgical treatment options achieving limb salvage.
Material and Methods: This retrospective, single-institution clinical study between 2018 and 2022, reviewed the medical records of the pediatric patients diagnosed with ALI. Demographics, underlying diseases, risk factors, Rutherford classifications and treatment options with results were evaluated.
Results: A total of 47 pediatric patients with diagnosis of ALI (55.3% male), out of 183 pediatric vascular department consultations, were evaluated. Mean age was 19.81±34.5 months (range 1-185). Most common comorbidity was congenital heart diseases (53.2%). Fifty-five percentage of arteriel injuries involved the lower limbs, and commonly were due to vessel catheterizations (38.3%). According to the Rutherford severity classification, class I was the most prevalent in 24 (51.1%) patients. Most of the patients were managed nonoperatively and 12.8% were treated with surgical procedures. Four patients underwent fasciotomies and on follow-up 3 of them required amputations. Overall in-hospital mortality rate was 4.3%, and this was not attributed to the limb ischemia. Median follow-up time was 8 months (range 1-38).
Conclusion: ALI patients in pediatric population can be managed successfully with conservative treatment options, due to the ability in children to develop arterial collaterals, in contrast with adults. Usually, the outcomes are not related to the etiology of ALI and underlying comorbidities.

Keywords: Acute limb ischemia, pediatric, anticoagulation, surgical thrombectomy, limb salvage

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OP-067

Explantation of vascular allografts

Chysty Andrei[1], Turomsha Uladzislau[1], Yudina Ol'ga[2], Rummo Oleg[1]

[1]Minsk Scientific and Practical Center for Surgery, Transplantology and Hematology, Department of Tissue Biotransplants, Minsk, Belarus
[2]Belarusian State Medical University, Department of Pathological Anatomy, Minsk, Belarus

Abstract

Aim: The problem of treating complex forms of vascular diseases remains relevant, where the stumbling block has become the choice of a suitable plastic material due to unsatisfactory results from the use of such classical options as synthetic vascular prostheses and autologous vessels. An alternative solution may be to use vascular allografts in a high-quality deceased donor vascular explantation procedure during multi-organ harvesting.

Material and Methods: The study covers the period from January 2010 to 2022, includes data on all operations performed on explantation and implantation (transplantation) of vascular allographs in the Republic of Belarus. The study consisted of two stages. During the first activities, methods were used to retrospectively analyze data for the period from 2010 to 2016. During the second stage, methods were used to prospectively analyze data for the period from 2017 to 2022.All vascular allographs were obtained from deceased donors who were declared brain dead. Explantation of vascular allografts was carried out immediately after the completion of the work of the organ surgical team in the sterile conditions of existing government healthcare organizations.

Results: 1675 vascular allografts were explanted from 742 deceased donors. From explanted vascular allografts, 553 were used to perform transplantations; 1122 were disposed of due to non-compliance with morphological criteria, either due to the detection of pathogenic microflora, or due to the need to use this type of vascular allograft throughout its safe shelf life.

Based on the analysis of the experience of performed operations of explantation of cardiovascular allographs, the following were developed and introduced into clinical practice: algorithm for selecting options for explantation of vascular allografts; classification of vascular allographs (12 types); algorithm for selecting options for explantation of vascular allografts; device for explantation of vascular allographs.

Conclusion: Explantation and use of medical allographs is a relevant and in-demand production technology. Modern methods of explantation, processing, preservation, storage, quality control and implantation of allogeneic vessels have been developed. For more effective use of vascular allografts, it is necessary to further improve the technologies of explantation operations and processing of the resulting grafts.

Keywords: Vascular allografts, homograft, harvesting, transplantation

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OP-068

Carotid dolichoarteriopathies and steroids

Elina Kheteeva[1], Roman Vinogradov[1], Viktoriya Derbilova[1], Elvira Vinogradova[2]

[1]Scientific Research Institute - Regional Clinical Hospital № 1 named after Professor S.V. Ochapovsky ", Krasnodar, Russia
[2]Kuban State Medical University, Krasnodar, Russia

Abstract

Aim: To determine the relationship between the presence of pathological tortuosity of the internal carotid artery and the steroid profile.
Material and Methods: A retrospective study was conducted in 169 patients (110 women and 59 men) and a prospective study in 11 patients (9 women and 3 men) with diagnosed pathological tortuosity of the internal carotid artery treated in the department of vascular surgery of the Regional Clinical Hospital No. 1 named after Professor S.V. Ochapovsky, Krasnodar during 2011-2023. Statistical processing of the results was carried out using the IBM SPSS Statistics 26 application software package. Due to the incorrect distribution of the sample, nonparametric methods of statistical analysis were used. The threshold value of the significance level is assumed to be 0.05. The dependence assessment was determined by analyzing nominal data-variables.
Results: Despite the significantly larger number of women among patients, the risk of stroke in men was 2.11 times higher with pathological tortuosity of the internal carotid artery. There is also a positive correlation between the pathological tortuosity of the internal carotid artery and an increase in dehydroepiandrosterone in the steroid profile of saliva.
Conclusion: 1. Male sex is a risk factor for the development of acute cerebrovascular accident with pathological tortuosity of the internal carotid artery. 2. There was no correlation between the deficiency or excess of estrogens in the steroid profile of saliva and pathological tortuosity of the internal carotid artery. 3. An increase in the level of dehydroepiandrosterone in the steroid profile of saliva positively correlates with the presence of pathological tortuosity of the internal carotid artery.

Keywords: Pathological tortuosity of internal carotid artery, estrogens,androgens

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OP-069

Spinal cord infarction in patients supported with veno-arterial extracorporeal membrane oxygenation: A systematic review

Charis Tan, Alison Zhu, Yishay Orr

Westmead Hospital, Department of Cardiothoracic Surgery, Westmead NSW, Australia

Abstract

Aim: Spinal cord infarction (SCI) is a rare complication of veno-arterial extracorporeal membrane oxygenation (VA-ECMO). While several case reports describe this devastating complication, there is limited understanding of the factors predisposing to SCI in this population. We aim to identify risk factors for SCI for patients supported on VA-ECMO to enable closer clinical monitoring of high-risk individuals.

Material and Methods: A systematic review of the literature was conducted to search for studies of adult or paediatric patients requiring VA-ECMO support, for which SCI was a reported outcome. Full-text articles published in English were eligible for inclusion. Values were reported as n (%) or median (interquartile range).

Results: Ten studies reporting on 28 cases were included for review. Fifty-seven percent (n=16) of patients were male with a median age of 47 (36.5-62) years. All patients were supported on VA-ECMO with 86% (n=24) of patients with peripheral cannulas placed in their lower body, most commonly in the femoral artery. Median duration of VA-ECMO support was 10 (5.25-15.5) days. Median time to first sign of neurological deficit was 10 (6.5-14.5) days with the majority of cases (n=25) involving the thoracic spinal cord. Concomitant Intra-Aortic Balloon Pump (IABP) use (HR 1.168 (0.5043-2.706), p=0.717) and female gender (HR 1.212 (0.5185-2.833), p=0.657) were possible risk factors for SCI.

Conclusion: SCI is a devastating and potentially under-recognised complication of VA-ECMO support, particularly when used for >10 days duration and when combined with IABP. While more studies are required to understand the aetiology of SCI, we have proposed actions to both recognise and manage early signs of SCI.

Keywords: Extracorporeal membrane oxygenation, spinal cord infarction, intraaortic baloon pump

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OP-070

Comparison of modified eversion endarterectomy against conventional techniques in carotid endarterectomy surgery

Denizhan Akpinar[1], Arif Okay Karslioglu[1], Elshad Mansimzada[1],
Ecem Tugba Yamac[1], Deniz Sarp Beyazpinar[2], Hakki Tankut Akay[1]

[1]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Stroke is one of the most important causes of morbidity and mortality worldwide. The atherosclerotic disease of the carotid artery accounts for a significant portion in the etiology of stroke. Carotid endarterectomy is a well established surgical procedure as a curative treatment for this disease. Throughout the years various different surgical techniques have emerged for carotid endarterectomy. The modified eversion carotid endarterectomy (m-ECEA) is the preferred technique in our center and in our ongoing trial at Başkent University Ankara Hospital since February 2015, we aim to compare the advantages and/or disadvantages of m-ECEA with the other conventional surgical techniques for carotid endarterectomy.

Material and Methods: In this ongoing trial since February 2015, 169 Carotid Endarterectomy procedures were done at Başkent University Ankara Hospital by the same surgical team. 104 of these were done using the m-ECEA technique. The mean age of the patients was 71.3±9.4 (41-90). 30% of the patients were female, 70% of the patients were symptomatic. 45% of the patients underwent general anesthesia while regional blockage was applied to the rest.

Results: The median operation time was 67.2 ±14.1 minutes. The median ICA clamp time was 12.2±3.6 minutes. Average time spent in the ICU was 28±7.6 hours. Average hospital stay was 3.6±1.1 days. Perioperative stroke/TIA incidence was 0.005% (1 patient). Perioperative restenosis incidence 0.005% (1 patient). Mean follow-up time was 14.3±8.1 months.

Conclusion: We believe that Modified Eversion Carotid Endarterectomy (m-ECEA) is a safe procedure which has similar/comparable results when compared to other Carotid Endarterectomy techniques. m-ECEA has a statistically significant shorter operation and carotid clamp time. Technical challenges such as a long plaque or high bifurcation are possible disadvantages that should be considered during planning the operation.

Keywords: Stroke, carotid artery disease, carotid endarterectomy, modified eversion

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OP-071

Type of arteriovenous fistula only predictive factor for development of cephalic arch stenosis: A retrospective study

Sarah Jia Ern Chew, Joseph Tneoh, Limi Lee, Joshua Wibowo, Ming Yii

Monash Health, Department of Vascular and Transplantation Surgery, Melbourne, Australia

Abstract

Aim: Cephalic arch stenosis in patients with ipsilateral arteriovenous access can result in haemodialysis access failure. Identification of risk factors of cephalic arch stenosis may allow for increased surveillance and early identification of patients with cephalic arch stenosis prior to haemodialysis failure. There are minimal studies on the risk factors for the development of cephalic arch stenosis. Therefore, the aim of this study was to identity factors affecting development of cephalic arch stenosis post arteriovenous access formation.

Material and Methods: This was a retrospective cohort study conducted in an Australian tertiary centre. Records of all patients who underwent arteriovenous access formation at our institution from January 2017 to December 2020 were retrospectively analysed and followed till 31st December 2022. Minimum duration of follow up was 12 months. Continuous variables which were not normally distributed were presented as mean and range and analysed using Mann-Whitney test. Categorical variables were presented as frequency counts and percentages and analysed using Fisher's exact test. Simple logistic regression was used to identify any significant risk factor for cephalic arch stenosis development.

Results: 516 patients had arteriovenous fistulas formed in the study period. 35 patients (6.8%) developed cephalic arch stenosis. Brachiocephalic type of arteriovenous fistula is associated with an increased risk of developing cephalic arch stenosis (OR=14, 95% CI: 1.88, 105.3, p-value=0.01). The average time from formation of arteriovenous fistula to intervention for cephalic arch stenosis was 336±196.9 days.

Conclusion: Type of arteriovenous fistula was the only significant factor that increases risk of developing cephalic arch stenosis. Operators could consider increased surveillance of this cohort of patients with increased risk of cephalic arch stenosis. Future prospective research into the pathophysiological factors influencing development of cephalic arch stenosis and whether early surveillance would be cost effective may be warranted.

Keywords: Vascular access, arteriovenous fistula, cephalic arch stenosis, haemodialysis

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OP-072

Is there any residual stenosis after evertion carotid endarterectomy? A retrospective analysis of postoperative carotid anatomy by computed tomography angiography

Fevzi Ayyildiz[1], Emre Pinar[1], Omer Faruk Rahman[2], Mehmet Mehdi Cambaz[3], Umut Alkan[3], Ahmet Tanyeri[3], Canten Tataroglu[4], Tunay Kurtoglu[1]

[1]Adnan Menderes University, Faculty of Medicine, Department of Cardiovascular Surgery, Aydın, Türkiye
[2]Burdur State Hospital, Department of Cardiovascular Surgery, Burdur, Türkiye
[3]Adnan Menderes University, Faculty of Medicine, Department of Radiology, Aydın, Türkiye
[4]Adnan Menderes University, Faculty of Medicine, Department of Pathology, Aydın, Türkiye

Abstract

Aim: Carotid artery atherosclerosis remains a common clinical entity that can lead to stroke. Eversion carotid endarterectomy has long been the method of choice for patients demanding carotid artery surgery. Restenosis after revascularization is one of the most undesirable and challenging issues for the surgeon. Residual stenosis accounts for more than one third of the severe stenosis cases after surgery, however there are few studies on the occurence of residual stenosis following the carotid artery surgery[1]. Aim of this study is to investigate the residual stenosis by retrospective analysis of postoperative carotid anatomy on computed tomography angiography(CTA) images.

Material and Methods: The patients who underwent eversion carotid endarterctomy by the same surgeon in a university hospital between September 2019 and May 2023 and who have a postoperative carotid CTA within three months after the surgery have been enrolled in the study. The preoperative stenosis rates have been noted and the residual stenosis if any have been determined based on NASCET method[2]. More than 50% stenosis in the first 3 months postoperative control imaging was considered "significant residual stenosis"[3].The demographic caracteristics and mortality have also been analysed. The atherosclertotic plaque histology of specimens obtained during the operation have also been examined by a blind pathologist in terms of plaque type, calcification, inflammation, neovascularization and bleeding into the atheroma.

Results: Of the 45 cases examined, 31 were male and 14 were female. In the study where the average age was 72.1 years, perioperative stroke was observed in 1 case. 48.9% of the plaques were fibrous, 51.1% were fatty, and 77.8% were calcific. Inflammation was observed in 20%, neovascularization was observed in 15.6%, and bleeding into atheroma was observed in 11.1%. The mean preoperative stenosis was 78.51(%)±9.74, no significant postoperative residual stenosis was observed. Non-significant residual stenosis ranging from 5.2% to 40% was observed in 5 patients, and no significant relationship was found with plaque pathologies in these patients.

Conclusion: Eversion carotid endarterectomy is an effective method for eleminating atherosclerotic plaque without causing residual stenosis. Plaque characteristics and demographic features were not found to be associated with significant residual stenosis.

Keywords: Evertion carotid endarterectomy, residual stenosis, angiography, histology

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OP-073

Pseudoaneurysm temporary embolization: A new method for the management of catheter-related complication

Temirlan Gamzatov, Aleksei Kebriakov, Alexei Svetlikov

1North-Western district scientific and clinical center named after L. G. Sokolov Federal Medical and Biological Agency, Vascular and Endovascular Surgery Department, Saint Petersburg, Russia

Abstract

Aim: Catheter-related pseudoaneurysm (CRPSA) is one of the most common vascular access site complications. A new method of minimally invasive management of CRPSA by means of temporary guidewire embolization (TGE) has been proposed.

Material and Methods: From January 2020 to December 2021, 7 CRPSAs (femoral artery, n=3; brachial artery, n=4) have been diagnosed after peripheral diagnostic and therapeutic interventions. Percutaneous ultrasound-guided puncture of the CRPSA cavity with a 21G needle was performed and a 0.018 non-coated flexible guidewire with a soft tip was inserted into the cavity and folded in several turns. After needle removal, leaving guidewire remained in the cavity, direct compression of CRPSA using ultrasound probe was initiated aiming to achieve blood flow arrest in CRPSA. Once thrombosis of the CRPSA cavity is achieved, the guidewire was removed.

Results: TGE was technically feasible in all 7 patients with CRPSA. In all cases complete thrombosis of CRPSA during TGE was achieved. There were no recurrences during the follow-up period. The time required for CRPSA thrombosis from insertion to removal of the guidewire ranged from 5 to 40 minutes (mean time 15 minutes). The greatest diameter of CRPSA ranged from 20 to 85 mm. Antithrombotic status did not affect the efficacy of the procedure. We had one complication from TGE. The formation of an additional CRPSA cavity occurred after the guidewire was inserted into the main cavity. The time of CRPSA thrombosis was significantly longer than in uncomplicated CRPSA and was 40 minutes. No other complications were noted.

Conclusion: TGE represents a highly effective and safe less-invasive treatment for CRPSA. This method has the potential to replace currently widely used other methods of CRPSA treatment due to the large number of advantages, simplicity and availability. Additional studies are required with a set of more clinical observations to fully study the method and identify all the shortcomings and complications.

Keywords: Puncture site complications, pseudoaneurysm, percutaneous treatment, temporary guidewire embolization

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OP-074

Clinical presentation and management of ruptured pseudoaneurysm: A case study

Enis Burak Gul, Alp Yildirim, Serkan Mola

Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Pseudoaneurysms, characterized by defects in vascular wall layers, often result from iatrogenic procedures. These vascular anomalies are increasingly common due to the rise in percutaneous arterial interventions, with rupture being a rare but life-threatening complication necessitating immediate intervention. We present the case of a 56-year-old female with a four-year history of pseudoaneurysm formation following cardiac catheterization, which underwent two unsuccessful percutaneous closure attempts. The patient had undergone metallic aortic and tricuspid valve replacements and was on regular warfarin therapy. Upon admission, she exhibited a large femoral pseudoaneurysm, and despite having her INR within therapeutic range, open surgical correction was deemed necessary. However, while awaiting elective surgery, she suffered a pseudoaneurysm rupture, leading to an emergency procedure. Laboratory results at the time showed an elevated INR (2.8), decreased hemoglobin (8.3 g/dl), and leukocytosis ($13.1x10^9$/L). Following fresh frozen plasma administration, a 15 cm incision was made, revealing a self-limited pseudoaneurysm contained by hematoma. The sac was excised, and a section of the femoral artery was replaced with an 8mm PTFE graft, with the patient subsequently discharged after five days. Pseudoaneurysms, often iatrogenic, are most commonly encountered with groin swelling and pulsatile masses. Diagnosis is confirmed through duplex ultrasound and can be further evaluated with contrast-enhanced CT angiography. Ruptured pseudoaneurysms are life-threatening, with potential complications including hemodynamic instability, neuropathy, skin necrosis, deep vein thrombosis, and infection. Treatment options depend on the pseudoaneurysm's size and localization, with surgery typically reserved for ruptured cases.In the context of anticoagulant use, we recommend surgical intervention as the primary treatment option for pseudoaneurysms. Despite potential minimally invasive methods, surgical closure remains the most reliable approach. This case underscores the critical importance of early diagnosis and appropriate management, especially in patients with iatrogenic pseudoaneurysms.

Keywords: Pseudoaneurysm, rupture, emergency surgery

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OP-075

Emergency TEAR in Blunt Thoracic Aortic Injury (BTAI): A single centre's 7-year experience

Firdaus Raduan[1], Jazree Jamaluddin[1], Zhafri Zulkifli[1], Afiq Amin[1], Sivakumar Krishnasamy[1], Ahmad Rafizi Hariz[1], Nora Julianna Osman[2], Suraya Othman[2]

[1]University Medical Malaya Centre, Department of Surgery, Malaysia
[2]Universiti Teknologi Mara, Department of Surgery, Malaysia

Abstract

Aim: Blunt trauma thoracic aortic injury (BTAI) is a life threatening vascular emergency associated with high mortality rate. It was traditionally treated with open surgery prior to introduction of Thoracic Endovascular Aortic Repair (TEVAR). We are reviewing TEVAR procedure for the past 7 years, assessing technical success, clinical success and mortality rate for patients.
Material and Methods: Retrospective evaluation of all patients with BAI who undergone TEVAR procedure in University Malaya Medical Centre between May 2017 and July 2023.
Results: There were 15 patients identified with BAI (2 grade I, 13 grade I). Al of the patients were male (100% with a mean age of 38 years (range 17-69 years). TEVAR was performed in all 15 patients with zero rate of conversion to open chest surgery. Technical success was achieved in 14 (93.3%) patients with one instance of forward migration of graft requiring left common carotid stenting intraoperatively. Clinical success was achieved in 10 (66.7%) patients. There were two (13.3%) postoperative strokes and one of them made full neurological recovery. Three (20%) patients developed acute limb ischemia (ALI) of lower limbs post procedure, of which two patients had arterial cutdown access while 1 patient had perclose approach. The 30-day mortality rate was 13.3% (two), one patient died to cerebrovascular accident (CVA) and the other due multi-organ failure. There have been no instances of device migration on subsequent follow-up or need for additional aortic intervention.
Conclusion: TEVAR is a safe and effective procedure for BTAI with high rate of technical a n d clinical success. With low rate of complications and mortality, TEAR has supplanted open surgery as treatment of choice for BTAI.

Keywords: Thoracic endovascular aortic repair, blunt thoracic aortic injury, blunt trauma thoracic aortic injury, vascular trauma

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OP-076

First comparative results of long-term survival after elective surgery for infrarenal abdominal aortic aneurysm in Russia and Tajikistan

Egan Kalmykov[1], Igor Suchkov[1], Nina Mzhavanadze[1], Okildzhon Nematzoda[2], Alidzhon Gaibov[3], Dzhavli Sultanov[3], Roman Kalinin[1]

[1]Ryazan State Medical University, Ryazan, Russian Federation
[2]Republican Scientific Center for Cardiovascular Surgery, Dushanbe, Republic of Tajikistan
[3]Avicenna Tajik Medical University, Dushanbe, Republic of Tajikistan

Abstract

Aim: Actually, no comparative data in long term survival of patient with infrarenal abdominal aortic aneurysm from various geographic regions, including Russia and Tajikistan were published. The aim of the study is a comparative analysis of the survival of elective treatment of patients with infrarenal abdominal aortic aneurysm (iAAA) in patients from Russia and Tajikistan.
Material and Methods: The retrospective study is based of the treatment of 60 patients with iAAA from the Republican Scientific Center for Surgery in Dushanbe (Tajikistan) (2011-2016) and 166 (2011-2015) patients from a clinic in Ryazan (Russia).
Results: Analysis of the treatment results of our patients demonstrated that only 69.7% and 73.3% of cases underwent elective surgical treatment of iAAA. The duration of observation of patients in Dushanbe and Ryazan was 21.0±0.9 (M±SE; min-max=11-33) and=21.0±0.5 (M±SE; min-max=2-33) months. Mortality during this period was comparable in both countries. And, up to 33 months, the survival rate of patients after surgical treatment of AAA reached 74% and was not statistically different in two countries.
Conclusion: The survival after elective treatment was comparable in both countries and reached 74% up to 33 month.

Keywords: Elective surgery, abdominal aortic aneurysm repair, infrarenal abdominal aortic aneurysm, survival rates

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OP-077

Clinical experience with heparin-bonded expanded polytetrafluoroethylene graft for below-the-knee bypass in the era of endovascular surgery

Yohei Yamamoto, Kazuki Tsukuda, Ai Kazama, Yoshiki Wada, Toru Kikuchi, Hiroki Uchiyama, Toshifumi Kudo

Tokyo Medical and Dental University, Department of Surgery, Division of Vascular Surgery, Tokyo, Japan

Abstract

Aim: A heparin-bonded expanded polytetrafluoroethylene (ePTFE) graft (Propaten graft; W. L. Gore & Associates, Flagstaff, Ariz) became available in Japan in July 2013 and covered by insurance in January 2014. We report an institutional experience with heparin-bonded ePTFE graft for below-the-knee (BK) bypass since its launch in Japan.

Material and Methods: This was a single-center, retrospective study. We reviewed data of consecutive patients who received elective BK bypass with the use of heparin-bonded ePTFE graft between October 2013 and April 2023.

Results: During the study period, BK bypass with the use of heparin-bonded ePTFE graft was performed in 34 limbs in 28 patients. Technical success was achieved in 97% of subjects. There was an occurrence of early graft occlusion, which was subsequently resolved through reanastomosis. The median ankle brachial pressure index improved from 0.41 (0.36-0.57) preoperatively to 0.91 (0.82-1.08) postoperatively ($p<.001$). The 30-day mortality rate was 3.4% (n=1) and the overall 30-day complication rate was 11.2% (n=4). Two patients developed graft infections at 7 and 42 months postoperatively. Primary patency rates at one, three and five years were 70.0%, 64.4% and 47.0%, respectively, while secondary patency rates for the same periods were 85.2%, 76.7% and 70.0%, respectively. Amputation free survival rates at one, three and five years were 90.0%, 76.9% and 69.2%, respectively.

Conclusion: When a suitable saphenous vein is unavailable, heparin-bonded ePTFE graft can be an acceptable alternative for knee-crossing revascularization even in the era of endovascular surgery.

Keywords: Peripheral arterial disease, infrainguinal bypass, below the knee, heparin-bonded expanded polytetrafluoroethylene graft

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OP-078

Isolated large,tortuous perforators and their incompetent territories,"treatment considerations"

Marjan Ladan

Pars Hospital, Vascular Surgery Department, Tehran, Iran

Abstract

Isolated incompetent perforators usually blow out through posterior thigh or around knee fossa and treating these perforarors is well accepted in CEAP 3 level of varicose vein disease.Many studies have compared different surgical and minimally invasive techniques to treat isolated incompetent perforators. In this study we will try to remind some challenging anatomies of isolated incompetent perforator veins especially when they have a long and/or large tortuous subfacial segment.According to our experience leaving a long,large and/or tortuous subfacial stump may lead to thrombosis and resemble DVT,So these kind of anatomies should be considered before starting treatment.

Keywords: Isolated incompetent perforators, varicose vein, tortuous, thrombosis

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OP-079

Surgical and endovascular management of coarctation of aorta: Comparative results

Nur Dikmen, Evren Ozcinar, Zeynep Eyileten, Levent Yazicioglu

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Coarctation of the aorta (CoA) accounts for 5–8% of all congenital heart diseases. Without correction, the mean life expectancy of patients with CoA is 35 years and 90% of those patients die before reaching the age of 50 years. The various treatment options include endovascular, surgery and hybrid procedures. The endovascular treatment includes simple balloon dilatation, stent placement, and stent graft placement. Though endovascular approaches are gaining popularity, not all CoA are suitable for the procedure. It depends on the anatomy of the lesion, associated pathology and clinical condition of the patient. The surgical techniques include resection and end-to-end anastomosis, subclavian flap repair, prosthetic patch repair and prosthetic interposition tube graft. These open surgeries can be performed with or without the aid of cardiopulmonary bypass (CPB) depending on the anatomy and collateral circulation. This is a retrospective study of 69 patients who were treated during the past 10 years. Of these, 18 patients were treated with endovascular techniques and 51 underwent open surgical repair. The mean age of the patients was 21 years (range: 1 month-37 years). Follow-up comprised monitoring of the blood pressure, echocardiography, and computed tomography and magnetic resonance angiographic studies. Shorter stay in the intensive care unit and higher necessity of antihypertensive treatment were the most conspicuous results of endovascular treatment group. And also, echocardiographic coarctation gradients were slightly higher than surgical treatment group.

Keywords: Aortic surgery, endovascular, coarctation of aorta

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OP-080

Comparison of preoperative and postoperative pain, depression and quality of life in patients with venous insufficiency treated with the classical stripping method and the EVLA method

Alper Selim Kocaoglu

Eskişehir City Hospital, Department of Cardiovascular Surgery, Eskişehir, Türkiye

Abstract

Aim: The aim of this study is to compare the preoperative and postoperative pain, quality of life, and susceptibility to depression levels of patients who underwent endovenous laser ablation (EVLA) and classical stripping surgery for the treatment of chronic venous insufficiency.

Material and Methods: Twenty patients who underwent EVLA for chronic venous insufficiency and 20 patients who underwent classical stripping surgery were included in the study. Preoperative and postoperative pains of the patients were evaluated with visual analog scale (VAS); Abedreen Varicose Vein Questionnaire (AVVQ) was used for quality of life assessment and Beck depression inventory (BDI) tests were used to evaluate emotional states.

Results: There was no statistical difference between VAS, AVVQ and BDI scores in the preoperative evaluations of the groups. Although the VAS score was found to be lower in the EVLA group compared to the stripping group in the controls performed on the 10th postoperative day, there was no statistical difference between the two groups. In the postoperative 10th day controls of AVVQ and BDI scores, both scores were found to be statistically significantly lower in the EVLA group than in the stripping group ($p<0.05$).

Conclusion: Patients who underwent EVLA for chronic venous insufficiency had less postoperative pain compared to patients who underwent stripping. For this reason, it is thought that the quality of life of patients who underwent EVLA is higher. Since patients who have undergone classical stripping surgery think that they have had a more serious operation, they have more restrictions in their lifestyles in the postoperative period and are affected more emotionally accordingly. For this reason, we think that EVLA procedure will give faster results in patients returning to their normal lives. At the same time, we believe that detailed information to be provided before and after the operation in patients undergoing classical stripping will have positive effects on the emotional state of the patients.

Keywords: Venous insufficiency, endovenous laser ablation, stripping, depression

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OP-081

Characteristic of hemodynamics in the area of proximal and distal anastomoses in various types of femoral-popliteal shunting

Aslan Zakeryaev, Амирлан Созаев, Герей Хангереев, Tarlan Bakhishev, Viktoriya Derbilova, Sultan Butaev, Aleksandr Baryshev, Roman Vinogradov, Vladimir Porkhanov

Scientific Research Institute - Regional Clinical Hospital № 1 named after Professor S.V. Ochapovsky", Krasnodar, Russia

Abstract

Aim: Femoral-popliteal bypass surgery is the most common type of surgery for extended lesions of the superficial femoral artery. According to the world literature, the frequency of occlusion of the femoral-popliteal shunt for 5 years is 50-90%. To study the parameters of local hemodynamics in the area of proximal and distal anastomoses of various modifications of femoral-popliteal shunts.

Material and Methods: To study hemodynamics in the area of proximal and distal anastomoses, 5 patients who underwent femoral-popliteal bypass surgery in various modifications during 2022-2023. The indication for surgical treatment was chronic arterial insufficiency of the II B stage according to Fontaine-Pokrovsky. Multispiral computed tomography with contrast enhancement (CT) was performed 1 day after surgery. Based on results, the geometry of the anastomoses were studied: the length of the anastomosis, its maximum width, the angle between the axis of the common femoral artery (popliteal artery) and the shunt. The segment between the extreme points of the anastomosis ("nose" and "heel") is taken as its length, the width is measured between the side walls of the anastomosis that are as far apart as possible. The angle between the femoral-popliteal shunt and the artery was measured between the axis passed through the common femoral artery proximally and the popliteal artery distally and through the "heel" of the anastomosis. Numerical calculations of blood flow were performed in the constructed models using SimVascular software. Based on the results of calculations using the ParaView [PW] program, distributions of hemodynamic parameters were constructed.

Results: In all cases, the lengthening of the anastomosis zone led to an increase in the RRT_int index, and shortening led to a decrease. Long, wide anastomosis contribute to the formation of atherosclerotic plaque and the development of restenosis. Anastomoses after femoral-popliteal bypass surgery with auto vein and lateral subcutaneous vein of the upper limb, hemodynamic parameters are better compared to other models.

Conclusion: This is due, in our opinion, to the peculiarity of the shunt location and compliance with the congruence of the lumen of the arteries and veins.

Keywords: Femoral-popliteal bypass surgery, hemodynamics, shunt

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Comparison between polytetrafluoroethylene (PTFE) and propylene suture materials in expanded polytetrafluoroethylene (ePTFE) grafts

Hakki Tankut Akay, Okay Karslioglu, Deniz Sarp Beyazpinar, Denizhan Akpinar, Ecem Tugba Yamac, Elshad Mansimzada, Zoukou Mariefrancedominique Seri, Endri Balla, Bahadir Gultekin, Atilla Sezgin

Başkent University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Infrainguinal bypass surgery stands is one of the most common open surgical procedure for lower limb revascularization. While autologous vein grafts are widely regarded as the gold standard, expanded polytetrafluoroethylene (ePTFE) grafts have emerged as an acceptable prosthetic alternative to autologous veins for infrainguinal arterial reconstructions. Contemporary surgical anastomotic interventions for cardiovascular reconstructions typically employ a monofilament suture, such as polypropylene, however, PTFE suture materials can be a perfect alternative.

Material and Methods: Between January 2022 and December 2022, we conducted a study aimed at comparing the effects of employing PTFE sutures in infrainguinal bypass procedures where PTFE grafts were used as conduits in the suprapopliteal position. To achieve this objective, we established two cohorts, each comprising 15 patients. In Group I, PTFE served as the suture material, whereas in Group 2, polypropylene sutures were employed. Preoperative and intraoperative data, including the use of surgicel, time to hemostasis, drainage, time spent in the intensive care unit, the necessity for surgical revision, postoperative hematoma occurrence, and hospitalization duration, were recorded. All surgical procedures were conducted by the same surgical team, employing a uniform operative technique.

Results: All patients with no suitable vein grafts underwent femoro-suprapopliteal bypass surgery with PTFE grafts due to either rest pain or ischemic ulcers. Among the 30 patients, 11 fell into Fontaine class 4, while 19 were categorized as Fontaine class 3. Group I (PTFE group) exhibited significantly lower hemostasis time and drainage levels on the first and second postoperative days ($p<0.0001$, $p=0.03$, and $p=0.017$, respectively). Notably, two patients in Group 2 required blood transfusions, and neither group necessitated surgical revisions or secondary interventions during the initial nine-month follow-up period.

Conclusion: In our study we observed less hemostasis time, less drainage and no use of surgical in PTFE sutures in PTFE graft material in suprapopliteal position. We may conclude that PTFE sutures can be a good alternative in this group of patients.

Keywords: Polytetrafluoroethylene suture, polypropylene sutures, polytetrafluoroethylene grafts

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OP-083

Staged strategy of Zone Zero TEVAR in treating acute aortic dissection Non-A Non-B type with collapsed true lumen a case report

Ryan Prasdinar, Danang Himawan Limanto

Airlangga University, Dr. Soetomo General Academic Hospital, Departement of Cardiothoracic and Vascular Surgery, Surabaya, Indonesia

Abstract

Type non-A non-B Acute Aortic Dissection (AAD) involves the aortic arch but not the ascending aorta. The location of the tear in this type makes it a very challenging lesion to address. The purpose of this case report is to describe the remarkable result of a staged procedure for surgical repair of type non-A non-B AAD. A 35-year-old male presented with atypical chest and upper abdominal pain. CT angiography revealed dissection extending from the aortic arch to the abdominal aorta. The patient was diagnosed with acute aortic dissection non-A non-B type with the entry tear in the greater curvature of the distal aortic arch just in front of the left subclavian artery (LSA) origin. He underwent staged aortic repair. The first stage involved debranching of the brachiocephalic and the left common carotid artery. using a Y-graft connected to the ascending aorta. The second stage was to perform a left carotid-subclavian artery bypass using 10 mm e-PTFE graft. The final stage involved performing Zone Zero TEVAR and proximal LSA interruption using an Amplatzer vascular plug in order to prevent type II endoleak. Zone-Zero TEVAR was planned to ensure good landing zone in this patient. Debranching of the three arch branches was necessary prior to undertake this final stage. Despite having three separate procedures, patient was discharged with no complication The staged aortic repair approach stands as a highly effective and tailored strategy for managing acute aortic dissections, especially in challenging aortic pathology.

Keywords: Acute aortic dissection, thoracic endovascular aortic repair, arch debranching

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OP-084

Our long-term results in patients who had pharmacomechanical thrombectomy due to acute iliofemoral deep vein thrombosis

Saygin Turkyilmaz, Ali Aycan Kavala, Gulsum Turkyilmaz, Utku Celik

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Although the main treatment for deep vein thrombosis (DVT) patients is anticoagulation; pharmacomechanical thrombectomy is among the treatment options for patients with iliofemoral thrombosis in the acute stage. After DVT, postthrombophlebitic syndrome (PDS) and chronic venous insufficiency (CVI) are important complications that affect the quality of life in the long term. In this study, we aimed to share the results of long-term follow-up of patients who underwent pharmacomechanical thrombectomy.

Material and Methods: At Department of Cardiovascular Surgery of Bakırköy Dr.Sadi Konuk Education and Research Hospital, 84 patients who underwent pharmacomechanical thrombectomy due to acute iliofemoral DVT between January 2014 and December 2018 were retrospectively examined. The same technique was applied to all patients: Pharmacomechanical thrombectomy+aspiration using a temporary vena cava filter, catheter-mediated thrombolysis for postprocedural 24 hours, and anticoagulant therapy for 6 months. The physical examinations, Villalta-Prandoni score and venous Doppler results of the patients at the 1st, 2nd and 5th year follow-up visits were examined.

Results: Of the total 84 patients, 50 (59.5%) were male and 34 (40.5%) were female, and the average age was 41 years. When the Doppler USG controls of the cases were examined, it was seen that there was complete recanalization in 95.2% (n=80) in the 1st year, in 91.7% (n=77) in the 2nd year, and in 83.3% (n=70) in the 5th year. During the long-term 5th year follow-up of the patients, physical examination revealed venous ulcers in 2 patients (2.4%), hyperpigmentation in the tibial region in 4 patients (4.8%), edema in the legs in 7 patients (8.3%), and varicose veins in 15 patients (17.9%). In the 5th year, there were 15 patients (17.9%) with a Villalta-Prandoni score ≥5 and considered to have PTS, and 2 of these patients had severe PTS.

Conclusion: It is known that approximately 50% of patients with proximal DVT attacks develop PTS despite appropriate anticoagulation, and 5-13% of these patients experience severe PTS. We can say that the rates of PTS development during follow-up of patients who underwent pharmacomechanical thrombectomy are lower. Therefore, pharmacomechanical thrombectomy should be considered among the treatment options in suitable patients with an acute iliofemoral DVT attack.

Keywords: Deep vein thrombosis, postthrombophlebitic syndrome, pharmacomechanical thrombectomy

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OP-085

Clinical outcomes of blunt aortic trauma in traumatic patients

Ali Aycan Kavala, Saygin Turkyilmaz, Selim Tumkaya, Zakir Ibrahim Kilinc

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Aortic injuries occur in 1-2% of patients with blunt trauma. Traumatic aortic injury is an emergency condition typically resulting from blunt trauma. In this study, we aimed to present our approach to traumatic aortic injuries and the clinical outcomes in our clinic.

Material and Methods: A retrospective analysis of 23 cases between 2015 and 2021 was conducted. Among the 23 patients, 5 underwent surgical operations due to unstable hemodynamics or ineligibility for Thoracic Endovascular Aortic Repair (TEVAR). TEVAR was successfully performed on 18 patients. Patients were followed for a minimum of 2 years, and the primary endpoint was defined as mortality due to all causes.

Results: All patients underwent either surgery or TEVAR. Among the 5 patients who had surgical intervention, 1 died within the first 30 days. Paraplegia developed in 1 patient, and tracheotomy was performed in 1 patient due to prolonged intubation. The average length of stay in the ICU was 18 days, and the total hospital stay averaged 32 days for these patients. They required an average of 2500 ml of blood product replacement in the first 48 hours postoperatively. Among the 18 patients who underwent TEVAR, 1 patient died within the first 30 days. None of the patients developed paraplegia, but 1 patient required carotid-subclavian bypass surgery due to ischemia in the left arm. The average length of stay in the ICU was 2 days, and the total hospital stay averaged 5 days for these patients. They required an average of 250 ml of blood product replacement in the first 48 hours postoperatively.

Conclusion: Aortic injury should be considered in patients with multiple traumas. In blunt thoracic trauma patients who meet repair criteria and have suitable anatomy, TEVAR is recommended over open repair. From 2007 to 2015, the rate of open repair decreased from 7.5% to 1.9%, while TEVAR rates increased from 12.1% to 25.7%. Randomized studies for open and endovascular management have not been conducted. Instead, trauma registry data and meta-analyses have shown that TEVAR provides superior 30-day survival rates in patients with suitable anatomy.

Keywords: Aortic trauma, thoracic endovascular aortic repair, aortic injury

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OP-086

Comparison of paclitaxel-coated balloon angioplasty with femoropopliteal bypass surgery in treating femoropopliteal lesions

Ali Aycan Kavala, Yusuf Kuserli, Saygin Turkyilmaz, Selim Tumkaya, Zakir Ibrahim Kilinc

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: To compare drug (paclitaxel)-coated balloon angioplasty with femoropopliteal bypass surgery in the treatment of femoropopliteal lesions.

Material and Methods: A retrospective study was performed between January 2015 and January 2019, covering a four-year period. All subjects who underwent femoropopliteal bypass surgery and drug-coated balloon angioplasty over a four-year period were evaluated. The subjects' demographic characteristics, lesion characteristics, treatment outcomes and disease-free survival were collected. Subjects were divided into the femoropopliteal bypass group (Group A) and the drug-coated balloon angioplasty (Group B) group.

Results: In total, 220 subjects were enrolled. Both Group A and Group B consisted of 110 subjects. The lesion length for the subjects in Group A was significantly longer than that in Group B (24.61±2.79 mm for Group A and 18.59±3.95 mm for Group B, p=0.001). The stenosis degree in Group A was also significantly higher than that in Group B (96.82±4.32% for Group A and 94.85±4.55% for Group B, p=0.001). The duration of the procedure, duration of hospitalization and rate of bleeding in Group A were significantly higher than those in Group B. The incidence of overall morbidity and reintervention rates in Group B were significantly higher than that in Group A. The preoperative ankle brachial index values of the subjects in Group B were statistically significantly higher than those in Group A (0.56±0.08 for Group A and 0.61±0.08 for Group B, p=0.001). For primary patency, there was a significant difference between the groups in the distribution of the duplex ultrasound results at the 3rd, 6th, 9th and 12th month control points (p=0.001). At all control points, Group A had better primary patency rates, whereas the secondary patency rates did not differ. In total, among the 220 patients, 125 (56.8%) were disease free, and 95 (43.2%) experienced recurrence. The mean disease-free survival times for Group A and Group B were 10.45±0.28 months and 9.11±0.37 months, respectively. The disease-free survival rates were significantly higher in Group A (p=0.001, p<0.05).

Conclusion: Femoropopliteal bypass resulted in better disease-free survival rates than drug-coated balloon angioplasty and serves as an effective modality for the treatment of femoropopliteal lesions.

Keywords: Limb salvage, balloon angioplasty, coated, disease-free survival

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OP-087

The usefulness of intravascular ultrasound (IVUS) compared to computed tomography angiography (CTA) and angiography in the diagnosis and treatment of superficial femoral artery stenosis

Hong Seok Han, Eunju Jang, Ki Yoon Moon, Seunghoon Lee, Sun Cheol Park, Sang Seob Yun, Jang Yong Kim

The Catholic University of Korea Seoul St. Mary's Hospital, College of Medicine, Department of Surgery, Division of Vascular and Transplant Surgery, Seocho-gu, Seoul, South Korea

Abstract

Aim: In patients with vascular disease, superficial femoral artery (SFA) is an important route that supplies blood to the distal leg arteries. If this blood vessel becomes narrow or clogged, there may be a risk of amputation, so appropriate treatment should be made through accurate diagnosis. Previous diagnosis was performed through computed tomography angiography (CTA), and additional angiography was performed if necessary, but with the recent developed intravascular ultrasound (IVUS), expectations for a new diagnostic method are increasing.

Material and Methods: We performed an analysis of prospectively collected the examination data of the patient with SFA suspicious lesion. CTA was used as the initial screening test as reference, and we examined angiography and IVUS during endo-vascular operation to compare with one another accuracy of examinations. The assessment and diameter of SFA lesion (Chi-square for the difference) were evaluated to identify characteristics of the multiple imaging techniques.

Results: We screened total 63 cases with SFA lesion between September 2018 and August 2023. Excluding 4 invalid error data, Total 59 cases (mean age 71.1, range 25~93) were collected and five patients underwent two procedures at different times, so the actual number of patients investigated was 54 (male 88.9%). We examined 24 cases with Eagle eye, 19 cases with Eagle eye short up, 16 cases with Opticross 18. Through IVUS, we confirmed 1 (0.02%) normal, 28 (47.5%) stenosis, 31 (50.8%) total occlusion cases in the SFA. Compared with CTA or angiography, IVUS showed no significant difference in intra-luminal diameter of SFA lesion but more detailed peri-operative information such as outer diameter, thickness or injury of vessel wall, property and degree of artherosclerosis to plan treatment.

Conclusion: CTA is a first choice of test in diagnosis of suspected SFA lesion. However, to plan a clearer treatment, IVUS is better than angiography as an additional test. Therefore, we recommend the use of IVUS in potential patients with SFA lesion in whom angiography is being considered.

Keywords: Intravascular ultrasound, computed tomography angiography, angiography, accuracy, diameter

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OP-088

Results of limb-sparing surgery with multidisciplinary approach in soft tissue sarcomas

Umit Kahraman[1], Osman Nuri Tuncer[1], Huseyin Kaya[2]

[1]Ege University, Faculty of Medicine, Department of Cardivascular Surgery, İzmir, Türkiye
[2]Ege University, Faculty of Medicine, Department of Orthopedics and Traumatology, İzmir, Türkiye

Abstract

Aim: We aimed to evaluate our vascular surgery results in limb-sparing surgery in soft tissue sarcomas performed with a large team.
Material and Methods: We analyzed 17 patients who were operated on with a multidisciplinary approach in the orthopedic clinic between 2018 and 2023 and were revascularized by cardiovascular surgery. We examined the patient group to include only lower extremity tumors that spread to major vascular structures. PTFE graft or Saphenous vein graft was used in artery and vein anastomoses. For long-term follow-up, we checked the lower extremities with Contrast-Enhanced Computed Tomography to see the arterial structures and the lower extremity venous Doppler ultrasonography to see the venous structures.
Results: The average age of the patients included in the study was 42.7±22.6 years. 7 (41.2%) of the patients were women and 10 (58.8%) were men. The average distance of the tumor to the surgical margin was 1.6±1.1 mm, the average postoperative tumor size was 14.3±6.3 cm, and the average follow-up period of the patients was 17.5 Months ±17 days. Fifteen patients (71%) had soft tissue sarcomas at the thigh region. Venous graft bypass surgery was performed in 12 (70%) of 17 patients. PTFE synthetic graft was applied in 6 (50%) patients and saphenous graft reconstruction was applied in 6 (50%) patients. 11 (91%) grafts were placed in the Femoral vein. 2 (16.6%) PTFE grafts and 2 (16.6%) Saphenous grafts were found to be thrombosed. Arterial graft reconstruction was performed in 16 of 17 patients (94%). The graft reconstruction was applied to the femoral artery in 14 (87.5%) patients. PTFE synthetic graft was applied to 6 (37.5%) patients, and Saphenous vein graft reconstruction was applied to 10 (62.5%) patients. Saphenous vein graft was occluded in 3 (18.5%) out of 16 patients. Amputation was performed in 1 (5.8%) patient.
Conclusion: Oncological and functional results after wide resection of sarcomas with their involved vessels and reconstruction of resected vessels are good. We found no difference between graft types in complication rate and functional outcomes. Limb-sparing surgery using major vascular reconstructions is an applicable method even with high complication rates.

Keywords: Sarcoma, extremities, vascular surgical procedures

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OP-089

MR lymphography of lymphatic complications in multifragmentary tibiotarsal fractures in patients with post-thrombotic disease

Julia Kononova[1], Sergei Kolobov[1], Vasiliy Yarema[1], Victor Zuev[2], Natalya Serova[2], Mariana Lazechko[4], Nikolay Yarygin[1]

[1]Evdokimov Moscow State University of Medicine and Dentistry, Orthopaedics and Disaster Medicine, Department of Traumatology, Moscow, Russia

[2]I.M. Sechenov First Moscow State Medical University, Department of Radiology, Moscow, Russia

[3]Central Clinic of the Ministry of Internal Affairs of the Russian Federation, Surgical Department, Moscow, Russia

[4]"The Skobelkin Research and Practical Centre for Lazer Medicine" of the Medical-Biological Agency, Scientific and Organizational Department, Moscow, Russia

Abstract

Aim: MR lymphography provides morphological and functional information about the lymphatic system and is the best method of planning optimal conservative and surgical treatment of patients with lymphatic complications. Improvement of the MR lymphography protocol for assessing secondary vascular changes at the site of injury in post-traumatic lower extremity edema patients for treatment and rehabilitation planning.

Material and Methods: 23 patients, consisting of 18 males and 5 females with an average age of 43.2±3.8 years, were observed. The study included patients with unstable fractures involving two or more components of the ankle joint and a history of post-thrombotic disease. All patients underwent contrast-enhanced MR lymphography using a 1.5 Tesla MRI machine. Gadopentetate dimeglumine 0.1 mmol/kg and 2% lidocaine solution was injected subcutaneously into the dorsum of each foot in the interdigital spaces. Real-time evaluation of the results was performed on series of T1, T2, T2-STIR weighted MR tomograms (fat-suppressed mode) in three native and contrast-enhanced projections, as well as MR sequences for slowly flowing fluids. Lymphatic vessels were visualized in delayed T1 VI studies at 5, 15, 25, and 55 minutes.

Results: In the first group (n=14), MRI images showed signs of diffuse edema of the skin and subcutaneous tissue around the ankle joint, fluid accumulation in the subtalar cavities, indicative of post-traumatic soft tissue edema. Group 2 (7 patients): pathological lymphatic vessels were twisted and dilated distal to the site of injury, with dermal backflow observed as diffuse interstitial enhancement, collateral lymphangiectasia, subcutaneous edema, and persistent dilation of lymphatic vessels in the fracture area 15–25 minutes after the injection of contrast. Some cases showed extravasation, indicating secondary lymphedema. Group 3 (n=2): on MRI scans-hypoplasia of lymphatic vessels at the fracture level, and above the knee joint gap, partially visualized pathways of contralateral lymph transport. A treatment and rehabilitation plan was developed individually for each group of patients.

Conclusion: 1. The optimized protocol of MR lymphography gives priority information about the diagnosis of post-traumatic edema. 2. The obtained morphological and functional data on MR lymphography differentiated post-traumatic edema and true secondary lymphedema, which influenced the treatment method.

Keywords: MR lymphography, post-traumatic edema, secondary lymphedema, rehabilitation, post-thrombotic disease, multifragmentary fractures

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OP-090

The successful complete radiofrequency ablation of saphenous vein insufficiency in 4438 patients, Ege University experience of 13 years

Aysen Yaprak Engin, Deniz Can Basaran, Umit Kahraman, Emrah Oguz, Karya Islamoglu, Fatih Islamoglu

Ege University Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Venous insufficiency is a common, life-limiting problem. Endovenous thermal ablation is the first choice of treatment. In this report, it is aimed to present successful results of radiofrequency ablation for great saphenous vein insufficiency performed in a single center.

Material and Methods: The data of patients who underwent radiofrequency ablation for great saphenous vein insufficiency between 2010 and 2023 was retrospectively scanned. There were 4438 patients treated. Symptoms, CEAP (clinical, etiologic, anatomic, pathophysiologic) class, physical and Duplex ultrasound examination results, Venous Clinical Severity Score (VCSS) and Aberdeen Varicose Vein Questionnaire (AVVQ) were recorded in preoperative, postoperative and follow-up visits. Follow-up visits were arranged at 1st week, 1st month, 6th month, 1st year and every year thereafter.

Results: Mean age was 48.7±12.3 and 62.1% of them was female. Total of 5136 legs were treated by radiofrequency ablation system (ClosureFast®, Medtronic Inc.) The mean follow-up duration was 64.1±31.4 months. All the veins were occluded at the 1st week visit. The closure rates were 99.9%, 99.7%, and 98.2% at 1st month, 1st year and 5th year visits respectively. The 1st year and 5-year symptom-free survival rates were 98.6% and 73.7%, respectively. The venous clinical severity scores had decreased from 5.9±1.2 to 0.5±0.2 at 1st year and mean VCSS was 0.9±0.8. at 5th year visit and 2.2±1.3 at 10th year visit. The Aberdeen varicose vein questionnaire scores had decreased from 19.7±5.5 to 1.9±0.6 in the 1st year. Mean AVVQ was 4.8±1.5 at the 5th year and 7.8±2.9 at the 10th year visits.

Conclusion: Radiofrequency ablation has excellent long term results.

Keywords: Chronic venous insufficiency, radio frequency ablation, endovenous treatment, great saphenous vein

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OP-091

The effect of tumor size on postoperative complications in patients undergoing carotid body tumor surgery

Barkin Dost Bulut, Dilek Erdinli, Irem Demiray, Aysen Yaprak Engin, Tahir Yagdi, Ismet Tanzer Calkavur, Cagatay Engin, Umit Kahraman, Yuksel Atay, Mustafa Ozbaran

Ege University Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Carotid body tumors are rare tumors that develop in the carotid bifurcation and their gold standard treatment is surgical excision. However, it is challenging due to the arterial and neural neighborships. In this research, we study the association of tumor diameters and development of complications or recurrence.

Material and Methods: Forty-three patients (29 female, 14 male; mean age 53.11, range 26-77) between 2014 and 2023 were included. The tumor originated from the left carotid in 23 patients, the right in 19 patients, and bilateral in 1 patient. According to the patients' ultrasonography and CT reports, mean tumor size was 32.06mm x 30.18mm (range 10-58mm x8-50 mm). While 11 patients had no preoperative comorbidities; it was observed that the most common comorbidities were HT (37.2%, n=16), hypothyroidism (25.5%, n=11), DM (13.9%, n=6) and HPL (11.6%, n=5). The most common symptom was neck swelling whereas 15 patients (34.88%) were asymptomatic. Three patients had previously undergone carotid body tumor surgery.

Results: Among 43 patients, peroperative participation of department of otolaryngology was requested for one patient. Nerve damage was detected in one patient intraoperatively. In one patient, ligation of common carotid artery was decided due to invasion. No postoperative complications developed in 35 patients (81.39%). Mean carotid body tumor size of patients without complications was 33.4mm x29.3mm (range10-55mm x8-50mm). Difficulty in swallowing in 3 patients, hoarseness in 2 patients, earache in 1 patient, bradycardia in 1 patient, and temporary facial paralysis in 1 patient was observed in the postoperative period. No permanent neurological complications developed in any patient's follow-up period. Mean carotid body tumor size of patients with postoperative complications was 34.25mm x30.37mm (range 22-45mm x20-50mm). Postoperative imaging was available for 20 patients. Imaging was performed after at least 6 months (mean 22.8 months). Recurrence was observed in 3 patients. Redo surgery was required in 1 patient. Mean preoperative carotid body tumor size of patients who developed recurrence was 37mm x31.6mm (range 23-58mm x24-41mm).

Conclusion: Greater carotid body tumor size is associated with increased risk of recurrence. Therefore, early surgical approach is important for postoperative success in patients with carotid body tumor.

Keywords: Carotid body tumors, gloms jugulare, nerve damage, recurrence, surgical excision

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OP-092

In-situ fenestration TEVAR treatment for supra-aortic branch involving thoracic aorta pathologies

Salih Anil Boga[1], Evren Ozcinar[1], Levent Yazicioglu[1], Emre Can Celebioglu[2], Sadık Bilgic[2], Nur Dikmen[1], Mehmet Cahit Saricaoglu[1], Cagdas Baran[1], Mustafa Bahadir Inan[1], Mustafa Sirlak[1], Serenay Ersoy[1], Onur Buyukcakir[1]

[1]Ankara University, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara University, Department of Radiology, Ankara, Türkiye

Abstract

Aim: Over the past twenty years, TEVAR has developed and been used more frequently. Using in-situ needle fenestration (I-TEVAR) as a method to revascularize supra-aortic branches is a valuable option. This study aimed to evaluate short and mid-term follow-ups of patients who I-TEVAR treatment.

Material and Methods: Between June 2021 and June 2022, I-TEVAR was performed on 7 patients. 5 of them have a diagnosis of type B aortic dissection and 2 of them have a diagnosis of thoracic aorta aneurysm. All these pathologies involved the left subclavian artery (LSA). The thoracic stent graft extending from the left main carotid artery ostium to the descending thoracic aorta, over the sheath in the right femoral artery was placed. Immediately after the stent graft placement, a balloon-assisted penetration catheter was advanced through the sheath in the LSA, the inserted stent graft was pierced, and a guide wire was advanced into the aortic arch. After catheterization, first of all, PTA was applied for pre-dilatation using balloon catheters, and then balloon expandable graft stents were placed to complete the fenestration process. Lastly, aortic arch angiography was performed. Demographic features, operative data, and radiological imaging were evaluated at a mean follow-up of six months. Morbidity, mortality, complication, and graft patency rates were obtained.

Results: I-TEVAR was performed on 7 patients with a mean age of 74±8 years. 100% graft patency rate was achieved. The mean procedure time was 2.21±0.94 hours. Access site complication (hematoma) occurred in 14.2% patients. In the first month follow-up, wound infection (right femoral) was observed in one patient (14.2%). Neurological complications developed in 1 (14.2%) of the patients during the post-procedure intensive care follow-up (cerebral infarction). That patient died due to cerebral infarction. Moreover, in the control CT angiography performed at the 6th month, all the stent grafts were patent and all the LSA ostium stents were also patent.

Conclusion: In low-risk patients, creating a fenestration after graft deployment (in-situ) is an option. To sum up, when treating patients with type B dissections or thoracic aortic aneurysms involving supra-aortic branches, the I-TEVAR procedure stands out as a significant and promising option.

Keywords: Thoracic aorta, left subclavian artery, thoracic endovascular aortic repair, in-situ fenestration

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OP-093

Surgical treatment of aortoenteric fistula

Irem Demiray, Arda Sezen, Aysen Yaprak Engin, Umit Kahraman, Osman Nuri Tuncer, Serkan Ertugay, Emrah Oguz, Anil Ziya Apaydin, Hakan Posacioglu, Yuksel Atay, Mustafa Ozbaran

Ege University Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Despite the developments in surgery aortoenteric fistula remains as a nightmare with its high mortality and surgical challenge. It is aimed to represent 7 patients with aortoenteric fistulae, treated surgically.

Material and Methods: Through 13 years, surgery was performed for 7 patients. Median age was 73,5 (range=44-92). Most of the patients were male (n=5, 71.42%). In 5 patients fistula site was duodenum. In one patient aortoeosophageal fistula and in one of them both aortooesophageal and bronchial fistula was present. One patient had prior TEVAR, one had full intestinal and renal debranching following with TEVAR operation and two of them had prior EVAR operations. Two of them had endoleaks in the CT images and one presented with infective embolization. Two patients had Behçet's disease and one patient had prior peritonitis due to anastomosis leakage after an operation for gastrointestinal stromal tumor.

Results: Two of the patients were treated by endovascular procedures due to very high operational risk, however, both needed open surgery eventually and both were deceased. Only three patient had the chance to be discharged and two of them were treated by axillobifemoral bypass and one of them was treated by aortobiiliac bypass and omental wrap.

Conclusion: One should always remember that aortoenteric fistulae is not a complication limited to open surgery and proper follow-up of endovascular treatment is crucial. As a treatment for aortoenteric fistulae, endovascular procedures are not recommended as the infective tissue or material is not removed and the defect of intestine remains. Definitive surgery should be planned, extraanatomic bypass may be safe to avoid local reinfection and omental wrap may also be used for local protection if extraanatomic bypass is undesired. Coexistence of Behçet's Disease and intraabdominal inflammation is remarkable.

Keywords: Aortoenteric fistulae, abdominal surgery, thoracic endovascular aortic repair, sepsis, Behcet's disease

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OP-094

Virtual vascular outpatient clinics! From pandemic to the norm

Muhammad Faisal Shaikh, Lazslo Papp

North Wales Hospitals, Department of Vascular Surgery, United Kingdom

Abstract

Aim: Like elsewhere in Europe, during the COVID 19 pandemic, strict social distancing measure were implement in United Kingdom (UK) to reduce the spread of the deadly virus. The vascular society issued national guidance and advise to restructure the delivery of outpatient clinic appointments indicating where possible patients be offered virtual consultation clinics. The aim of this study is to evaluate the effectiveness of virtual clinic on vascular patients and to assess if virtual method of consultation could be a viable option in the post- pandemic future.

Material and Methods: From May 2020 till March 2020, all patients receiving consultation, regarding their vascular symptoms over telephone under one vascular surgeon were included in the study. Patient's demographic data was collected from the electronic referral system. Clinical outcome and follow up data was collected from the clinical letters, patients electronic out patient's records, patient's case notes, emergency department's admissions, and discharge summaries. The patients were followed 6 months after their index consultation. The primary outcome measure was success of the consultation, defined as achieving the same outcome as could have been achieved in a face-to-face clinic. Secondary outcome measures included patients travel distance to the hospital if the same would require attending a face to face consultation and its environmental impact.

Results: During the study, 318 consultations were scheduled. There were 124 (40%) new patients. 55 patients (17%) were not contactable. Of the remaining 263 consultations, 128 (49 %) had a successful outcome, remaining patients required a face to face consultation. 87 (33%) patients were discharged from the clinic. 7 (2%) patients died during the follow up period. An estimated 8159.3 (average 53.7) kilometres of patient travel (2.8 tonnes of carbon dioxide emissions) were saved during the period.

Conclusion: The rate of successful outcomes following a virtual consultation in our patient population is lower as compared to conventional face-to-face clinics. However, as the service was set up in an urgent situation to cope with pandemic, there was little time for preparation. The results suggests that success rate and efficiency of the clinic can be further improved with appropriate patient selection and clinic planning.

Keywords: Out patients, virtual clinics. vascular surgery

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OP-095

A Marphan syndrome nightmare. Multiple EVAR, TEVAR, debranching and renal ototransplantation

Hidayet Demir, Mehmet Altug Tuncer

Okan University, Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Marfan syndrome is a connective tissue disease with a high rate of aortic dissection and aneurysm. Additional strategies and combined approaches are required in the surgical treatment of these patients due to the persistence of dissection and the risk of rupture.Marfan patients undergo multiple aortic surgeries in long term. These operations consist of open surgical procedures and endovascular approaches.We aim to present in this article that a marfan patient long term surgery strategies. The patient is 58 years old male patient. The patient underwent open cardiac surgery in 2012 due to type A dissection. We performed ascending aorta replacement and arc of aorta debranching with Tevar. Two years later descending aorta ruptured and we performed an emergency TEVAR. At that time we determined there was a very large false aneurysm of thoraco-abdominal aorta. And we performed abdominal debranching include superior mesenteric artery, celiac artery and inferior mesenteric artery. Than we performed Tevar and Evar where infrarenal zone. In 2019 patient underwent surgery due to iliac aneurysm rupture than we performed Evar leg graft. After all the patient came emergency services because of abdominal pain and we determined that large aneurysm of renal arteries level. The patient has already open abdominal debranching so we decide to indicate high mortality rate of open surgery than we discussed with transplant team and they performed endoscopic right renal oto-transplantation. Than we performed Tevar again juxta-renal level. Over 10 years follow up, patient underwent several surgeries and we had to develop new strategy like oto-transplantation. As a result, Marfan syndrome is a major public health problem. And their aortic disease mortal than the other patient. If they were underwent to dissection surgery had to follow up closer because of enlargement of false lumen. Endo-vascular procedures are very important in these group. Endovascular treatment modalities and increased experience have significantly contributed to the longer-term survival of these patients.

Keywords: Marfan syndrome, dissection, oto-transplantation

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OP-096

The predictive value of whole blood viscosity for the development of cerebrovascular events after carotid endarterectomy

Adem Reyhancan, Mursel Buyukadali, Gizem Gur, Salih Tuysuz, Orkut Guclu, Serhat Huseyin, Suat Canbaz

Trakya University, School of Medicine, Department of Cardiovascular Surgery, Edirne, Türkiye

Abstract

Aim: Carotid endarterectomy is a surgical technique that carries risks such as stroke and transient ischaemic attack during and after surgery. In this study, we investigated the predictive value of whole blood viscosity in predicting transient ischaemic attack and stroke in the first year after surgery.

Material and Methods: Data from all patients who underwent carotid endarterectomy in our hospital were retrospectively analysed. All parameters required for the calculation of whole blood viscosity were obtained from the patients' routine preoperative blood tests. Of all patients, the results of the preoperative blood tests were available for 149 patients. For these patients, hospital admissions, outpatient clinic and emergency department reports, and imaging results in the postoperative year were retrospectively evaluated. At 1-year follow-up after carotid endarterectomy, 15 patients developed cerebrovascular accidents. This group of patients was referred to as group 1 and patients who did not suffer cerebrovascular accidents were referred to as group 2. The two groups were compared in terms of whole blood viscosity.

Results: The mean age was 63.93±7.46 years in group 1 and 64.15±9.15 years in group 2. There was no statistically significant difference between the two groups in terms of surgical technique, type of patch used, use of shunt, presence of severe contralateral stenosis and preoperative symptoms. When comparing the two groups in terms of whole blood viscosity at high shear rate (group 1, 12.37±0.99 cP; group 2, 11.81 ± 0.94 cP) and low shear rate (group 1, -13.60±21.92 cP; group 2, -26.18±20.81 cP), there was a statistically significant difference between them (p=0.029). In addition, the preoperative albumin/CRP ratio was significantly lower in group 1 patients than in group 2 patients (p=0.040). When the predictive power of these two parameters for cerebrovascular accidents was calculated, the AUC was 0.636 for whole blood viscosity and 0.662 for albumin/CRP ratio.

Conclusion: We found that preoperative whole blood viscosity was significantly higher and albumin/CRP ratio was significantly lower in patients with cerebrovascular accidents within 1 year after carotid endarterectomy. We believe that with a larger sample size it will be possible to draw more accurate conclusions regarding predictive power.

Keywords: Whole blood viscosity, carotid, endarterectomy

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OP-097

Critical analysis of the outcomes of patients needed reintervention after open surgery or endovascular treatment for abdominal aorta aneurysm

Yusuf Corbacioglu, Mehmet Cahit Saricaoglu, Nur Dikmen, Evren Ozcinar, Levent Yazicioglu

Ankara University, Faculty of Medicine, Department of Cardiovascular surgery, Ankara, Türkiye

Abstract

Aim: Abdominal aortic aneurysm (AAA) augmentation as permanent dilatation of the abdominal aorta greater than 3 cm or greater than 50% of the aortic diameter at the diaphragm level. The aim of this study is to reveal the time lived and the need for retreatment of our patients who underwent earlier surgery (endovascular or open surgical repair) with AAA indications and to give an idea about the improvement of the first treatment methods in order to shape them. In addition, the results of the equipment used and likely to be used for these treatment methods are indicated.

Material and Methods: All patients over the age of 18, who had previously been operated for abdominal aortic aneurysm in our clinic or in another clinic, and who had to be operated for abdominal aortic aneurysm again between January 2005 and December 2020, will be included in the study. Demographic characteristics of the patients included in the study, their clinical status, radiological data at the time of their procedures will be accessed and these data will be listed as follows. In addition, during the second procedure applied in our clinic, all the above-mentioned data will be recorded and these data will be interpreted with statistical analysis.

Results: Reasons that increase the need for re-intervention; advanced age ($p<00.1$), male gender (p 0.005), active smoking ($p<0.001$),a history of AAA in first-degree relatives ($p<0.001$), obesity (p 0.008) and chronic lung disease (p 0.008) has been identified.When the effects of the measurement values of the patients during the first procedure on the need for the secondary procedure were evaluated; The need for secondary procedure was found to be significantly higher in patients with Aneurysm diameter >60mm ($p<0.001$), graft neck width >30 mm ($p<0.001$), infrarenal angulation >45 degrees (p 0.004), graft sealing distance <15 mm (p 0.008), aneursym diameter expansion >5 mm ($p<0.05$) and >10 mm wide iliac artery diameters (p 0.001).

Conclusion: Anatomical measurements and factors during primary procedures were found to predict the need for secondary procedures. For this reason, it is thought that it may be beneficial to be more strict about measurements and indications during the primary procedure in order to reduce the need for secondary procedures.

Keywords: Abdominal aortic aneurysm, endovascular treatment, open vascular surgery, abdominal aorta, re-intervention, late complication

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OP-098

Result of venous stent and balloon in deep venous thrombosis patients

Murat Eroglu, Yesim Guner, Ibrahim Fevzi Ozdomanic,
Abdulkerim Ozhan, Engin Akgul, Ali Ihsan Parlar, Ahmet Cekirdekci

Kütahya Health Sciences University, Evliya Celebi Training and Research Hospital,

Abstract

Aim: Deep Venous Thrombosis (DVT) is a significant health concern related to venous circulation, and the choice of treatment options plays a crucial role in patient outcomes. In this article, we present our results of venous stents and balloons in the management of deep venous thrombosis patients.

Material and Methods: We included venous stent and balloon patients between January 2021 and July 2023 in deep venous thrombosis. 6 patients with venous stent and 9 patients with venous balloon were included in the study. All included patients had iliofemoral DVT, and received tPA during the procedure. Venous stent group were mainly chronic DVT patients and venous balloon group were acute DVT patients. The patency of the venous stents or balloons were evaluated by doppler ultrasound in the 1st postoperative month.

Results: Mean age of the patients was 53.4±18.5. Four patients were female in the study population. Mean size of the venous stents was 13.0±3.3 and mean length of the venous stents was 108.0±32.5. Mean size of the venous balloons was 7.8±0.4 and mean length of the venous balloons was 108.0±24.4. Patency rate and clinical improvement was 100% in our study population.

Conclusion: Venous stents and balloons have revolutionized the management of deep vein thrombosis, providing effective and minimally invasive solutions for patients. These interventional tools offer hope for improved quality of life and reduced complications in individuals with DVT. Further research is needed to refine techniques and understand long-term outcomes.

Keywords: Deep venous thrombosis, venous stent, venous balloon

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OP-099

Popliteal aneurysms: A posterior surgical technique and single center outcomes

Cigdem Tel Ustunisik, Ergida Albrahimi, Berk Arapi, Ozan Onur Balkanay, Suat Nail Omeroglu

İstanbul University Cerrahpaşa, Department of Cardovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The primary objective of the current study was to evaluate and analyze the initial outcomes associated with open surgical repair for popliteal artery aneurysms (PAAs) utilizing prosthetic grafts. By conducting this research, we aimed to gain a comprehensive understanding of the early results and implications of this particular surgical intervention for PAAs.
Material and Methods: From the year 2007 to 2022, a total of 31 patients underwent open surgical repair with a posterior approach at Cerrahpaşa University Hospital. All of the data that has been gathered was collected from the ISHOP medical system.
Results: Among the cohort of 31 patients, a total of 83% (n=26) were identified as male, while the remaining 17% (n=5) were classified as female. A total of 54 cases of popliteal aneurysms were identified in these patients. All patients underwent a posterior surgical approach, involving the ligation of aneurysm and the intervention of prosthetic graft interposition. A total of 12% (n=4) of the patients were admitted to the emergency department with acute limb ischemia, while the remaining 88% (n=27) of the patients underwent elective surgical procedures. There were no instances of mortality observed during the intraoperative period. Only a single patient underwent an amputation within a 30-day timeframe.
Conclusion: The open surgical repair of peripheral arterial aneurysms (PAAs) using prosthetic grafts has been found to be a safe and viable treatment option. This procedure has demonstrated favorable early outcomes, with satisfactory primary patency rates.

Keywords: Popliteal artery aneurysm, surgical repair, graft patency

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OP-100

Carotid endarterectomy in the very elderly: The long term prognosis

Muhammad Faisal Shaikh, Mehdi Muhammadi, Saima Mukhtar, Matthew Metcalfe, Sadasivam Selvakumar

Lister Hospital, Department of Vascular Surgery, Coreys Mill Ln, Stevenage SG1 4AB

Abstract

Aim: An aging population is one of the most significant social transformations of the 21st century around the globe, with major implications in healthcare expenditure involving all areas of health care including vascular surgery. The National Institute for Health and Care Excellence (NICE) recommends carotid endarterectomy regardless of age following a stroke or TIA with a moderate or severe stenosis. Although vascular European vascular society recommends surgery in patients over 75 years of age with imaging finding of higher risk of stroke, if the life expectancy is over 5 years. Here we aim to evaluate the postoperative outcome with particular reference to long term mortality following carotid endarterectomy in the patients over 80 years of age.

Material and Methods: From June 2019 till May 2022, all patients undergoing carotid endarterectomy at our hospital under the vascular service were included in the study. Patient's demographic data was collected from the electronic patient referral system. Clinical outcome and follow up data was collected from the clinical letters, theatre records, and patients electronic out patient's records, patient's case notes, emergency department's admissions, and discharge summaries. Patients were divided into two groups very elderly at or over 80 years and those below 80 years of age. The primary outcome measure was success of the procedure. Secondary outcome measures included morbidity and mortality. The patients were followed at least 12 months after their index consultation.

Results: During the study period, 106 carotid procedures were performed in our department. The mean age of patients was 72 years (range 46 to 95 years). The male female ratio was 2:1. There were 23 patients in the very elderly group. Only 13 were still alive on follow up (long term mortality of 48 % within 2 years following surgery. surgery as compared to other group (less than 80) 80 patients were still alive at the time of follow up (3.7 % mortality).

Conclusion: Carotid endarterectomy can be performed in very elderly patients with low operative risk and reasonable long-term results in selected group of patients. However further studies are needed to study the mortality and morbidity in the group treated conservatively.

Keywords: Carotid endarterectomy, very elderly, long term outcome

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OP-101

Carotid endarterectomy compared with carotid artery stenting for extracranial carotid artery stenosis: A retrospective single-centre study

Oguzhan Birdal[1], Eyup Serhat Calik[2], Umit Arslan[2], Yavuzer Koza[1], Ugur Kaya[2], Abdurrahim Colak[2], Muhammet Hakan Tas[1]

[1]Atatürk University, Faculty of Medicine, Department of Cardiology, Erzurum, Türkiye
[2]Atatürk University, Faculty of Medicine, Department of Cardiovascular Surgery, Erzurum, Türkiye

Abstract

Aim: One of the main risk factors for an ischemic stroke is significant carotid artery stenosis, and extracranial severe carotid artery stenosis accounts for 20% of ischemic strokes. Prior to the development of carotid artery stenting (CAS), the only effective and reliable treatment for carotid artery stenosis was carotid endarterectomy (CEA). This study compares the results of CAS and CEA in patients with significant extracranial carotid artery stenosis.

Material and Methods: All patients who underwent carotid artery revascularization had their hospital records retrospectively examined. Based on whether CEA or CAS was used for the carotid revascularization, the patients were split into two groups. In order to compare 30-day, 1-year, and long-term outcomes, the rates of transient ischemic attack (TIA), myocardial infarction (MI), stroke, and all-cause death were examined. Composite endpoints for both groups were also looked at.

Results: For severe occlusive carotid disease, 122 CEA and 148 CAS procedures were carried out. Age, incidence of COPD, amount of asymptomatic cases and LDL cholesterol level were difference between the baseline characteristics. No significant differences were found between CEA and CAS procedures for 30-day death, MI, or neurologic morbidity outcomes. During the 1-year follow-up, it was observed that the TIA and composite endpoint were considerably higher in the CAS group. In the long run, there was no discernible difference between the two groups.

Conclusion: There was no noticeable difference between the CEA and CAS groups in our examination of cases with severe carotid artery stenosis in terms of 1-month outcomes, 1-year results (apart from TIA and composite endpoints), or long-term outcomes. Extracranial carotid artery stenosis can be treated safely and effectively using CAS.

Keywords: Carotid artery stenting, carotid endarterectomy, carotid stenosis, retrospective analysis

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OP-102

Identification and treatment of patients with concomitant chronic venous insufficiency and diabetes mellitus: a management algorithm using a modified Delphi method

Kursat Bozkurt[1], Marie Josee Van Rijn[2], Eliete Bouskela[3], Giacomo Gastaldi[4], Frederic Glauser[5], Hermann Haller[6], Juan Rosas Saucedo[7], Eberhard Rabe[8], Armando Mansilha[9]

[1]Department of Cardiovascular Surgery, Istanbul University-Cerrahpasa Medical Faculty, Istanbul, Turkey
[2]Department of Vascular Surgery, Erasmus Medical Center, Rotterdam, the Netherlands
[3]Biomedical Center, Laboratory for Clinical and Experimental Research on Vascular Biology (BioVasc), State University of Rio de Janeiro, Rio de Janeiro, Brazil
[4]Division of Endocrinology Diabetology Nutrition and Patient Education, Geneva University Hospitals, Geneva, Switzerland
[5]Division of Angiology and Hemostasis, Geneva University Hospitals and Faculty of Medicine, Geneva, Switzerland
[6]Hannover Medical School, Department of Nephrology and Hypertension, Hannover, Germany
[7]Instituto de Diabetes de Celaya, AC. Celaya, Mexico
[8]Department of Dermatology, University of Bonn, Bonn, Germany
[9]Faculty of Medicine, University of Porto, Porto, Portugal and Department of Angiology and Vascular Surgery, Hospital de S. João, Porto, Portugal

Abstract

Aim: Chronic Venous Insufficiency (CVI) and Diabetes Mellitus (DM) represent a significant burden in patient daily life. While the two diseases share common risk factors, pathophysiology and often co-exist, they are usually assessed and managed as separate conditions. The study aims to develop recommendations for improving the identification and treatment of patients with concomitant CVI and DM.

Material and Methods: Using a modified Delphi method, a multidisciplinary expert panel developed 38 Likert scale statements and 2 multiple choice questions. This was disseminated via an online survey across vascular and diabetes specialists in Europe, Middle East, Central and South America. Respondents indicated their level of agreement with each statement. The threshold for consensus agreement was defined as 75%.

Results: A total of 238 respondents completed the survey. Most of the statements (27/38) reached >90% agreement, 9/38 attained between 75-90% agreement, and 2 failed to meet the threshold. The awareness around the impact of the two diseases was high, however a gap was identified in the assessment and treatment of patients suffering from concomitant DM and CVI. Leg oedema, skin changes (such as pigmentation, eczema, and varicose veins), leg burden (pain, heaviness, itching or burning sensation, and cramps) and overweight were recognised as warning signs of coexisting diseases. Seventy-seven (77%) respondents considered obesity (BMI >30) and leg oedema as signs for assessment of the presence of DM and DmVC in patients with CVI, while 63% agreed that three parameters (skin changes, leg burden and oedema) would be required to trigger investigation for coexistent CVI in patients with DM. Treatment of patients with DmVC and CVI should be achieved with a multifactorial approach, including lifestyle change, non-medical and pharmacological treatments. Venoactive drugs indicated in both CVI and DmVC were recognized as treatment option in this patient population.

Conclusions: These results raised the need to consider CVI and DM as a multimodal therapy area. An algorithm is proposed to help identifying at-risk patients and to provide recommendation on the management of patients with concomitant diseases.

Keywords: Diabetes mellitus, chronic venous insufficiency, chronic venous disease, consensus, algorithm, venoactive drugs

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OP-103

Comparable amputation free survival by endovascular surgery in TASC D femoropopliteal critical limb ischemia

Skyi Yin Chun Pang[1,2], Rosanna Yin Ting Chow[2], Tiffany Ho Yi Chan[3], Ronald On Ho Tse[1], Stephen WingKeung Cheng[2]

[1]Pamela Youde Nethersole Eastern Hospital, Department of Surgery, Division of Vascular Surgery, Hong Kong SAR, China
[2]Queen Mary Hospital, Department of Surgery, Division of Vascular Surgery, Hong Kong SAR, China
[3]Pamela Youde Nethersole Eastern Hospital, Department of Radiology, Hong Kong SAR, China

Abstract

Aim: To evaluate the outcomes between endovascular surgery and bypass/hybrid approach in treating critical limb ischemia with TASC D femoropopliteal occlusion.

Material and Methods: This is a 10-year retrospective cohort study including 46 critical limb ischemia patients with TASC D femoropopliteal occlusion undergoing revascularization from 2009-2018. Cases were retrieved from Clinical Data Analysis and Reporting System. Demographics, lesions characteristics, operative findings and follow-up data were reviewed.

Results: 46% of patients had endovascular intervention, 35% open bypass, and 19% hybrid operation. The endovascular group had significantly shorter length of lesion (endovascular 25.1cm; bypass 33.2cm; hybrid 26.6cm; p=0.002). The technical success rate of the endovascular group was 84%. Different endovascular strategies were used. Twelve-month primary patency rate of endovascular group was lower (endovascular 47.6% vs bypass 75% vs hybrid 66.7%; p=0.22) but secondary patency rate at three years post op was more comparable (endovascular 52.4% vs bypass 62.5% vs hybrid 77.8%; p=0.42). The three-year amputation free survival was similar (endovascular 77.8% vs bypass 62.5% vs hybrid 77.8%; p=0.56).

Conclusion: With comparable amputation free survival, endovascular treatment is a feasible alternative for critical limb ischemia patients even with long and complex femoropopliteal occlusion. Close surveillance is essential to guide timely reintervention. Individualized plan of revascularization should be considered.

Keywords: TASC D, femoropopliteal, critical limb ischemia, peripheral artery disease

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OP-104

The rationale of using stent graft to treat new "stent graft-vein junction" stenosis for dysfunctional arteriovenous graft: A retrospective comparison study in a single center in Taiwan

Yun Ting Lee[1], Mingli Levin Li[2], Yu Ling Hsu[3], Ching Feng Wu[2], Yi Chun Lin[4], Chih Hsiang Hsu[2], Chih Chung Ting[2], You Cian Lin[2]

[1]Cathay General Hospital, Department of Family medicine, Taipei, Taiwan
[2]China Medical University Hospital, Department of Cardiovascular Surgery, Taichung, Taiwan
[3]Taichung Veterans General Hospital, Department of Surgery, Taichung, Taiwan
[2]Taipei Veterans General Hospital, Department of Cardiovascular Surgery, Taipei, Taiwan

Abstract

Aim: Stent grafts (SG) are widely utilized for the management of recoiled and recurrent vein-graft junction (VGJ) stenosis in arteriovenous grafts (AVGs). Subsequently, the proximal edge of SG-vein junction (SGVJ) has become a common cause of target lesion revascularization. However, there is a lack of evidence supporting the rationale for using a new SG to treat SGVJ lesions.
Material and Methods: We conducted a retrospective analysis of all SG placements at SGVJ for dysfunctional AVGs at our center from May 2011 to May 2023. We assessed primary patency (PP), assisted primary patency (APP), secondary patency (SP), and access survival (AS) of proximally stacked SGs using Kaplan-Meier survival analysis. The daily costs between each SGs were compared. SGs placed at distal edge lesions and ruptured grafts during angioplasty were excluded.
Results: A total of 169 newly-placed SGs were stacked proximally on previously-placed SGs to address SGVJ lesions in 106 AVGs and 104 patients. The mean age of the patients was 70±13 years. Among the AVGs, 44 received a 3rd SG, 17 received a 4th SG, and 2 received a 5th SG. The mean duration from AVG creation to the first SG for VGJ stenosis was 18 months, with a mean follow-up duration of 21.7 months. The 6-month PP, APP, SP, and AS of the first SGs were 11.3%, 20.8%, 43.4%, and 86.2%, respectively. The mean duration from the first to the 2nd SG and 3rd SG was 9.1 and 9.4 months. The 6-month PP, APP, SP, and AS of the 2nd and 3rd SGs were 13.9% vs. 19.0%, 27.1% vs. 26.5%, 48.6% vs. 47.2%, and 72.2% vs. 66.5%, respectively. There were no significant differences in patency between the 2nd and 3rd SGs compared to the 1st SG, except for AS ($p<0.01$). The daily expenses to maintain AS without surgical revision were 82, 63.6, 52.7 USDs, respectively ($p>0.05$).
Conclusion: Not like favorable outcomes of SG placement on de novo VGJ lesions for dysfunctional AVGs, proximally-stacked SGs for new SGVJ lesions demonstrated limited effect and cost-effectiveness in our center. There is insufficient evidence to support the expanded use of SGs for new SGVJ stenosis.

Keywords: Arteriovenous graft, vein-graft junction stenosis, target lesion revascularization, access patency, access survival

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OP-105

Effectiveness of scoring balloon angioplasty versus high pressure balloon angioplasty in native haemodialysis access stenoses: A randomized controlled trial

Firdaus Raduan[1], Jazree Jamaluddin[1], Rafizi Hariz Ramli[1], Eric Chung[1], Ng Wei Lin[1], Chan Kin Wong[1], Ramzi Yusuff[2], Zeti Rahayu Karim[2]

[1]University Medical Malaya Centre, Department of Surgery, Malaysia
[2]Universiti Teknologi Mara, Department of Surgery, Malaysia

Abstract

Aim: Hemodialysis access failure is commonly associated with hemodialysis access stenoses. These stenoses are due to development of neointimal hyperplasia. High-Pressure Balloon (HPB) angioplasty is widely used as first-line treatment for these stenoses. A viable alternative to HPB is the use of Scoring Balloon (SB Triwedge) angioplasty for fistuloplasty procedure. 1. To compare 6th months postintervention primary patency rate post fistuloplasty between scoring balloon angioplasty and high pressure balloon angioplasty. 2. To compare technical success, complication rate and clinical success between scoring balloon angioplasty and high pressure balloon angioplasty

Material and Methods: This is a prospective randomized clinical trial conducted at the University Malaya Medical Centre, Kuala Lumpur, Malaysia. Ethics board approval was obtained for the investigation protocol prior to initiation of the study. Inclusion criteria for this study include end stage renal failure patients (ESRF) with native hemodialysis access on regular hemodialysis. Patients who were excluded are those with thrombosed fistula and target lesion within inflow artery or central venous system. Patients were randomized to receive SB or HPB after fistulogram was performed. The design attempted to involve equal allocation of patients to the two treatment arms of the study. Data from study were analysed using SPSS version 28.

Results: Eighty one patients consented to participate in the study from February 2022 to February 2023. After assessment from fistulogram, thirty six patients were eventually enrolled in the study and randomized. In the High Pressure Balloon (HPB) group, 18 (10 men, 8 women; mean age, 58.2 years) achieved clinical success. In the Scoring Balloon (SB) group, 18 patients (7 men, 11 women; mean age, 61.4 years) achieved clinical success. Primary patency rate in SB group were 77.7% while in HPB group were 72.2% (p=0.235). In respect to technical success, SB group achieved 88.9% while HPB group achieved 83.3% (p=0.206). Complication rate were lower in SB group as compared to HPB group (5% vs 15.7%; p=0.289).

Conclusion: Scoring Ballon Angioplasty is a safe and effective alternative to conventional High Pressure Balloon Angioplasty for fistulaplasty in stenoses of native hemodialysis access.

Keywords: Fistuloplasty, fistula stenoses, hemodialysis access, scoring balloon

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OP-106

Endovascular treatment versus hybrid repair for iliofemoral occlusive disease: A prospective randomized trial

Shoraan Saaya, Olesia Osipova, Alexey Cheban,
Pavel Ignatenko, Starodubtsev Vladimir, Andrey Karpenko

Novosibirsk Research Institute of Circulation Pathology, Department of Vascular and Hybrid Surgery, Novosibirsk, Russia

Abstract

Aim: The objective of pilot randomized trial was to compare the short and one year safety and efficacy of endovascular treatment (ET) and hybrid repair (HR) procedures with using the «SuperaVeritas» stent system for patients with coexisting iliac and common femoral occlusive disease.

Material and Methods: The study was registered ClinicalTrials.gov (NCT03315884). From March 2018 till November 2021, 62 patients were randomized (31 ET and 31 HR). After recanalization and balloon angioplasty of the iliac artery (IA) and common femoral artery (CFA) were performed stenting IA and CFA in ET group patients. HR group patients underwent recanalization and stenting of iliac arteries in combination with CFA endarterectomy and patch angioplasty.

Results: The average hospital length of stay was shorter in ET (3.9±1.2 days vs 7.9±2.7 days HR, p=.001). 30-day perioperative morbidity rate was 9.7% in ET vs 22.6% in HR (p=.17). There were no mortalities, no major adverse events in either group within 30-days postoperative period. No myocardial infarction, death or amputations were determined during 1-year follow-up. The primary patency rate at 12 months was 81% in the ET and 94% in the HR (p=.12). The secondary patency and primary assisted patency rates at 12 months in ET were 97% and 100% versus 100% and 100% in HR, respectively.

Conclusion: The results of this first pilot randomized study support the safety and 1-year efficacy of endovascular treatment for patients with tandem lesion of iliac and common femoral artery. ET patients demonstrated shorter length of stay and similar one-year patency rates.

Keywords: Atherosclerosis, hybrid procedure, endovascular treatmant, common femoral artery, iliac artery

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OP-107

Treatment of pulsating hematomas and false aneurysms peripheral arteries of the upper and lower extremities

Yulia Alexandrovna Vinogradova, Leonid Sergeyevich Kokov, Igor Petrovich Mikhailov

Research Institute of Emergency Medicine named after. N.V. Sklifosovsky

Abstract

False aneurysms, also known as traumatic artery pseudoaneurysms (APAs), and pulsating hematomas of the limbs are rare. Most published articles on this subject are case reports. The exact epidemiology of them as a result of limb trauma is not well-known, and their management is not standardized. In total 129 cases of peripheral artery false aneurysms and pulsating hematomas were analyzed in Research Institute of Emergency Medicine N.V. Sklifosovsky. In 87 (67.44%) cases these were pulsating hematomas. Treatment began with local compression with a pressure bandage. The compression efficiency was 89.2%. The effectiveness of treatment was influenced by: the patient's use of anticoagulant and disaggregant drugs, constitutional features of the patient, arterial hypertension, localization and diameter of the post-puncture artery defect. The diagnosis of false aneurysm was 42 (32.56%) patients. In 27 (64.3%) cases it was puncture interventions, of which endovascular interventions for therapeutic and diagnostic purposes accounted for 18 (66.7%) patients. In other cases: trauma at home (6 cases), the consequences of a road accident (4 cases), and the consequences of knife wounds (5 observations).All patients with suspected false aneurysm underwent ultrasound duplex scanning (100% of cases). Additional methods of instrumental diagnostics including CT-angiography with intravenous contrast were required in 37 (88.1%) patients. Localization of damage: femoral artery in 29 cases (69.05%), subclavian artery – 3 (7.14%), axillary artery - 3 (7.14%), brachial artery – 4 (9.52%), the radial artery - 2 (4.76%), in 1 case the ulnar artery. In 18 (42.8%) patients with post-traumatic aneurysm, in the first two days after diagnosis, treatment began with local compression with a pressure bandage under ultrasound guidance. This type of treatment is accompanied by pain in the area of compression, was found to be ineffective, and the patients underwent surgery. Open surgical treatment was performed in all patients with false aneurysms. The duration of reconstructive vascular surgery varied from 1 hour to 7 days. Structure of surgical interventions: vascular suture of an arterial defect – 34 (80.9%); artery reconstruction – 8 (19.1%). In all patients, it was possible to restore the integrity of the vessel.

Keywords: False aneurysm, pulsating hematoma, traumatic artery pseudoaneurysm, vascular surgery

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OP-108

Management strategies for visceral artery aneurysms from a Japanese single-center experience

Hideaki Obara[1], Hideyuki Hayashi[1], Kentaro Matsubara[1], Masanori Hayashi[1], Masanori Inoue[2], Yuko Kitagawa[1]

[1]Keio University, School of Medicine, Department of Surgery, Tokyo, Japan
[2]Keio University, School of Medicine, Department of Radiology, Tokyo, Japan

Abstract

Aim: Visceral artery aneurysms (VAAs) are rare, and the natural history of VAAs is not well understood as they are often asymptomatic and found incidentally; however, they carry a risk of rupture that can result in death. Therefore, appropriate treatment strategies are required. In this study, we reviewed the current status of treatment for VAAs in our department.

Material and Methods: One hundred seven patients with VAAs (excluding renal aneurysms) treated at our institution between January 1997 and February 2023 were included in this study, excluding those with traumatic or iatrogenic. Patient background, imaging findings, treatment modalities, and outcomes were retrospectively reviewed.

Results: One hundred twenty-three VAAs were treated in 107 patients (64 males) with median age of 59 years old, and average observation period is 57 months. The VAAs located in splenic (n=58), pancreaticoduodenal (n=24), superior mesenteric (n=7), hepatic (n=7), gastroepiploic (n=7), gastric (n=5), celiac (n=4), colic (n=4), gastroduodenal (n=4), celiomesenteric trunk (n=3). Fourteen of the 107 cases (13%) were ruptured. Endovascular therapy (EVT) was performed in 78 cases (73%), open surgery (OS) in 24 cases (22%), and hybrid approach (OS with EVT) in 5 cases (5%). EVT consisted mostly of coil embolization. OS included aneurysmectomy with revascularization in 9 cases, splenectomy in 9 cases, aneurysmectomy alone in 5 cases, and aneurysmorrhaphy in 1 case. Hybrid approach included coil embolization with revascularization, coil embolization with aneurysmectomy, coil embolization with hematoma removal, coil embolization with resection of median arcuate ligament, and stent grafting with artery ligation in one case of each. Perioperative complications were found in 2 patients with duodenal stenosis after coil embolization for ruptured pancreaticoduodenal aneurysm and in a patient with pancreatic fistula after splenectomy, both of which were cured with conservative treatment. No aneurysm reperfusion or enlargement was observed during follow-up period.

Conclusion: We have achieved good results in the treatment of VAAs by utilizing EVT, OS and hybrid approach. It should be essential to establish a minimally invasive and appropriate treatment strategy by combining EVT as the mainstay with OS when necessary, preserving end organ perfusion.

Keywords: Visceral artery aneurysms, hybrid approach, endovascular therapy, open surgery

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OP-109

Outcomes of surgical treatment for critical ischemia of lower limb at VietDuc university hospital

Duong Ngoc Thang[1], Huu Uoc Nguyen[2], Doan Quoc Hung[2], Nguyen Quoc Hung[3]

[1]Viet Duc University Hospital, Cardiovascular and Thoracic Center, Ha Noi, Viet Nam
[2]Ha Noi Medical University, Ha Noi, Viet Nam
[3]Nghe An General Hospital, Nghe An, Viet Nam

Abstract

Aim: Chronical schemia of lower limb is a common vascular disease in elder. There are more than 200 million peoples who were affected with various grade. Arterial bypass surgery remains "gold standard" in a large number of patient. The purpose of the study is to describe clinical, paraclinical characteristics and outcomes in our conditions.

Material and Methods: Descriptive retrospective study at VietDuc university hospital between January 2020 and December 2022 to identify patients with diagnosis of critical ischemia of lower limb and with surgical treatment, excluded patients with primary amputation. Clinical characteristics, laboratory tests, surgical management, complication and follow up were collected and analyzed with SPSS 20.0 software.

Results: From January 2020 and December 2022, 132 patients were indentified. There were 16 (12.1%) females. Mean age was 69.6±10.71 years old, only 3 patients who were less than 50 years old. A half of patients was smoking and 89 (67.4%) had hypertension, 85 had coronary disease, 78 had carotid disease and 10 had unhealed amputation at foot level. Twenty three patients (17.4%) present intermittent claudication at two lower limb. In angioscanner, 23 had aortic occlusion, iliac occlusion was the most common lesion (67%). Sixty three were operated under general anesthesia. There were 27 aorto-bifemoral, 13 ilio-femoral, 45 femoro-popliteal above knee, 17 femoro-popliteal below knee, 3 popliteo-posterior tibial, 22 cross over femoro-femoral and 4 axillo-femoral bypass. There were 2 patients with venous arterialization and 6 patients with endarteriectomy and arteriotomy. Eleven patients were treated by hybrid procedure. Reversed great saphenous vein was used in 37 patients, 1 had insitu saphenous vein bypass, 64 (51.6%) had bypass with synthetic conduit as Dacron. Mean operated time was 167.7±66.40 minutes, the bypass below knee took the longest surgical time ($p<0.05$). Almost the patient (93.2%) had post-operative clinical improvement, 11 had graft occlusion, 1 had false aneurysm of anastomoses, 7 were died by cardiac insufficiency, pneumonia, gastrointestinal bleeding, sepsis shock. Follow up at 6 months, the primary patency rate was 90.8%.

Conclusion: For critical ischemia of lower limb, bypass surgery still has an important role and acceptable outcome beside endovascular treatment.

Keywords: Critical ischemia, peripheral arterial disease, arterial bypass

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OP-110

Endovascular interventions in a day care unit

Muhammad Faisal Shaikh, Lazslo Papp

North Wales Hospitals, Vascular, Rhyl, United Kingdom

Abstract

Aim: Recently, day case peripheral endovascular interventions have gained momentum due to constantly optimizing results, based on technological and pharmacological advancements. There are several reports on same-day discharge following uncomplicated procedures. Despite this there remains hospitals and departments that have not fully adopted day-case angioplasty especially where the patients have to travel long distance for their procedures and have limited access to the emergency services at their door steps. We evaluate the safety and feasibility of same-day discharge after endovascular procedures in north wales hospitals.

Material and Methods: Patients who underwent day case peripheral arterial endovascular interventions from April 2019 to March 2020, in north wales hospitals, were studied. Primary data source was identified from the Interventional Radiology Database. Data including patient's demographics, clinical information, primary procedure details, technical success, peri-procedural complications, and secondary interventions were recorded from patients discharge summaries, primary care referrals, admission records, inpatient episodes, theatre records, surgical procedure notes, emergency admissions records, Interventional room records and electronic patients discharge summaries. The distance from the patient's home to the intervention hospital was also noted. In the event of hospital admission following the procedure, reasons for this were determined. Patient's records were evaluated at a minimum of 6 months post procedure.

Results: Over 12-month period, 122 patients underwent peripheral arterial interventions as daycase. The mean age was 69 years. There were 83 males. Majority (82%) of cases were electively performed, only 2% was indicated as emergency procedures. 100 were therapeutic. The mean distance to hospital from home address was 23.6km. The most common artery undergoing treatment was the superficial femoral (44%), followed by the common iliac (34%). Our procedure technical success rate was 94%. There were 5 minor complications and one major requiring further open surgery post procedure. Six patients (5%) required hospital admissions following the intervention.

Conclusion: Day case discharge is safe and cost-effective following peripheral endovascular interventions. The policy can be adopted universally, as the post procedure complication rate and hospital admissions remains relatively low for both simple and complex arterial disease.

Keywords: Day care, peripheral artery interventions, safety, vascular diseases

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OP-111

Peripheral vascular injuries in children - experiences at Viet Duc University Hospital

Duong Ngoc Thang[1], Nguyen Huu Uoc[1], Doan Quoc Hung[2]

[1]Viet Duc University Hospital, Cardiovascular and Thoracic Center, Ha Noi, Viet Nam
[2]Ha Noi Medical University, Ha Noi, Viet Nam

Abstract

Aim: Extremity vascular injuries are rare in children that present challenges to vascular surgeon. Contrary to these injuries in adults, they are not easy to diagnosis with non-specific clinical symptom and imaging. In addition, there were not many discussion about this problem, then protocols for management and treatment are not clearly. The small size of vessels and growth in the future are the most difficult challenges that they can not use the surgical techniques like in adults. With the largest population of injuries in the North of country, the purpose of the study is to characterize management strategies and outcomes in our conditions.

Material and Methods: Descriptive retrospective study at VietDuc university hospital between May 2021 and February 2023 to identify patients younger than 18 years old with diagnosis of extremity vascular injuries and with surgical treatment. Clinical characteristics, laboratory tests, surgical management, complication and follow up were collected and analyzed with SPSS 20.0 software.

Results: From May 2021 to February 2023, 46 patients were indentified. There were 16 (34.8%) patients with upperextremity injuries, 30 (65.2%) with lower-extremity injuries. Mean age was 9.7 years, there were 28 males (60.9%), 73.9% were blunt-injured, traffic accident were 50%. Overall, 23.9% were directly admitted, 1 patient had a failure vascular repair at provincial hospital, 6 patients were hemodynamically unstable, 2 patients had abdominal trauma that require operative intervention and 2 patients had cerebral injuries. Thirty four patients (73.9%) had at least one extremity injury, fourteen of them were open fractures. More than a half (58.9%) did not present an acute ischemic syndrome of extremities. For vascular repair, there were 16 (34.8%) direct revascularization, 13 (28.3%) arterial dilatation by Fogarty catheter, 9 (19.5%) repair by using great saphenous vein, 1 patient had cephalic and basilic veinous repair by allograft vein. Six patients had temporary external fixation for complex lower limbs fractures. One patient had a secondary amputation after vascular repair. In following up, 23 patients (65.7%) had post-operative normal function of extremity.

Conclusion: The incidence of pediatric vascular injury is low. Early diagnosis and surgical treatment at a trauma centre may reduce mortality and rate of amputation.

Keywords: Pediatric vascular trauma, vascular trauma, vascular repair

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OP-112

Aortic remodeling after elective endovascular aortic repair (EVAR)

Ferit Cetinkaya[1], Gokay Deniz[2], Mehmet Ali Turkcu[2], Zafer Iscan[2]

[1]Ağrı Education and Research Hospital, Department of Cardiovascular Surgery, Ağrı, Türkiye
[2]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: EVAR treatment in abdominal aortic aneurysms is becoming increasingly common nowadays. In this study, it was aimed to determine the change in the structure of the aneurysm sac and neck in the mid-term follow-up after EVAR treatment.
Material and Methods: 180 patients with infrarenal abdominal aortic aneurysm who were admitted to our hospital treated electively between June 2016 and January 2021, had at least one year of follow-up and who had preoperative and postoperative CTA data were included.
Results: The median aneurysm diameter decreased from 61.0 mm to 57.5 mm ($p<0.001$). The median of diameter A increased from 24.0 mm to 26.0 mm ($p<0.001$). The median of diameter B increased from 24.0 mm to 26.0 mm ($p<0.001$). The median of the infrarenal neck angle decreased from 35.0º to 30.0º ($p<0.001$). The mean aneurysm length decreased from 131.6±18.5 mm to 130.5±18.6 mm ($p<0.001$).
Conclusion: This study showed that after EVAR treatment, the aneurysm neck diameter enlarged by an average of 2 mm due to the radial power of the endograft, the infrarenal neck angulation was improved by an average of 5 degrees, the neck length did not change, and the aneurysm length measured between the infrarenal level and the aortic bifurcation could shorten by about 1 mm. As a result, it has been observed that the aneurysm sac shrinks over the years after successful EVAR, and the infrarenal neck angle of the aneurysm decreases and the neck diameter expands depending on the radial power of the endograft.

Keywords: Endovascular aneurysm repair, abdominal aortic aneurysm, endovascular, stent-graft, morphology, remodelling

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OP-113

Management of aortic pathologies: TEVAR and EVAR experience

Tariq Alanezi[1], Sultan Alsheikh[2], Mussaad Al Salman[2], Badr Aljabri[2],
Mohammed Aldossary[2], Kaisor Iqbal[2], Abdulmajeed Altoijry[2]

[1]King Saud University, College of Medicine, Riyadh, Saudi Arabia
[2]King Saud University, College of Medicine, Department of Surgery, Division of Vascular Surgery, Riyadh, Saudi Arabia

Abstract

Aim: This retrospective study aimed to investigate the management and outcomes of two endovascular procedures, namely TEVAR and EVAR, in a single tertiary care center.

Material and Methods: This study included 59 patients that underwent TEVAR or EVAR for various aortic pathologies, including aortic dissections, transections, ulcers, and aneurysms. Patient outcomes and follow-up data were documented. A P-value below 0.05 was statistically significant.

Results: TEVAR accounted for 47.5% of cases, while EVAR represented 52.5%. Majority patients (88.1%) did not experience intraoperative complications. However, of those that did, endoleak and access failure were the most commonly observed complications affecting 5.1% of patients, each. Postoperative complications ranged from simple groin hematomas (13.6%) to endograft leaks (10.2%), stent thrombosis and acute limb ischemia (5.1%, each), and cerebrovascular accidents (3.4%). Reintervention was necessary in 16.9% of cases, with endograft leaks being the main reason for reintervention (60%). In the EVAR cohort, the most prevalent indication for the procedure was aneurysms, accounting for 90.3% of cases. In contrast, trauma was the primary indication for TEVAR, comprising 67.9% of cases. Emergency surgeries were significantly more frequent in the TEVAR group (P=0.013). Additionally, patients who underwent TEVAR had a significantly longer hospital stay compared to those who underwent EVAR (13.7±9.78 vs 8.09±6.68, p=0.012). Patients requiring thoracic aortic intervention were more likely to be young (≤60 years, p=<0.001), non-smokers (p=0.036), and having no significant co-morbidities (p=<0.001).

Conclusion: This retrospective study provides valuable insights into the management and outcomes of TEVAR and EVAR procedures. Our study found low incidence of operative complications, however, endoleak remained a common complication requiring reintervention. The primary indication for TEVAR and EVAR differed, with trauma and aortic dissections being the main indication for TEVAR and aneurysms being the most common indication for EVAR. Emergency surgeries were more frequent in the TEVAR group, and patients had significantly longer hospital stays compared to EVAR patients. These findings contribute to the understanding of the management and outcomes of TEVAR and EVAR, emphasizing the significance of personalized approaches and vigilance in monitoring potential complications, particularly endoleaks.

Keywords: Aneurysm, aortic dissections, endovascular techniques, endovascular aneurysm repair, thoracic endovascular aortic repair

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OP-114

Pedal arch quality vs direct angiosome: Which predicts better wound healing in ischaemic diabetic foot ulcers?

Limi Lee, Stephen Thwaites, Ming Yii

Monash Health, Department of Vascular Surgery, Clayton, Australia

Abstract

Aim: Crural arterial atherosclerotic disease is the key element in ischaemic diabetic foot ulcers (DFU). Only half of these patients are amenable for direct angiosome revascularization. Perhaps pedal arch quality plays a more important role in DFU healing. Aim of this study is to compare between pedal arch quality and direct angiosome in ischaemic DFU wound healing.
Material and Methods: A total of 332 diabetic patients with 372 limbs at Monash Health Hospitals from 1 January 2015 to 31 Dec 2019 with foot ulcers/ gangrene were included. Their digital subtraction angiography were evaluated to determine the pedal arch patency and direct angiosome. Cox regression analysis was performed to determine factors affecting non-healing wounds. Survival analyses using Kaplan-Meier test were applied to duration to healing and overall survival.
Results: Hazard ratios of non-healing wound for complete pedal arch and direct angiosome were 0.56 (p=0.034) and 0.78 (p=0.123). Patients who have complete pedal arch achieves 75% of wound healing within a year compared to those who have direct angiosome, 67% from Kaplan-Meier analysis. About 40% of these patients would have major amputation and 25% of them did not survive within 2 years.
Conclusion: Complete pedal arch hastens wound healing. Pedal arch quality is a better predictor of wound healing than direct angiosome in ischaemic DFU. Unfortunately, most of them would eventually have major amputation within 2 years with 25% mortality rate.

Keywords: Pedal arch, angiosome, diabetic foot ulcer

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OP-115

Almazov Centre experience in the treatment of Leriche syndrome

Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova,
Darya Viktorovna Chernova, Almaz Gafurovich Vanyurkin

Almazov National Medical Research Centre, Department of Vascular and Endovascular Surgery, Saint-Petersburg, Russia

Abstract

Aim: To evaluate the long-term results of open and endovascular interventions for aorto-iliac occlusions in patients with chronic limb ischemia (CLI).

Material and Methods: A total 186 patients were included in this retrospective observational study comparing aorto-femoral bifurcation bypass versus total endovascular revascularization. The first group included 112 patients, the endovascular treatment group included 74 patients. We evaluated the primary endpoints: primary patency (12, 24, 36 months after surgery), freedom from reinterventions, major cardiovascular events (MACE and MALE) and secondary endpoints - secondary patency (12, 24, 36 months after surgery). The choice of treatment tactics (open or endovascular) depended on the anatomy of the lesion and the comorbidity of the patient.

Results: Technical success was achieved in 100% of cases in both groups. In endovascular group bare metal stents (BMS) were used in 48.6% (36/74), while stent-grafts were used in the remaining 51.4% (38/74), either alone or in combination with BMS. There were no difference in primary patency between groups over a 2-year follow-up period: the primary patency in one year were 97.5% in the open group and 94.2% in endovascular group ($p>0.05$); in two years 89.1% and 88.4% respectively ($p>0.05$). After 3 years, primary patency was statistically significantly lower in the endovascular treatment group (82% vs 80.1%; $p<0.05$). As for secondary patency, there was no statistically significant difference in the groups over the three-year follow-up period. There was significant difference in the duration of the operation and postoperative day, as well as the combined end point with the best indicators in the endovascular treatment group (8.7% vs 3.7%; $p=0.05$).

Conclusion: Endovascular interventions have become a generally accepted strategy for revascularization in patients with Leriche syndrome. This approach allowed us to move away from the classic bypass surgery on the aorto-iliac segment and perform revascularization with minimal surgical trauma in elderly patients.

Keywords: Leriche syndrome, endovascular treatment, aorto-iliac disease

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OP-116

Junior doctors' perceptions of the barriers and facilitators in the implementation of evidence-based prescribing for peripheral artery disease

Alison Zhu

Concord Repatriation General Hospital, Department of Vascular Surgery, NSW, Australia

Abstract

Aim: Peripheral artery disease (PAD) is a major risk factor for cardiovascular morbidity and mortality, with international guideline recommendations for secondary prevention including best medical therapy (BMT), consisting of antithrombotic agents, statin and antihypertensives. Previous research has shown that a suboptimal percentage of patients who are admitted for endovascular management of PAD are discharged home on guideline-directed BMT. Junior clinicians are often responsible for prescribing decisions made in hospital including the arrangement of prescriptions for medications on discharge. Qualitative interviews were conducted with junior doctors to explore the perceived barriers and facilitators to evidence-based prescribing.

Material and Methods: Semi-structured interviews were conducted with 10 junior doctors who were purposively sampled from three hospitals in New South Wales, Australia. Junior doctors ranged between 1 and 3 post-graduate years' experience. Topics for the semi-structured interviews included risks of antithrombotic therapy, benefits of antithrombotic therapy, the process of decision-making when prescribing, perceived personal responsibility when prescribing, the accessibility of antithrombotic medication, knowledge of guidelines, and barriers to adoption of evidence-based practice. Interviews were audio-recorded, transcribed verbatim and analysed thematically.

Results: Three salient themes emerged from thematic analysis: perceived high risk of antithrombotic therapy in the acute perioperative period, disparity between perceived personal responsibility and actual clinical role, and lack of confidence in asserting beliefs despite knowledge of guidelines. Key challenges of evidence-based prescribing on discharge included poor communication between junior doctors and the senior team in the operating theatre, as well as external factors exerting time pressure, including hospital protocol for morning discharges.

Conclusion: Junior doctors are often responsible for prescriptions of medications upon discharge from hospital despite perceptions that this is not within the scope of their clinical role. The inpatient admission highlights a window of opportunity to institute BMT to improve both procedural and long-term outcomes for patients with PAD. The identification of barriers and facilitators to the prescription of BMT allows for planning of future implementation strategies to improve BMT prescription, thus enhancing patient outcomes.

Keywords: Peripheral artery disease, best medical therapy, guidelines, prescribing, junior doctors

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OP-117

Efficacy of MPFF on lower limb discomfort in subgroups of patients with chronic venous disease: A post hoc analysis of the CHEWY trial

Kursat Bozkurt[1], Arnaud Lucien[2], Lucie Truffaut Chalet[2], Steven Quentzel[2], Armando Mansilha[3]

[1]İstanbul University, Cerrahpaşa Medical Faculty, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]Servier Institute of International Research, Suresnes, France
[3]University of Porto, Faculty of Medicine, Porto, Portugal

Abstract

Aim: The CHEWY trial demonstrated the non-inferior effect on lower limb discomfort (LLD) in patients with chronic venous disease (CVD) of two different formulations of the venoactive drug micronized purified flavonoid fraction (MPFF 1000 mg/day) over 8 weeks. Using the study database we aimed to describe the effect of MPFF in relevant subpopulations.

Material and Methods: In CHEWY, LLD (primary efficacy criterion) was patient-assessed at baseline and weekly until Week 8 (W8) using a 10-cm electronic visual analogue scale recorded from 0 (no discomfort) to 10 (extreme discomfort). A post hoc analysis was carried out on the pooled data of both study arms. All observed values for LLD were described in subgroups defined by the following baseline parameters: previous sclerotherapy and/or surgical treatment of varicose veins yes versus no, age<60 versus ≥60 years of age, body mass index [BMI] <30 versus ≥30kg/m^2, highest CEAP class C0s-C2 versus C3-C4, female versus male gender.

Results: Data were available from 596 patients. For previous sclerotherapy and/or surgical treatment of varicose veins no (n=494) versus yes (n=102), LLD (mean±SD) at W0 was 7.31±1.70 and 7.18±1.82, respectively, and at W8 was 3.60±2.44 (n=437) and 3.62±2.40 (n=82), respectively. For age <60 (n=490) versus ≥60 (n=106) years: LLD at W0 was 7.34±1.70 and 7.03±1.77, respectively, and LLD at W8 was 3.74±2.43 (n=426) and 2.98±2.34 (n=93), respectively. For BMI <30 (n=485) versus ≥30 (n=111) kg/m^2: LLD at W0 was 7.19±1.70 and 7.70±1.72, respectively, and LLD at W8 was 3.62±2.41 (n=433) and 3.52±2.55 (n=86), respectively. For CEAP class C0s-C2 (n=375) versus C3-C4 (n=221), LLD (mean±SD) at W0 was 7.07±1.67 and 7.65±1.74, respectively, and at W8 was 3.77±2.42 (n=331) and 3.32±2.42 (n=188), respectively. For female (n=492) versus male (n=104): LLD at W0 was 7.35±1.69 and 7.01±1.81, respectively, and LLD at W8 was 3.62±2.44 (n=432) and 3.51±2.39 (n=87), respectively. Similar findings were observed in each subgroup for secondary endpoints leg heaviness and leg pain.

Conclusion: MPFF treatment was associated with large, clinically meaningful reductions in lower limb discomfort in patients with CVD across subgroups defined by age, BMI, CEAP clinical severity, gender and previous sclerotherapy and/or varicose vein surgery.

Keywords: Chronic venous disease, micronized purified flavonoid fraction, chewable tablets, phlebotonic, venoactive drug, subgroup analysis

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OP-118

Treatment of anterior accessory saphenous venous insufficiency. Role of endothermal ablation in the treatment of the anterior accessory saphenous vein

Le Nhat Tien, Nguyen Huu Uoc

Viet Duc University Hospital, Cardio Vascular Medicine, Intervention- Respiratory Department, Ha noi, Viet nam

Abstract

Aim: Insufficiency of the accessory saphenous vein still has many challenges in treatment, sometimes requiring a combination of methods such as endovascular thermal ablation, surgery, and sclerotherapy. Where is the role of endothermal ablation in the treatment of the anterior saphenous vein (AASV).

Material and Methods: This retrospective review included 62 limbs treated for anterior accessory saphenous venous valve failure in a single hospital between 2019 and 2021. The baseline characteristics assessed included age; gender, clinical classification, etiology, anatomy, pathophysiology classification; Venous Clinical Severity Score (VCSS); and vein diameter. Outcomes related to the safety and efficacy of the procedure included the modality and duration of treatment, successful ablation on postoperative imaging, clinical outcomes after the procedure, and the incidence of endothermal heat-induced thrombosis (EHIT) and any complications after the procedure.

Results: A total of 62 limbs. The preprocedural VCSS score was a mean of 6.05±2.53. The most common clinical stage was C2 in 72.6% (n=45). Venous diameter and reflux assessment were obtained by duplex venous ultrasound (DUS) examination. The average AASV diameter 7.63±2.89 mm. Treatment modalities included radiofrequency ablation (RFA) in 16.1% (n=10), endovenous laser ablation (EVLA) in 83.9% (n=52). In total, 87.1% (n=54) of limbs underwent concurrent microvascular ablation at the time of EVLA. The total treatment length was obtained in 62 limbs, the mean being 27.0±11.0 cm. The 1-month postoperative DUS examination was performed in 62 limbs, showing a successful ablation rate at 96.8% (n=60). No limbs (0.0%) developed EHIT. The mean VCSS score after the procedure was 4.35±2.06 (P<0.01). Continue follow-up was 3 months, 6 months and 1 year. 2 limbs (3.2%) that had not been successfully ablation at 1 month were treated with RFA.

Conclusion: Our experience over a 3-year period and 1-year follow-up for the treatment of AASV with RFA and EVLA showed it to be safe and effective in a variety of disease severity with improved VCSS and very low incidence of EHIT. Long-term follow-up data are needed.

Keywords: Anterior accessory saphenous vein, anterior saphenous vein, endothermal ablation, insufficiency

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OP-119

Endeavor on realizing robotic vascular surgery in Japan

Toshio Takayama, Takashi Endo

The University of Tokyo Hospital, Department of Vascular Surgery, Tokyo, Japan

Abstract

Most open surgical repairs in vascular surgery field have not shown much progress in terms of reducing their invasiveness, while endovascular technique has remarkably contributed in realizing less-invasive treatment of various vascular diseases. An open abdominal aortic aneurysm repair, for example, still requires a long midline incision; an endovascular aneurysm repair, on the other hand, can be done percutaneously nowadays. Robotic technology can be a game changer to improve this situation. Actually, robotic-assisted surgery has been widely utilized by gynecologists, urologists and general surgeons to achieve a minimally invasive treatment. However, it has not been well utilized by many vascular surgeons yet. Historically, laparoscopic technique was once attempted to be introduce in vascular surgery field over late 1990s to early 2000s, but it was not widely accepted mainly due to its difficulty in vascular anastomosis using long, stiff laparoscopic instruments. Vascular anastomosis by robotic system is a totally different experience. Its multiple-joint arm system enables smooth, precise anastomotic maneuvers, and this feature will thus lead to a minimally invasive vascular surgery. In this presentation the author will reveal our struggles in aim for realizing robot-assisted vascular surgery in Japan.

Keywords: Robotic surgery, minimally-invasive surgery, new technology

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OP-120

Post-TEVAR evaluation of cardiac remodeling by transthoracic echocardiography for thoracic aortic aneurysm

Sabir Hasanzade[1], Ayla Ece Celikten[2], Enis Burak Gul[3], Murat Gevrek[3], Nur Gizem Elipek[3], Ferit Kasımzade[3], Anil Ozen[3], Hakki Zafer Iscan[3]

[1]Memorial Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Çorum Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye
[3]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Little is known about the cardiovascular changes after Thoracic endovascular aortic repair (TEVAR) and regarding the impact on aortic stiffness. We aimed to evaluate the motionless state of arcus aorta and proximal descenden aorta after TEVAR. Therefore, we researched post-procedural cardiac remodeling in patients who underwent TEVAR with transthoracic echocardiography.

Material and Methods: Between 2019 and 2022, patients who experienced TEVAR due to thoracic aortic aneurysm in our clinic were retrospectively evaluated. The emergency or elective cases in which transthoracic echocardiography (TTE) could not be performed before the procedure were excluded from the study. Pre- and post-procedure transthoracic echocardiographic data of 32 patients in one year follow-up were compared. Measurements of left ventricular end-diastolic diameter (LVEDD), left ventricular ejection fraction (LVEF), interventricular septum (IVS), and ascending aorta were performed.

Results: Decrement in diameter of ascending aorta was non-significant (p=0.34). However, an increase was observed in IVS and LVEDD measurements. No significant change is observed in LVEF. As a result, left ventricular remodeling may be negatively affected due to the mechanical effect of thoracic endografts. Therefore, designing more adaptive and physiological endografts may have better results.

Conclusion: To evaluate left ventricular diameters and mass index with computed tomography in addition to TTE, may be more informative for prognosis. Adjustment of medical therapies may be beneficial. Aortic stiffness and the restricted motion of aorta after TEVAR should be studied in larger series and longer follow-ups.Our study highlights the potential deleterious endograft role in the cardiovascular system although further studies are needed to achieve robust evidence.

Keywords: Echocardiography, aorta, thoracic aorta aneurysm, endovascular aneurysm repair, left ventricular remodeling

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Oral Presentations Nominated for an Award

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Best Abstracts -1

Mid-term follow-up results of SMFSG assisted TEVAR for zone 2 thoracic aortic pathologies

Hakki Zafer Iscan, Sinan Ozcelik, Murat Gevrek, Servet Turgut, Baran Karadeniz, Mehmet Ali Unal, Naim Boran Tumer

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Thoracic endovascular aortic repair assistive techniques adapt endovascular solutions to aortic arcus and allow sufficient sealing zones while revascularizing the branch vessels. We aimed to assess the safety, feasibility, and effectiveness of SMFSG technique for zone 2 aortic pathologies in elective and urgent settings at the early and mid-term period with Lifetech Ankura™ Thoracic (LTA) endograft.

Material and Methods: During January 2020 and January 2023, 29 patients all having thoracic aortic pathology including Zone 2 and revascularization for left subclavian artery (LSA) with SMFSG were retrospectively evaluated. The primary endpoints at 30 days and during the follow-up period were overall mortality, aorta-related mortality (ARM). The secondary endpoints were endoleak, patency of LSA and reinterventions in the follow-up period.

Results: The mean age of the patient cohort was 56.4±11.3 (34-82) years. 26 patients (89.6%) were male. 32 thoracic endografts were used in 29 patients. Mean length of the TEVAR grafts were 17.9±3.2 cm. In our patient population 8 patients had primary BES deployment (28.6%) for LSA. There was no open conversion to surgery, no additional assistive techniques and no need for a bail-out procedure. Mean intensive care unit period was 10.8±4.2 hours (4-24 hours). Mean length of stay was 3.9±1.5 days (3-6 days). The fenestration procedure took a mean period of 11.6±4.1 minutes (9-18 minutes). The fluoroscopy period was 9.9±4.3 minutes (4-22 minutes). LSA patency rate before discharge was 100%. The follow-up period was 20.8±9.1 months (6-29 months). The secondary patency rate for LSA was 96.5% for the follow-up period with one occlusion at the first month control. One patient died at the 28th month due to cardiac causes.

Conclusion: Our limited experience demonstrated SMFSG via LTA endograft to be a safe, effective, and simple technique for zone 2 landing without any additional assistive procedures. It is always available and can be applied to every aortic pathology with no additional cost whether elective or urgent if the anatomy is suitable. Longer follow-up will show the material fatigue or durability of e-PTFE and by this way SMFSG will take place for all aortic pathologies.

Keywords: Surgeon modified fenestrated stent graft, zone 2 thoracic endovascular aortic repair, aortic aneurysm

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Best Abstracts -2

Arterial stiffness index assessment in patients diagnosed with leriche syndrome

Hakan Guven

Heart and Arrythmia Hospital, Department of Cardiovascular Surgery, Bursa, Türkiye

Abstract

Aim: Leriche syndrome is characterized by a triad of symptoms, including claudication, impotence, and decreased pulses, which are caused by aortoiliac occlusion. Risk factors for this condition include hyperlipidemia, hypertension, diabetes mellitus, and smoking. Ankle Brachial Index (ABI) is a non-invasive, reliable and cost-effective screening method. Arterial stiffness, which is an initial manifestation of vasculopathy, encompasses various mechanisms and results in reduced arterial compliance. It has recently been suggested as a reliable and independent predictor of cardiovascular disease. We investigated whether the Arterial Stiffness Index could be used as a prediction method in the same way.

Material and Methods: Gender (male/female), age (years), height (cm), weight (kg), BMI (kg/m^2), brachial systolic pressure (mmHg), brachial diastolic pressure (mmHg) and heart rate were recorded in 134 angiographically diagnosed patients with Leriche syndrome (Grup 1) and 97 healthy individuals (Grup 2) without atherosclerotic disease between 2018 and 2023. Artielial stiffness index examination was performed in all patients and healthy subjects using Optical Pulse Oscillography. The results were compared statistically.

Results: There was no significant difference between patients with Lerich syndrome and healthy subjects in terms of demographic characteristics. Although blood pressure measurements were higher in Group 1, there was no statistically significant difference between Group 1 and Group 2. The ASI was 8.78±0.96 m/sec in Group 1 and 7.13±0.63 m/sec in Group 2. There was a statistically significant difference between the two groups.

Conclusion: The arterial stiffness index has become more commonly used in the early diagnosis of atherosclerotic vascular diseases because it is a non-invasive and user-friendly method. We believe that patients with pathological ASI should undergo a thorough examination for the presence of Leriche syndrome.

Keywords: Leriche sendrom, arteriel stiffness index, aterosclerotic cardiovascular disease

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Best Abstracts -3

Decoding the transcriptome for the ulcerated plaque discrimination in carotid artery stenosis

Ceyda Colakoglu Bergel[1], Isil Ezgi Eryilmaz[1], Atif Yolgosteren[2], Unal Egeli[1], Can Kosukcu[3], Basak Erdemli Gursel[4], Murat Bicer[2], Gulsah Cecener[1], Mustafa Tok[2]

[1]Bursa Uludağ University, Faculty of Medicine, Department of Medical Biology, Bursa, Türkiye
[2]Bursa Uludağ University, Faculty of Medicine, Department of Cardiovascular Surgery, Bursa, Türkiye
[3]Hacettepe University, Child Health Institute, Department of Pediatric Metabolism, Ankara, Türkiye
[4]Bursa Uludağ University, Faculty of Medicine, Department of Radiology, Bursa, Türkiye

Abstract

Carotid artery stenosis (CAS) is a multifactorial disease characterized by plaque accumulation in the carotid arteries. Based on their surface morphology, carotid artery plaques are divided into smooth and ulcerated while grouped as stable or vulnerable according to their biology. Unlike smooth plaque, surface ulceration is an earlier indicator for plaque rupture associated with vulnerable plaque and increased cerebrovascular events. Therefore, determining the effective molecular factors in the progressive process of ulcerated plaques can be used as early indicators of the formation of vulnerable plaques and the resulting ischemic events. In the present study, the factors involved in the progression of ulceration were investigated at the transcriptome level with RNA-Seq analysis for discriminating the biology of smooth and ulcerated plaques in CAS patients. After the plaque morphologies were determined by Doppler USG, a total of 8 CAS patients, 75% of whom had ulcerated plaques (n=6), were included in the study. The plaque materials were resected by carotid endarterectomy, and then total RNAs were isolated from the resected tissue samples. RNAs were qualified using an Agilent Bioanalyzer. For the samples with DV200 scores greater than 70%, RNA-Seq analysis was performed using the transcriptome panel on the IonGeneStudio™ S5 NGS system. Then, the data was processed with CLC Workbench and IonReporter™. Finally, Ingenuity Pathway Analysis (IPA) was used for determining the differential expressed genes (DEGs) between the ulcerated and smooth plaques based on $p<0.05$&log2FC±1.5-fold. IPA results showed that while XIST (12.23-), AVPI1 (10.35-), HLA-DRB6 (7.77-), and HLA-DQA1 (2.8-) were upregulated, CHI3CL2 (3.8-), CXCL13 (3.4-), LYPD2 (3.4-), PF4V1 (3.1-) were downregulated in the ulcerated group. The molecular and cellular functions cumulatively affected by the DEGs between the groups were cell movement, intercellular signaling and interaction, cell death, and survival signals. The signaling pathways that were affected by the DEGs were determined as macrophage alternative activation, LXR/RXR, FXR/RXR, and Th1 and Th2 activation pathways. Therefore, our results suggest that the DEGs, which play a role in the increased signaling of cell death and cell-cell interaction and decreased chemokine and cell survival signals, potentially discriminate ulcerated plaques from smooth ones in CAS patients.

Keywords: Carotid artery stenosis, plaque biology, RNA sequencing

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Best Abstracts -4

Venous thromboembolism risk and thrombophylaxis assessment by integration of vte prevention algorithm and VTE risk evaluation assessment tool into the hospital information management system

Atilla Aral, Cansev Sevencan, Evren Ozcinar, Atilla Halil Elhan, Birgul Yurdakul, Semih Ulupinar, Arda Omer Cetinkaya, Suleyman Altun, Birsen Aksoy, Sehriban Irmak

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Venous thromboembolism (VTE), initiating with deep vein thrombosis and resulting in pulmonary embolism, is a dangerous health problem. Prediction of venous thromboembolism risk for the patient and treatment of appropriate prophylaxy modality in the early phase of the disease may be crucial for the reduction of VTE incidence and decreasing the cost of the patient care. However, there is not much data about this scope that comprise all clinics of the hospital. We aim to examine VTE prophylaxy treatment frequency and to obtain the changes for the prophylactic method preferences by integration of VTE prevention algorithm and Autar Risk Evaluation Score into the Hospital Information Management System (HIMS).

Material and Methods: This study was conducted between 16th May 2022 and 16TH May 2023 in a Tertiary University Hospital. Totally 1749 patient was involved who were >18 year old and had >24 hour hospitalization duration.

Results: By the point prevalence study, before the integration period 743patients and after the integration 1006 patient were included. 90.9% of intensive care unit patients, 53.5% of surgical clinics patients, 48% of internal medicine clinics patients were at the risk of deep vein thrombosis. Before the integration process, prophylactic treatment usage ration for the patient at risk group 79.8%, following the integration this ratio rose up to 86.8%. Before the integration period, inappropriate prophylactic treatment for the patients in the no risk group was 57.5%, this ratio decreased to 43.9%. The low risk group that pharmacological prophylactic treatment is not recommended was 26.3% and reduced to 11.6% after integration process.

Conclusion: By the help of standardized approach, prophylactic treatment usage ratio at the risk group and knowledge of VTE information process rate were increased. Beyond this, In the low risk VTE group that pharmacological prophylactic treatment was not recommended and in the no risk VTE group, unnecessary pharmacological prophylactic therapy application rates were significantly reduced. Integration of VTE prevention algorithm may reduce the unnecessary prophylactic therapy usage in the hospitals.

Keywords: Venous thromboemboli, quality for health, decision support systems

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Best Abstracts -5

Morpho volumetric analysis of aneurysm sac and correlation with maximum diameter for Post-EVAR surveillance

Mehmet Ali Turkcu[1], Ferit Cetinkaya[1], Gokay Deniz[1], Mustafa Dagli[3], Ertekin Utku Unal[2], Hakki Zafer Iscan[1]

[1]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ufuk University, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Ankara City Hospital, Department of Radiology, Ankara, Türkiye

Abstract

Aim: The number of Endovascular Aortic Repair (EVAR) are growing tremendously, the post-EVAR surveillance becomes a more important issue. The aim of this study was to determine the factors affecting the aneurysm remodeling and to evaluate a better surveillance protocol by using the morphovolumetric analysis after EVAR.

Material and Methods: Between 2019 and 2023, 131 patients who underwent elective EVAR in our hospital, having pre-postoperative Computed Tomographic Angiography (CTA) were the patient cohort. A post-EVAR 10% or more reduction in pouch volume was evaluated as positive "remodeling" by volumetric analysis. For post-EVAR surveillance reliability and correlation with maximum diameter (D max) was evaluated.

Results: Positive remodeling was detected in 44 of 131 (33.6%) patients at follow-up. Not using DAPT was found to be approximately 3 times, 3 or less lumbar artery patency approximately 4 times, independent predictor for positive remodelling. Detection of endoleak independent of the type in the control was associated with no decrease in sac volume (p=0.003). Preoperative aneurysm volume greater than 233.5 cm^3 (p=0.001) and thrombus volume over 204 cm^3 (p=0.002) was associated with secondary intervention.
When Post-EVAR morphologic changes were examined, neck enlargement (p<0.001) and decrease in neck angulation (p<0.001) was found. >47.5 alpha angle was in relation with Type 1a endoleak existance (p=0.046).

Conclusion: Neck enlargement and decrease in neck angulation was the Post-EVAR morphologic changes. Preoperative detection of more than 4 lumbar arteries, postoperative use of Double Antiplatelet Therapy (DAPT), and existence of any type of endoleak were factors for negative remodeling. Lifelong surveillance for EVAR is mandatory in different algorithms individually. The best method for organizing this surveillance protocols should be done by a combination of D max and volume analysis. By this way, the most economic and reliable surveillance is possible. In post-EVAR surveillance, D max is the fastest and reliable data for today. However, after our current study, we realized that only D max may be misleading and should be correlated with volume analysis datas.

Keywords: Endovascular aortic repair, aneurysm, morpho volumetric analysis

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Best Abstracts -6

Comparison of drug-coated balloon angioplasty alone and directional atherectomy combined with drug-coated balloon angioplasty in patients with lower extremity peripheral arterial disease with claudication

Ali Aycan Kavala[1], Yusuf Kuserli[1], Gulsum Turkyilmaz[1], Mehmet Ali Yesiltas[2], Saygin Turkyilmaz[1], Utku Celik[1]

[1]Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]Prof. Dr. Cemil Taşçıoğlu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The objective of the study was to compare drug-coated balloon (DCB) angioplasty alone and directional atherectomy (DA) combined with DCB angioplasty in patients with lower extremity peripheral arterial disease (LE-PAD).

Material and Methods: Subjects treated with DCB angioplasty alone (group A) and DA combined with DCB angioplasty (group B) were enrolled in the study. A retrospective chart review was performed between the 4 years. Subjects with severe and occluded LE-PAD were included. Demographic data, atherosclerotic vessel properties, and procedural data were recorded. For both groups, success rates (technical, procedural, and clinical) were presented.

Results: In total, 226 patients were evaluated. For baseline characteristics, only tobacco use and hyperlipidemia were higher in group B (p=0.001 and p=0.010, respectively). For the ankle-brachial index, no significant difference existed at the first, third, sixth, 12th or 24th month follow-ups. No significant difference existed for the Rutherford class at the first, third, sixth, or 12th months according to the groups. A significant difference was found at 24-month Rutherford levels. The incidence of severe claudication in group A was significantly higher than that in group B (13 [12.4%] for group A and 3 [2.8%] for group B, p=0.035). The stenosis rate after predilatation in group B was significantly higher than that in group A (54.56±5.36 for group A and 59.20±6.21 for group B, p=0.012). The distribution of full patency in the 12th month in group B was significantly higher than that in group A. The rate of 70-100% stenosis in the 12th month was significantly higher in group A than in group B. According to the groups, the distribution of the patients who were lost to follow-up and died during the follow-up and secondary results, primary patency rates, and 2-year disease-free survival rates were also similar.

Conclusion: Atherectomy combined with DCB is superior for the long-term treatment of LE-PAD.

Keywords: Peripheral arterial disease, balloon angioplasty, directional atherectomy

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Best Abstracts -7

An alternative approach to the treatment of Raynaud's phenomenon: Cilostazol

Kudret Atakan Tekin

Hitit University, Çorum Erol Olcok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye

Abstract

Aim: Raynaud's phenomenon (RP), seen in 3-5% of the population and is four times more common in women, is a clinical diagnosis characterized by vasospastic attacks and pain, often triggered by cold in the extremities. In patients who do not benefit from lifestyle changes, vasodilator treatment is considered first, and calcium channel blockers (CCB) are usually the first treatment step. However, patient noncompliance often occurs in patients using CCBs due to their hypotensive side effects. In this study, we aimed to examine the potential of cilostazol, a selective phosphodiesterase III inhibitor, to treat RP with its antithrombotic, antiplatelet and vasodilatation properties.

Material and Methods: 31 patients diagnosed with primary RP who came to our clinic between March 2022 and July 2023, started lifestyle changes and CCB treatment, and could not use CCB due to hypotensive side effects were retrospectively screened. Patients were treated with cilostazol at 100 mg twice a day for six months. The patients' vasospastic attack frequency (per week), duration (min) and visual analogue scale (VAS) values were examined in the pre-drug period and in the first and sixth months after the medication. Patients who could not complete the treatment were excluded from the study.

Results: The average age in the study was 21.66±3.45, the female sex ratio was 83.3% (n:20). 22.5% (n:7) of the patients stopped using cilostazol due to headache, palpitations and other side effects. One of these seven patients underwent sympathectomy. There was a significant decrease in the frequency, duration and VAS values of vasospastic attacks in the 1st and sixth months after cilostazol treatment compared to the pre-cilostazol period ($p<0.01$). The frequency, duration, and VAS values of vasospastic attacks were 11.8±7.5, 15.8±5 and 7.37±1, respectively, in the pre-cilostazol period; 5.8±4.5, 9.3±3.3 and 5.3±0.87, respectively, in the first month after cilostazol; 2.7±2.3, 5.4±3.8 and 3.45±2.0, respectively, at six months after cilostazol.

Conclusion: Cilostazol may be an excellent alternative to CCBs, which are difficult to use due to hypotensive side effects in treating RP. However, more comprehensive and prospective studies with more patients are needed.

Keywords: Raynaud phenomenon, cilostazol, calcium canal blocker, vasospastic attack, visual analogue scale

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Best Abstracts -8

Investigation of the vasculoprotective effects of bempedoic acid against senile aortic damage and atherosclerosis on aged rats

Cenk Anil Olsen[1], Ozgur Baris[1], Zehra Seda Halbutogullari[2,3], Selenay Furat Rencber[3,4], Gulsen Celebi[5], Gozde Bugutekin[5], Semil Selcen Gocmez[5], Yusufhan Yazir[3,4], Muhip Kanko[1], Tijen Utkan[5]

[1]Kocaeli University, Faculty of Medicine, Department of Cardiovascular Surgery, Kocaeli, Türkiye
[2]Kocaeli University, Faculty of Medicine, Department of Medical Biology, Kocaeli, Türkiye
[3]Kocaeli University, Institute of Health Sciences, Department of Stem Cell, Kocaeli, Türkiye
[4]Kocaeli University, Faculty of Medicine, Department of Histology and Embryology, Kocaeli, Türkiye
[5]Kocaeli University, Faculty of Medicine, Department of Pharmacology, Kocaeli, Türkiye

Abstract

Aim: The incidence of cardiovascular diseases increases with age, oxidative stress, and chronic inflammation. There is not enough information in the literature regarding the anti-inflammatory and vasculoprotective effects of bempedoic acid, a powerful new drug for reducing resistant LDL levels. We aimed to make a new contribute to the literature by examining the vasculoprotective effects of bempedoic acid with senescence.

Material and Methods: Once a naturally aged animal model was established, 40 rats were included in the study. They were divided into four groups of 10 each. Young (4 months) rats and young^{+}drug group; aged (12 months) rats and aged^{+}drug group. Bempedoic acid (30 mg/kg/day) was administered orally for four weeks. Thoracic aortas were removed and 4 µm-thick samples were stained with hematoxylin and eosin (H&E) to evaluate histomorphology. Quantitative-Real-Time-PCR (qRT-PCR) was performed to detect changes in inflammation and apoptosis markers using RNA isolation and cDNA synthesis. Degeneration, vacuolization, and hyperplasia in smooth muscle cells and a thicker tunica media layer were observed in the aortic sections of the elderly control group compared to the other groups. However, in the elderly group treated with bempedoic acid, the thickness of the tunica media layer decreased significantly, and aortic histomorphology improved to levels comparable those to in the young control groups.

Results: According to the results of qRT-PCR performed with the Syber Green method using cDNA samples, the levels of inflammatory markers, Monocyte Chemoattractant Protein-1 (MCP-1), tumor necrosis factor-α (TNF-α), and interleukin-1β (IL1-β) were found to be increased in the aged animals, and their levels were significantly decreased after bempedoic acid administration. On the other hand, an apoptosis marker, Caspase-3 expression also decreased in the bempedoic acid group. The levels of IL-10, an anti-inflammatory marker, increased after medication in the elderly group treated with bempedoic acid.

Conclusion: The protective effects of bempedoic acid against inflammation and senile aortic damage in the aortic tissues of aged rats was demonstrated quantitatively by gene analysis and histomorphological confirmation.

Keywords: Rats, senescence, bempedoic acid, anti-aging drugs

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Best Abstracts -9

The factors affecting amputation in patients with acute limb ischemia: Evaluation of biochemical markers and time of admission

Yusuf Erkal, Isa Civelek, Sertan Ozyalcin, Emre Boysan, Renda Circi, Ferit Cicekcioglu

Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The primary objective of this study is to investigate the factors contributing to the need for amputation in patients presenting with Acute Limb Ischemia (ALI), along with exploring any relevant biochemical parameters that might play a role in this condition.
Material and Methods: The study encompassed patients who sought medical attention for ALI at our clinic between January 2012 and January 2022. Specifically, we included patients with ALI attributed to atherosclerosis (AS) and atrial fibrillation (AF), while excluding cases resulting from trauma or iatrogenic causes. Detailed examination of the patients' baseline characteristics, biochemical parameters, and hematological values at the time of admission was conducted. Additionally, we analyzed factors that might influence the development of amputation in those patients who eventually required such intervention after experiencing ALI.
Results: A total of 377 patients were incorporated into the study, comprising 57.82% male (n=218) and 42.18% female (n=156) individuals. Among this cohort, 30 patients necessitated amputation. Through multivariate analysis, we determined that the key factor determining the requirement for amputation was the timing of admission (odds ratio (OR) 1.289; confidence interval (CI) 95%, p=0.05). Notably, no significant association between the neutrophil-to-lymphocyte ratio (NLR), other hematological parameters, and the likelihood of amputation was detected through both univariate and multivariate analyses (OR 1.49; CI 95%, p=0.512).
Conclusion: Based on the findings of our study, the timing of admission appears to be a crucial factor influencing the development of amputation following an episode of ALI. However, we did not identify any significant impact of biochemical and hematological parameters on the likelihood of amputation in patients with ALI.

Keywords: Ischemia, extremity, surgical amputation

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Best Abstracts -10

Initial experiences of our clinic related to limb salvage treatment; Stem cell therapy

Ozgur Altinbas[1], Erhan Hafiz[2], Isik Betil Kutlu[2], Ugur Sener[3], Mehmet Adnan Celkan[2]

[1]Gaziantep University, Vocational School of Health Services, Gaziantep, Türkiye
[2]Gaziantep University, Department of Cardiovascular Surgery, Gaziantep, Türkiye
[3]Dr.Ersin Arslan Training and Research Hospital, Department of Cardiovascular Surgery, Gaziantep, Türkiye

Abstract

Aim: Peripheral artery disease (PAD) is a common vascular disorder worldwide. Ulceration, amputation and even death may occur as a result of this situation. Although surgical or endovascular interventions are the gold standart modalities for severe PAD, upto 30% of the patients are not suitable candidates for such revascularization methods. Excessive operative risk, presence of multiple, diffuse and distal lesions may prevent to use these methods. Autologous stem cell therapy for severe PAD seems to be a recent method for the treatment of severe limb ischaemia. In this study we aimed to present our initial experiences about this new strategy.
Material and Methods: Between 2020-2021, a total of 10 patients (41-64 years old) with severe PAD were involved to the study. All participants have critical ischemia with rest pain and discoloration. Inclusion criteria were 90%< occlusion of arteries below the knee with unsuccessful endovascular or surgical intervention or unsuitable patients for these methods. The mixture of autologous conditioned plasma (ACP) and autologous conditioned adipose (ACA) were administered to the vascular route extravasally.
Results: None of the patients were underwent amputation except one (toe of the right extremity). Ankle brachial index (0.48±0.05 to 0.64±0.06), pain-free walking distance (76.8±20.6 m to 304±71.8 m) and 0 to 10 pain scale (6.44±0.42 to 2.24±0.28) were all found to be improved in one year follow up.
Conclusion: Despite traditional treatments in PAD, autologous stem cell therapy is a safe and efficient method that can be used for saving limbs.

Keywords: Stem cell, peripheral arterial disease, limb salvage

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Nursing Presentations

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NP-001

Evaluation of the effectiveness of the care bundle for the prevention of ventilator associated pneumonia in patients undergoing pulmonary endarterectomy

Aylin Gunay[1], Merve Fettahoglu[1], Denizhan Akpinar[2], Okay Karslioglu[2], Hakki Tankut Akay[2], Atila Sezgin[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The incidence of VAP associated with the use of mechanical ventilation in intensive care units is between 2.5% and 75.3%. Considering the high rates of VIP, the concept of care bundle has been used in order to reduce the rate of VIP and to minimize the negative consequences of VIP. In this study, we aimed to evaluate the effectiveness of the care bundle to prevent ventilator-associated pneumonia in patients who underwent pulmonary endarterectomy in our intensive care unit.

Material and Methods: This study is a retrospective, descriptive and cross-sectional study. The care bundle was implemented in Başkent University Ankara Hospital Cardiovascular Surgery Intensive Care Unit on 23.03.2022. Between 21.10.2020 and 07.06.2023 all inpatients were included. The files of 21 patients were retrospectively evaluated. Descriptive characteristics of the patients (personal characteristics, disease process, the ventilation process, use of ventilator-associated pneumonia care bundle, development of ventilator-associated pneumonia) were recorded in the data collection.

Results: 42.9% (n=9) underwent surgery before and 57.1% (n=21) after the care bundle implementation. The mean age of the non-care bundle group was 54.44±19.5 years, 77.8% were female, the mean intubation time was 38.5±18.1 hours, the mean CPIS (clinical pulmonary infection score) was 3.4, and 22.2% of the patients developed ventilator-associated pneumonia. The mean age of the care bundle group was 51.2±18.5 years, half of them were women, the mean intubation time was 43.6±28.6 hours, the mean CPIS (clinical pulmonary infection score) was 4.2, and 8.3% of the patients developed ventilator-associated pneumonia. The relationship between the mean values of two groups and the development of ventilator-associated pneumonia was analyzed, no significant difference was observed between the groups ($p>0.05$).

Conclusion: In intubated patients followed up in intensive care units, it is thought that it would be more effective to apply the interventions applied to prevent ventilator-associated pneumonia and reduce the complications that may develop in accordance with care bundles instead of applying them alone. It is thought that the effectiveness of care packages consisting of evidence-based nursing interventions preventing ventilator-associated pneumonia in institutions will increase with the establishment of protocols and ensuring their applicability.

Keywords: Patient care bundles, effectiveness, ventilator-associated pneumonia, critical care nursing

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NP-002

The effect of pulmonary endarterectomy on patients' quality of life and health outcomes

Gulcin Aydin[1], Hatice Nalan Ozhan Elbas[2], Hakki Tankut Akay[1]

[1]Başkent University Ankara Hospital, Cardiovascular Surgery Service, Ankara, Türkiye
[2]Başkent University, Faculty of Health Sciences, Department of Nursing, Ankara, Türkiye

Abstract

Aim: CTEPH is characterized by vascular obstruction and remodeling, leading to increased pulmonary vascular resistance. Pulmonary endarterectomy is only curative method. However, it may affect the quality of life of patients after surgery.
Material and Methods: This study is of a retrospective descriptive type. Participants in the study consist of patients who underwent pulmonary endarterectomy at a foundation hospital in Ankara between 07.06.2023 and 08.04.2021. The data were collected through the data collection form prepared by the researchers and the page 12 page.
Results: Between 07.06.2023 and 08.04.2021, pulmonary endarterectomy was performed on 21 patients, and 4 of the patients (19%) died during the intensive care unit period after the operation. The average age of the patients participating in the study is 53.23±16.79. 52.9% of the participants are women, 82.4% are married, 64.7% are primary school graduates, 76.5% are not working and the majority live in the province. The average duration of patients' stay in intensive care after surgery is 11.29±5.8. The total hospital stay is 14.58±5.3. A statistically significant difference was found between the gender of the patients and the mean scores of the SF-12 quality of life scale physical function sub-dimension, marital status and physical role function sub-dimension, employment status and pain sub-dimension.
Conclusion: As a result of the study, it was determined that the majority of patients had a high quality of life. A larger population is needed for broader results.

Keywords: CTEPH, quality of life, pulmonary endarterectomy

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NP-003

The effect of foot reflexology on pain and ankle brachial index level in patients with peripheral artery disease: A randomized controlled trial

Elif Budak Erturk[1], Sevcan Avci Isik[1], Azize Karahan[1], Ilknur Senel[2], Hakki Tankut Akay[3]

[1]Başkent University, Faculty of Health Science, Department of Nursing, Ankara, Türkiye
[2] Başkent University Ankara Hospital, Nursing Director Department, Ankara, Türkiye
[3]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: This study aimed to determine the effect of foot reflexology on pain and ankle brachial index (ABI) level in patients with peripheral artery disease (PAD).

Material and Methods: This is a randomized controlled, single-blind study design. The population of the study consists of patients who applied to Başkent University Ankara Hospital Cardiovascular Surgery outpatient clinic and were diagnosed with PAH. The sample of the study will be completed with a total of 52 (intervention=26, control=26) patients. In the ongoing study, 11 patients in the intervention group and 6 patients in the control group have been reached so far. Data are collected by descriptive characteristics form, Ankle Brachial Index evaluation form, and Numerical Pain Rating Scale. For the secondary results of the study, periferal saturation values and the Walking Distance Reduction Scale was applied.

Results: The findings obtained from the study so far are as follows; The average age of the intervention and control groups was; 62.90±13.14, 69.83±8.97, respectively; 72.7% of the intervention group and 50% of the control group were male, 72.7% of the intervention group and 33.3% of the control group had PAD between 1 and 5 years. The mean ABI scores of the intervention group before and after the first reflexology session were right 0.30±0.51, 0.50±0.59, left 0.25±0.44 and 0.42±0.51, respectively and the before and after the second reflexology session were right 0.37±0.51; 0.52±0.56, left 0.36±0.51; 0.44±0.51, respectively. The first and second ABI measurements of the control group were right 0.32±0.53; 0.30±0.50, left 0.40±0.48; 0.39±0.47, respectively. The mean pain score of the intervention group was 2.72±2.45 before reflexology, 0.90±1.37 and 0.40±1.20 after the first and second sessions of reflexology, respectively. The mean pain score of the control group was 1.83±3.25.

Conclusion: In line with the findings obtained so far from the study, foot reflexology applied to individuals with PAH may decreased the mean pain scores and increased the ABI values of the intervention group patients. Reflexology, which is among the non-pharmacological interventions of nursing care can be used to reduce the symptoms experienced by PAH patients and to support peripheral circulation.

Keywords: Peripheral artery disease, reflexology, pain, ankle-brakial index, nursing care

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NP-004

Critical leg ischemia and nursing care

Gulcin Aydin[1], Azize Karahan[2], Hakki Tankut Akay[3]

[1]Başkent University Ankara Hospital, Cardiovascular Surgery Service, Ankara, Türkiye
[2]Başkent University, Faculty of Health Sciences, Department of Nursing, Ankara, Türkiye
[3]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Critical leg ischemia is a condition in which ischemic rest pain, ischemic skin lesions, and ulcers or gangrene that do not heal for more than 2 weeks are observed as a result of chronic malnutrition of the tissues due to arterial flow deficiency even at rest. The physical and psychological effects of critical legischemia negatively affect patients. These patients have a high risk of mortality and morbidity. The pathophysiological process underlying peripheral artery disease is similar to coronary artery disease and is based on systemic atherosclerosis. Important determinants of the development of peripheral artery disease are age ≥75 years, smoking, diabetes mellitus and arterial hypertension. Medical, surgical and endovascular methods are used in the treatment of these patients. Nursing interventions in peripheral artery disease should primarily focus on primary prevention, including the evaluation and prevention of risk factors. Nurses have important responsibilities in improving the healing process and quality of life of patients through planned nursing interventions during the treatment and care process. The primary responsibilities of nurses are to provide nutritional support to the patient, pain management, local wound care, patient education, infection control, blood sugar control in patients with diabetes, and prevention of complications that may occur due to limitation of movement. Critical leg ischemia can cause secondary wounds, hygiene problems, sleep problems, limitations in sexual life and a decrease in quality of life due to movement restrictions. Nurses can make a significant contribution to the recovery process of patients with holistic nursing care, taking into account the effects of critical leg ischemia on the physical, psychosocial and economic life of patients.

Keywords: Ischemia, peripheral artery disease,nursing care

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NP-005

Determination of intensive care nurses' perceptions of privacy during dressing after femoral popliteal bypass (Fem-Pop) surgery: A qualitative study

Hulya Karaer[1], Merve Sobe[1], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Privacy is defined as "confidentiality", "personal privacy" and has physical, social, psychological and cognitive aspects. In intensive care, where the treatment and care of patients with life-threatening conditions are carried out, prioritizing these processes may lead to violation of privacy. The aim of the study was to examine the perceptions of intensive care nurses regarding patient privacy during the dressing of patients who underwent Femoral Popliteal Bypass Surgery.

Material and Methods: This descriptive, qualitative study was conducted in a foundation university hospital. The sample of the study consisted of 12 nurses who volunteered to participate in the study and who performed the care and treatment of patients who underwent Femoral Popliteal Bypass Surgery in the intensive care unit. Face-to-face interviews were conducted with the nurses and recorded with a voice recorder. "Introductory Information Form" and a semi-structured questionnaire consisting of 8 questions were used to collect the data. The data were analyzed thematically.

Results: Twelve nurses working in the intensive care unit with a mean age of 28.5 years participated in the study. The nurses, most of whom were undergraduate graduates (66.6%), with an average of 8 years of experience in the profession.

In the study, a total of 6 themes were determined as "Definition of Privacy, Nurses' Attitudes Towards Patient Privacy, Practices for the Protection of Patient Privacy, Difficulties Encountered in Protecting Patient Privacy, Violation of Privacy and Its Reflection on the Patient, Practices to Be Done to Increase Patient Privacy" regarding the protection of patient privacy.

Conclusion: Privacy in health care services provided in intensive care units is an important issue that is not sufficiently emphasized. It was determined that nurses were aware of privacy but encountered some obstacles during practices. At the same time, it was determined that their practices, physical characteristics of health institutions and policies to protect patient privacy were inadequate. Therefore, it is thought that more studies are needed on the subject. In order to provide nurses with knowledge, skills and positive attitudes towards privacy, it is necessary to expand the nursing education curriculum, increase in-service trainings and update the procedures in institutions.

Keywords: Privacy, critical care nursing, dressing, qualitative evaluation

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NP-006

Risk factors for the development of pressure injury in patients with peripheral arterial disease

Gulsen Kilic[1], Elif Cal[1], Merve Sobe[1], Hakki Tankut Akay[2]

[1]Başkent University Ankara Hospital, Department of Nursing, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Peripheral arterial disease (PAD) is a progressive and chronic circulatory disorder that develops due to atherosclerosis in the arteries of the extremities as a result of the accumulation of lipid and fibrous substances between the intima and media layers of the vessels. This study was conducted to determine the risk factors of nursing care in the development of pressure injury in patients with peripheral arterial disease.

Material and Methods: The study was retrospective descriptive and consisted of the data of patients diagnosed with Peripheral Arterial Disease hospitalized in the Cardiovascular Surgery Intensive Care Unit of a foundation hospital between July 2020 and July 2023. Patient Identification Form and Braden Risk Assessment Scale were used for data collection.

Results: The mean age of 46 patients was 65.5 years, 73.9% were male, 32.5% had hypertension and diabetes, and 15.6% had coronary artery disease. There was a statistically significant difference ($p<0.05$) between the patients' pressure sore development status and hb values, htc values, duration of intensive care unit stay and Braden Risk Scale scores.

Conclusion: It is thought that lower hb value, htc value, length of stay and braden risk scale score may facilitate pressure sore development.

Keywords: Peripheral arterial disease, nursing, pressure injury

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NP-007

5-year outcomes of patients who underwent femoropopliteal bypass surgery and applied nursing interventions

Sevcan Avci Isik[1], Elif Budak Erturk[1], Hakki Tankut Akay[2], Aysel Abbasoglu[1], Ecem Tugba Yamac[2], Elsat Mansimzade[2]

[1]Başkent University, Faculty of Health Sciences, Department of Nursing, Ankara, Türkiye
[2]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The aim of this study was to determine the early 5-year outcomes of patients underwent femoropopliteal bypass surgery and the nursing interventions implemented. The study's primary outcomes were patency and amputation-free survival rates; secondary outcomes were postoperative complication rates, length of hospital stay, repeat emergency surgery, and unplanned readmission within 30 days.

Material and Methods: This was a retrospective study. It included 68 patients who underwent femoropopliteal bypass surgery in the last 5 years (March 14, 2018-March 14, 2023) at Başkent University Ankara Hospital. Data were collected from the electronic medical records and patient files of the patients included in the sample by reviewing the details of the surgery, postoperative outcomes and nursing interventions, and using a 3-part form prepared by the researchers based on the literature.

Results: The mean age of the patients who participated in the study was 70.01±9.04 years and 82.4% were male. 57.4% of the patients were former smokers, 69.1% had diabetes mellitus, 52.9% had hypertension, and 26.5% had coronary artery disease. In the postoperative period, 14.7% of the patients developed wound infection, 10.3% occlusion and need for blood transfusion, and 7.4% graft thrombosis. The mean duration of hospitalization was 7.13±6.55 (days), 8.8% had unplanned re-hospitalization, 27.9% had re-surgical intervention, and one patient (1.5%) had mortality. In the postoperative period, all patients (100%) underwent all necessary interventions for circulation, pain, bowel function, and bleeding evaluations by nurses. The mean mobilization time of the patients was 0.89±0.30 days. It was determined that 27.9% of the patients were given smoking cessation training by the nurses and 5.9% were given home extremity exercise training.

Conclusion: When the early 5-year outcomes of patients who underwent femoropopliteal bypass surgery and the nursing interventions applied are analyzed, wound infection, occlusion and the need for blood transfusion mostly developed in the postoperative period. The rate of reoperation is high due to complications. All necessary interventions were performed by nurses in the postoperative period, but the rate of smoking cessation education is low.

Keywords: Femoropopliteal bypass, short-term results, nursing care

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NP-008

Evaluation of the effectiveness of the safe surgery checklist in patients undergoing thoracic and abdominal endovascular aortic aneurysm repair

Aylin Gunay[1], Seren Altinkopru[1], Dominique Seri[2], Elshad Mansimzada[2], Hakki Tankut Akay[2], Atila Sezgin[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Medical errors usually occur in the operating room within healthcare organizations and approximately 15% of surgical patients are faced with medical errors. The World Health Organization initiated the -Safe Surgery Saves Lives project in 2008 to bring standards to all countries in surgical procedures. In 2009, surgeons, anesthesiologists, nurses, patient safety specialists and patients came together to create the -Safe Surgery Checklist. In this study, we evaluated the effectiveness of the safe surgical checklist in patients undergoing thoracic and abdominal endovascular aortic aneurysm repair in our intensive care unit.

Material and Methods: This study is a retrospective, descriptive and cross-sectional study. All patients who underwent thoracic and abdominal endovascular aortic aneurysm repair in the Cardiovascular Surgery Intensive Care Unit July 01, 2020 and July 13, 2023 were included in the study. The patient files were evaluated retrospectively. Descriptive characteristics of the patients (personal characteristics, characteristics related to the disease process, use of safe surgery checklist, and development of complications) were recorded in the data collection form. The data were analyzed in the Statistical Package for the Social Sciences (SPSS) 25.0 program.

Results: The study included 29 patients. The mean age of the patients was 70.7±8.6 years and 72.4% were male. EVAR (abdominal endovascular aneurysm repair) was performed in 75.9% and thoracic endovascular aneurysm repair (TEVAR) in 24.1% of the patients. It was observed that 69% of the patients' the Safe Surgery Checklist was completed. It was observed that 62.1% of the patient's schecklist filled out the "Before Leaving the Clinic" section, and the second section was "Before Anesthesia" with 41.4%. There were no problems that could threaten patient safety in all patients.

Conclusion: The implementation of the safe surgical checklist will be effective to prevent situations that threaten patient safety and reduce complications that may develop in patients followed up with thoracic and abdominal endovascular aortic aneurysm repair in intensive care units. In this direction, it is thought that its effectiveness will increase by ensuring the applicability of the protocols included in each step of the safe surgery checklist in institutions.

Keywords: Patient safety, checklist, surgery, effectiveness, aortic aneurysm

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NP-009

Job satisfaction and job stress of nurses working in the field of cardiovascular surgery

Gulcan Kendirkiran[1], Seda Nur Sungur[2]

[1]Haliç University, Faculty of Health Sciences, Department of Nursing, İstanbul, Türkiye
[2]Koç University Hospital, Operating Room, İstanbul, Türkiye

Abstract

Aim: This study was carried out in a descriptive and cross-sectional design to determine the job satisfaction and job stress of nurses working in the field of cardiovascular surgery.

Material and Methods: While the population of the research is 80 nurses working with cardiovascular surgery patients at XX University Hospital, the sample is; The population of the study consisted of 66 nurses calculated with the known sampling method. The study covers the dates 26.06.2023-10.09.2023, and the data of the study were collected face to face with Personal Information Form, Nurse Job Satisfaction Scale and Perceived Job Stress Scale, following the approval of the ethics committee and the institution.

Results: The mean age of the subjects 27.69±4.31 (years), 78.8% were female, 72.7% were single, 66.7% had a bachelor's degree, 83.3% chose the profession willingly, 63.6%' It was determined that most of them were satisfied with their profession and 56.1% of them had been working for ≥5 years. Among those who stated that they were satisfied with their profession, the mean scores of positive emotions related to work were significantly higher ($p<0.05$). As a result of the Backward: LR logistic regression analysis; it has been determined that the way of working is an important parameter that affects the stress situation that will have a negative impact on health ($p<0.05$). A negative, weak, and statistically significant relationship was found between the scale of perceived work stress and the perceived importance at work, pleasant working environment, and HRQo-General scores ($p<0.05$).

Conclusion: Cardiovascular surgery is an area where nurses need to follow the patient closely in the service and intensive care processes, and there are long-lasting surgeries in the operating room processes. Nurses may experience changes in stress or job satisfaction due to intense work tempo. However, as the results of the study show, as the perceived importance, pleasant working environment, and job satisfaction of nurses increase, the perceived job stress tends to decrease. For this reason, practices that can provide nurses' job satisfaction and reduce work stress are required in order to reduce the negative effects of intense work tempo and risky situations.

Keywords: Nurse, job satisfaction, job stress, cardiovascular surgery

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NP-010

The effect of peripheral pulse monitoring and nursing care against possible complications in patients used with intraaortic balloon pump

Ebru Azan, Suheyla Karakaya

Ankara Etlik City Hospital, Department of Cardiovascular Surgey, Ankara, Türkiye

Abstract

Aim: Intraaortic Balloon Pump (IABP) is a mechanical support device widely used in acute left ventricular failure, cardiogenic shock, valvular diseases, persistent chest pain, papillary muscle rupture, ventricular septal defects, mitral regurgitation, acute myocardial infarction complications and bypass surgery. Purpose of use;To increase oxygen delivery to the myocardium, reduce left ventricular workload and increase cardiac output. In our study, we aimed to discuss the importance of peripheral pulse monitoring and nursing care in order to prevent complications that may develop in patients who received IABP in our clinic.
Material and Methods: 61 patients (Male: 83.6%, Female: 16.4%) who had IABP i nserted in our clinic between October 2022 and September 2023 were retrospectively examined. The average age is 64.
Results: The most common complications in patients with IABP implantation are; embolism, ischemia, hematoma and vascular rupture. In addition, insufficiency in tissue perfusion due to ventricular dysfunction, mental status disorders, decrease in cardiac output, unregulated blood pressure and catheter infections can also be observed. In 3 (4.9%) of the patients who had IABP inserted in our clinic, peripheral ischemia was detected in the initial period by hourly peripheral pulse monitoring and the catheter location was changed.
Conclusion: It is necessary to monitor the patient with IABP for limb ischemia. For these purposes, it is of great importance to regularly evaluate peripheral distal pulses and pulse fullness, and to control color, temperature, pain, loss of movement, numbness, infection and capillary refill time in the extremities. In cases where the pulse cannot be felt manually in the extremity where the catheter is placed, it should be checked with a Doopler. In patients; monitoring of vital signs, monitoring of bleeding, use of anticoagulants such as heparin infusion, monitoring of mental status changes and blood parameters (Aptt, act etc.), in-bed mobilization,avoiding flexion of the extremities, catheter dressing and care, evaluation of signs and symptoms of infection, evaluation of possible are important factors in complications prevention. In our clinic, hourly peripheral pulse monitoring is done on nurse observation forms in patients who have IABP implanted. In this way, we believe that complications can be prevented by detecting anomalies that may occur in the periphery at an early stage.

Keywords: Peripheral pulse, nursing care, intraaortic balloon pump, ischemia, complication

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NP-011

Our nursing experiences and responsibilities in carotid surgery

Ayla Aksoy[1], Nurcan Asci[1], Ilker Hasan Karal[2], Emrah Ereren[2], Huseyin Agirbas[1], Askin Kilic[2], Serdar Menekse[1], Gokhan Lafci[3]

[1]Samsun Education and Research Hospital, Department of Cardiovascular Surgery, Samsun, Türkiye
[2]Samsun University, Faculty of Medicine, Department of Cardiovascular Surgery, Samsun,Türkiye
[3]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: In this article, we aimed to share our operating room nursing responsibilities and experiences in our carotid surgery practies.
Material and Methods: In our clinic, carotid endarterectomy and patchplasty are performed on symptomatic (dizziness, fainting) 50%, asymptomatic patients with %70 or more stenosis.All cases are operated on under general anesthesia.In all patients, the common carotid artery,internal carotid artery and external carotid artery on the side where the intervention will be performed are suspended.. After heparin administration, the carotid arteries are clamped with a cross clamp, the average cross clamp time is 25 to 42 minutes. The atheroma plague is removed from the common carotid artery.Afterwards,the inside of the vein cleaned.The incision line is closed with saphenous vein patch plasty with 7.0 prolene suture.
Results: Perioperative nurses,who are members of the multidisciplinary team, must have sufficient knowledge and skills about vascular surgery.In addition, it is important for nurses to have basic knowledge, skills and experience about catheters, sutures, grafts and surgical instruments used in vascular surgery,in terms of teamwork.
Conclusion: Ensuring patient safety, supplying the materials used, keeping records and ensuring that all these processes are carried out under aseptic conditions must be ensured.

Keywords: Carotid artery, surgery, surgeon, operating room nursing

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NP-012

The importance of nursing care in preventing complications of brachial artery catheterization

Seda Alabas, Berfin Tugrul, Durdane Senol

Ankara Etlik City Hospital, Department of Cardiovascular Surgey, Ankara, Türkiye

Abstract

Aim: Invasive blood pressure measurement is one of the most valuable parameters used to see the function and efficiency of the cardiovascular system. Arterial catheterization is frequently used to monitor patients in intensive care units. Although it is not usually the first choice, the brachial artery is also used for arterial blood pressure monitoring. Due to the lack of alternative circulation, close monitoring is required to prevent possible ischemic complications. In this study, we aimed to understand the nurse's role in the follow-up of complications of brachial artery catheterization.

Material and Methods: We followed 48 patients who underwent brachial artery catheterization in the Cardiovascular Surgery Intensive Care Unit of Ankara Etlik City Hospital between January 2023 and September 2023. The catheterized extremity was examined for pain, edema, distal pulse, sensations, coldness, pallor, and cyanosis. Hourly pulse monitoring was provided via both the ulnar artery and radial artery. The arterial catheter line was flushed with heparin fluid regularly to prevent thrombosis.

Results: The average duration of brachial catheter stay was 32 hours. No decrease or disappearance of distal pulses was observed in any patients. A feeling of numbness in the hand was reported in 4 patients, and pain in the forearm and hand was reported in 6 patients. Their extremities were warm and pink. There was no swelling or hematoma in the intervention area. In 3 patients, the catheter was removed because of a color change in the intervention area. In these patients, peripheral tissue perfusion was monitored frequently, and no ischemia occurred.

Conclusion: Although brachial artery cannulation is not the first choice for invasive arterial monitoring, it can be used in cases of necessity. It can be cannulated more quickly than the femoral artery due to its easy access. In this study, the importance of immediate nursing care and follow-up was understood in preventing complications related to brachial artery cannulation by ensuring early removal of the catheter in cases such as pain, coldness in the extremities, edema, and hematoma.

Keywords: Catheterization, brachial artery, nursing

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NP-013

Contribution of effective pain management to the treatment process in the intensive care nursing process in peripheral artery disease (PAD)

Suheyla Karakaya, Ebru Azan

Ankara Etlik City Hospital, Department of Cardiovascular Surgey, Ankara, Türkiye

Abstract

Aim: Peripheral artery disease (PAD); It is a chronic circulatory disorder manifested by narrowing or occlusion in the distal aorta, iliac artery, femoral artery, popliteal artery or more distal arteries as a result of progressive atherosclerosis. In patients with peripheral artery disease, severe pain is observed in the affected extremity due to circulatory impairment. Pain is constant and very difficult to prevent. Pain symptoms harm the individual's well-being and affect their functional capacity by causing them to remain immobile, feel tired, weak and hopeless, give up social activities, and fear amputation. In this study, we aimed to discuss the importance of pain control in peripheral artery patients and its contribution to the treatment process.

Material and Methods: A total of 98 patients who received inpatient pain management with a diagnosis of PAD in our clinic between October 2022 and September 2023 were retrospectively examined. 81.63% of these patients are male and 18.36% are female. The average age is 65.58.

Results: Patients hospitalized with a diagnosis of PAD in our clinic have problems complying with treatment because they experience anxiety due to severe pain and fear of losing their limbs.Pain management in these patients was provided by pharmacological (opioid and non-opioid analgesics) and non-pharmacological methods (such as appropriate positioning of the extremities, keeping the extremities warm). Necessary explanations were made about the beginning of the treatment process of the patients who received pain control and that there would be recovery if they adapted to this process, and the patient's concerns were resolved and participation in the treatment was ensured.

Conclusion: It has been observed that the quality of life of patients whose pain is reduced and stopped by applying pharmacological and non-pharmacological methods is increased, the duration of hospital stay is shortened, the anxiety of patients who are told that they will recover is reduced, and their participation and compliance with the treatment is better.

Keywords: Peripheral artery disease, pain, patient

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NP-014

Nursing follow-up and care to prevent the development of arterial pseudoaneurysm after vascular interventions

Seda Alabas, Berfin Tugrul, Durdane Senol

Ankara Etlik City Hospital, Department of Cardiovascular Surgey, Ankara, Türkiye

Abstract

Aim: Arterial interventions may cause some pathologies by disrupting the integrity of vascular structures, such as arterial pseudoaneurysms during cardiovascular surgery. This study aims to reveal the factors that may cause the development of arterial pseudoaneurysm after invasive interventions and how they should be followed up

Material and Methods: One hundred twenty-five consecutive patients who underwent various cardiovascular surgery interventions and received invasive femoral arterial monitoring were followed up and included in the study. Demographic data of the patients, additional diseases, medications used, blood pressure before and after the procedures, bleeding profiles, length of stay of the catheters, and drugs used were recorded. In addition to the patient's vital signs, the areas with arterial catheters were closely monitored, and whether distal pulses could be detected or not were recorded.

Results: Femoral artery pseudoaneurysm developed in 2 of 125 patients despite appropriate dressing and close follow-up. Although there were no circulation problems distal to the aneurysm in these patients, pain and swelling in the femoral artery localization occurred. These two patients who developed pseudoaneurysms had serious blood pressure control problems, and it was known that they were patients with hypertensive attacks despite appropriate antihypertensive treatment in the preoperative period. In other patients, pseudoaneurysm development could be prevented by close dressing monitoring, pressure dressing, and keeping arterial blood pressure within appropriate ranges.

Conclusion: This study showed the importance of regular blood pressure monitoring and wound site control after arterial catheterization. Nurse care and follow-up are very effective in preventing the development of pseudoaneurysms. As a result of follow-up and maintenance, the risk of pseudoaneurysm formation in patients is minimized. Of the 125 patients followed, pseudoaneurysm developed in only two patients with close nursing care and follow-up, and this condition could be controlled in the other 123 patients.

Keywords: Arterial catheterization, blood pressure monitoring, pseudoaneurysm, dressing and wound control, nursing

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NP-015

Investigation of knowledge Levels of nurses working in surgical clinics about venous thromboembolism

Aylin Gunay[1], Gizem Goktas[1], Merve Fettahoglu[1], Ziyafet Ugurlu[2], Ecem Tugba Yamac[3], Hakki Tankut Akay[3]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University, Faculty of Health Sciences, Department of Nursing, Ankara, Türkiye
[3]Başkent University Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Venous thromboembolism (VTE) is a preventable condition that is a serious cause of hospital mortality and morbidity. The incidence of VTE in individuals in the general population is between 0.75-2.69 per 1000. Nurses play an important role in VTE prophylaxis to improve patient outcomes. It is of great importance to evaluate the knowledge of nurses on this subject and to develop needs-specific training programs. In this study, it is aimed to examine the level of knowledge of nurses working in surgical clinics about venous thromboembolism.

Material and Methods: This descriptive study was conducted with nurses working in the surgical clinics of Baskent University Ankara Hospital between August 15, 2023 and September 15, 2023. There are 169 nurses working in the surgical clinics. The data were collected face-to-face using a data collection form, which included descriptive characteristics and information statements about venous thromboembolism. Statistical evaluations were made with the SPSS statistical program.

Results: The mean age of the participants was 27.06±5.4 years, 83.6% were female and 55.2% were undergraduate graduates. 37.1% of the participants had 5 years or more experience 63.8% of the employees worked in the service and 36.2% in the intensive care unit. 67.5% of the employees stated that there was an application, 28.4% stated that there were antiembolic stockings, and 47.4% stated that they received this information in school education. 55% of the employees found the information they received sufficient and 82.4% of them wanted to receive more information. The rate of correct answers (over 90%) to the statements related to venous thromboembolism risks, preventive measures, early mobilization, foot exercises, symptoms of venous thromboembolism directed to nurses working in surgical clinics was high. The rate of correct answers (below 60%) for the statements regarding the complications of venous thromboembolism, pharmacologic methods and the use of pressurized elastic stockings was high.

Conclusion: Nurses who received training on venous thromboembolism were more successful, and it is thought that continuing the training of all healthcare professionals working in these areas by renewing it regularly at regular intervals will reduce the risk of venous thromboembolism.

Keywords: Venous thromboembolism, nursing, knowledge

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NP-016

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Başkent University

Sevcan Avci Isik[1], Elif Budak Erturk[1], Hakki Tankut Akay[2], Azize Karahan[1], Denizhan Akpinar[2], Okay Karslioglu[2]

[1]Başkent University, Faculty of Health Sciences, Nursing Department, Ankara, Türkiye
[2]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The aim of this study was to determine the risk factors of venous insufficiency according to demographic characteristics in nurses working in a foundation university hospital.

Material and Methods: The study was a descriptive cross-sectional study. A total of 100 nurses working at Başkent University Ankara Hospital constituted the sample. Demographic characteristics of nurses and venous insufficiency risk factors determination form, Epidemiologic and Economic Study in Venous Insufficiency-Quality of Life Questionnaire (VEINES-QOL) and CEAP classification form were used for data collection. A physical examination was performed by a cardiovascular surgeon using a Doppler ultrasound to check the presence and density of varicose veins and the result was recorded on the CEAP form. In addition, circumferences below the knee and above the ankle were measured from both lower extremities of the participants.

Results: The mean age of the nurses participating in the study was 31.14±8.12 years, 84% were female. Of the nurses, 38% worked in the service, the mean duration of practice was 9.5±8.2 years, and they worked overtime for an average of 7.08±9.02 hours per week. Of the nurses, 52% stated that they walked more than 6 hours a day and 51% stated that they sat for less than 2 hours. The mean body mass index of the nurses was 24.06±4.0, 42% were smokers, 18% had a chronic disease, and 38% had someone in their family diagnosed with venous insufficiency. It was determined that 48% of the nurses were in the C1 CEAP classification. The mean circumference below the knee of the nurses was 36.01±3.71 on the right and 36.05±3.76 on the left; the mean ankle circumference was 24.76±2.72 on the right and 24.72±2.82 on the left. The mean VEINES-QOL of the nurses was 78.26±13.70.

Conclusion: Considering the findings obtained from the study, it was determined that the majority of nurses had telangiectasia or reticular veins (C1) according to physical examination and doppler ultrasound results. The main risk factors for venous insufficiency in nurses were smoking, having a family member diagnosed with venous insufficiency, not exercising regularly, working long hours per day and standing for a long time.

Keywords: Venous insufficiency, nurse, risk factors

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NP-017

Analysis of prevalence, incidence, risk factors and general characteristics of chronic venous insufficiency in nurses; Ankara Bilkent City Hospital

Yesim Aslan, Soner Yavas, Emrah Uguz

Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Chronic venous insufficiency develops due to inadequate functioning of venous wall and/or valves in lower limb veins. This situation results in leg symptoms due to pooling of blood and venous hypertension. Our study aimed to determine the prevalence, incidence and general characteristics of chronic venous insufficiency in nurses working in our hospital.

Material and Methods: Nurses working in various clinics in our hospital were included in the study. The symptoms of the individuals and their effects on daily activities, working hours, previous treatments, and their status according to the CEAP classification were investigated.

Results: 100 nurses (85 women, 15 men) were included in the study. The average age was 34.0±8.9 (range 24-52 years), working years 12.1±10.22 (range 1-33 years). It was determined that the average daily standing time was 2-4 hours for 4 nurses, 4-6 hours for 11 nurses, and 6 hours or more for 85 nurses. Evaluation was made on a total of 9 different symptoms. Out of 100 nurses, 70 had sensation of swellng, 89 had pain, 74 had swelling, 59 had night cramps, 48 had sensation of burning, 62 had restless legs, 66 had throbbing, 46 had itching, and 56 had sensation of pins and needles. The average number of symptoms was found to be 5.7±2.8 per person. On physical examination, according to the CEAP classification, C0 lesions were detected in 47 nurses, C1 lesions in 24 nurses, C2 lesions in 17 nurses, C3 lesions in 9 nurses and C4a lesions in 3 nurses. Daily activities were observed to be disrupted in 69 nurses. It was determined that only 24 of 96 nurses with symptoms and only 1 of 4 nurses without symptoms had been diagnosed before, 7 of whom received drug treatment, 4 compression therapy, 1 sclerotherapy, 6 surgical treatments and 7 no treatment.

Conclusion: Chronic venous insufficiency is a common finding among nurses and is a disease that reduces both the quality of life and work. Although this disease is common, it seems that the majority of nurses do not care enough about diagnosis and treatment.

Keywords: Chronic venous insufficiency, incidence, demographic features, nurse

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NP-018

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Bursa Yüksek İhtisas Training and Research Hospital results

Durgadin Selcuk, Kadir Kaan Ozsin, Senol Yavuz

University of Health Science, Bursa Yüksek İhtisas Training and Research Hospital, Department of Cardiovascular Surgery, Bursa, Türkiye

Abstract

Aim: Chronic venous insufficiency is an important clinical condition with a high prevalence that reduces the patient's quality of life. Age, gender, family history, obesity, pregnancy and jobs that require long sitting or standing have been identified as risk factors. In this survey study, we aimed to examine venous insufficiency and its clinical symptoms among nurses.

Material and Methods: This survey was conducted with 106 nurses over the age of 18 between May-2023 and June-2023. Demographic data and CEAP venous insufficiency classifications of the participants were recorded. Professional duration, daily working hours and venous insufficiency symptoms were questioned. The obtained data were analyzed.

Results: Of the respondents 87 (82.1%) were women and 19 (17.9%) were men and the average age was 33.3. The average working time was 11.7 years and the average standing time was 3.7 hours. 35 (33%) of the participants had a family history. Pain was detected in 72.6% of the respondents, swelling and throbbing in 50%, a feeling of fullness in 45.3%, burning sensation and restlessness in 35.8%, night cramps in 33.9% and itching symptoms in 24.5%. While symptoms increased in 53.8% of the participants compared to a year ago, 67.9% had an increase in the severity of symptoms in the last month. 33.9% participants were worried about their leg appearance. 42 (39.6%) of the participants were recorded as CEAP-0, 42 (39.6%) as CEAP-1, 13 (12.2%) as CEAP-2 and 9 (8.5%) as CEAP-3. Although approximately 80% of the nurses surveyed were in CEAP stages 0 and 1, we detected the main symptoms of venous insufficiency in more than half of the participants, and mostly the symptoms were at the end of the day. Additionally, symptoms were increasing in more than half of the participants compared to a year ago.

Conclusion: We found that venous insufficiency symptoms are common among nurses, regardless of clinical classification. We think that this situation depends mostly on the time spent in the profession and active standing hours.

Keywords: Venous insufficiency, nurses, symptoms

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NP-019

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Erzurum City Hospital

Tugce Dalbay, Ziya Yildiz, Mevriye Serpil Diler, Taha Ozkara, Husnu Kamil Limandal, Hatice Isil Dayi, Taha Guzel, Abdulselam Karaduman, Ozgur Dag, Mehmet Ali Kaygin

Erzurum City Hospital, Department of Cardiovascular Surgery, Erzurum, Türkiye

Abstract

Aim: This study aimed to determine the prevalence of venous insufficiency in nurses and identifying risk factors for venous insufficiency.

Material and Methods: 100 nurses working at Erzurum City Hospital and who agreed to provide data voluntarily participated in the study, which was planned as a descriptive and correlational study. Study data were collected by face-to-face interviews with nurses in June 2023, after obtaining the necessary institutional and ethics committee permissions. The Diagnostic Information Form, consisting of 17 questions, and the Venous Insufficiency Epidemiologic and Economic Study Quality-of-Life Questionnaire (VEINES-QOL), consisting of 8 questions, were used in the study. The collected data were analyzed in the SPSS 11.

Results: As a result of the analysis, the ages of the nurses participating in the study ranged between 23 and 58, and 77% were women, 32% were smokers, 44% worked in the clinic, 32% in the intensive care unit, and 24% in the operating room, 84% of them stayed up for 6 hours or more. Additionally, the relationship between the risk of venous insufficiency and gender was not significant; It was determined that there was a significant relationship between the unit worked, age, genetic predisposition and the hours worked standing.

Conclusion: It has been determined that nurses working in the operating room have a higher risk of venous insufficiency than nurses working in other units, and the risk of venous insufficiency is associated with advanced age and increased standing time.

Keywords: Venous diseases, venous insufficiency, nursing

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NP-020

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; İstanbul Bakırköy Dr. Sadi Konuk Education and Research Hospital

Ali Aycan Kavala, Selim Tumkaya, Merve Onal

İstanbul Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Chronic venous insufficiency is a condition resulting from obstruction, valve insufficiency, muscle pump dysfunction, or a combination of these. The nursing profession is stated as a risky occupational group in terms of chronic venous insufficiency, as it requires working standing for long periods of time. Chronic venous insufficiency affects nurses' quality of life and reduces their work performance. This situation causes disruption of health care services. In the study with a descriptive design, İstanbul Bakırköy Dr. It was aimed to examine the risk factors and demographic characteristics of venous insufficiency in nurses working at Sadi Konuk Training and Research Hospital.

Material and Methods: The sample of the research was conducted by İstanbul Bakırköy Dr. It consisted of 100 nurses (n=100) working at Sadi Konuk Training and Research Hospital. Research data were collected using the nurses' demographic characteristics and venous insufficiency risk factors determination form, the Epidemiological and Economic Work-Quality of Life Survey in Venous Insufficiency, and the Standard CEAP form section C to determine the level of venous insufficiency. In data analysis; Descriptive statistical methods (number, percentage, mean, standard deviation and median), chi-square test and logistic regression analysis were used. The data were considered significant within the 95% confidence interval ($p<0.05$).

Results: It was determined that the average age of the nurses participating in the study was 30.26 (minimum 23, maximum 59) and 81% were women. In addition, it was determined that the average number of working years of nurses was 7.93 and 42% of them worked in inpatient clinics. According to the CEAP classification, 44% of the nurses were found to have telangiectasia or reticular veins and 54% did not show any signs of venous disease.

Conclusion: As a result, it was found that the percentage of chronic venous insufficiency in nurses was quite high. In line with the findings obtained as a result of the research; It is recommended that nurses use compression stockings for protective purposes, exercise regularly, avoid habits such as smoking and alcohol, and create appropriate training environments where they can take these precautions in clinical practice.

Keywords: Nurse, chronic venous insufficiency, nursing care

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NP-021

Chronic venous disease in health professionals: NUEVO-TR data from İstanbul Bağcılar Research and Training Hospital

Miraç Karabiber[1], Adil Polat[2]

[1]Giresun University, Giresun Research and Training Hospital, Cardiovascular Intensive Care Unit, Giresun, Türkiye
[2]İstanbul Bağcılar Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Chronic venous disease (CVD) is found in 5 of 1000 people in adult population. CVD is an important health problem causing marked cost in diagnosis and treatment, loss of labor and its socioeconomic consequences. Most cases occur due to valvular failure, obstruction or ineffective muscular pump. Clinical picture is a broad spectrum with multifactorial background. Patients may be presented with simple reticular veins or telengiectasias and up to severe skin changes or ulcerations. CVD significantly affects life quality. NUEVO-TR was designed to evaluate the healthcare professionals for CVD incidence. Herein, we would like to present the Bağcılar Research and Training Hospital data.
Material and Methods: Surveys were conducted with direct questioning by the research nurse. The diagnoses were made by the physician. The first part of the form consisted of the demographic data and the second part of the epidemiologic and economic working-life quality questionnaire.
Results: Total of 100 nurses volunteered for the study. 34% were male and 66% female. The average age of the volunteers was 29.25 years and the average working duration was 6.95 years. 86% of the volunteers did not have a known CVD while 14% had a previous diagnosis. 54% cases had family history for CVD. Any leg pain in the previous 4 weeks was not present in 11%, very mild in 16%, mild in 13%, moderate in 40%, severe in 19% and very severe in 1%. At physical examination 59% had no visible or palpable CVD signs. In 35% of the volunteers telengiectasias or reticular veins were detected and in 6% varicose veins were found.
Conclusion: In conclusion, healthcare professionals constitute a risk group for CVD. In order to prevent the symptoms and to increase the life quality, the risk groups should be educated for life style changes from the early stages of the disease.

Keywords: Chronic venous insuffiency, insidence, risk factors

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NP-022

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Ankara University

Kiymet Kaplan Yucel, Evren Ozcinar, Sevinc Itir, Mustafa Sirlak, Levent Yazicioglu

Ankara University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Chronic insufficiency is a world wide disease. As an occupational disorder, the disease also affect the nurses in cardiovascular surgery departments. The aim of the study is assessment of risk factors and demographic features of the disease in the nurses at the cardiovascular surgery department.
Material and Methods: We evaluate the nurses working in cardiovascular surgery department. Face to face questinnaire is planned.
Results: 38 nurses were examined. Most of the nurses have faced with the symptoms of chronic venous disease.
Conclusion: Cardiovascular surgery departments are tough clinics and the workers in these clinics may be affected by this conditions.

Keywords: Chronic venous disease, nurses, cardiovascular surgery

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NP-023

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Adana City Training and Research Hospital

Suat Karaca

Adana City Training and Research Hospital, Department of Cardiovascular Surgery, Adana, Türkiye

Abstract

Aim: Chronic venous insufficiency (CVI) causes severe symptoms and complications in the adult population with the prevalence of %14.5 to %16,but the prevalence, related risks factors of CVI are unknown among nurses. The demographics and occupational factors of nurses at Adana City Training and Research Hospital were collected by questionnaires A total of 101 participants were enrolled and our study was aimed to show a relationship between long standing time, and venous insufficiency in nurses.
Material and Methods: According to this survey study; age, gender, years at professional area, working unit and CEAP classifications were noted.
Results: Nurses participating to the study 62% were female and 38% were male. Mean age was 37±2, mean active working year 16±1. 45% of the nurses working in the operating room, 34% were in the intensive care unit and 21% were in the services. Total prevalence of CVI was 38.6% and nurses have related to CEAP 1 36.6% and only 2 of the nurses had CEAP 2. Standing time in operating room workers was 6 hours and over. Nurses working at operating room had higher incidence of CVI (65%). Only 11.8% of total nurses received compression therapy.
Conclusion: Long standing time causes venous insufficiency in healthcare professionals. It can be beneficial for nurses to spend less time standing.Operating room workers are closer to develop venous insufficiency. Wearing compression stockings with the sufficient pressure and resting for enough time was recommended for CVI symptom relief.

Keywords: Chronic venosu insufficiency, compression stocking, nurses, prevalence, risk factors, venous insufficiency

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NP-024

Analysis of venous insufficiency risk factors and demographic characteristics in nurses: Konya

Omer Tanyeli, Ozge Ozcan

Necmettin Erbakan University, Medicine Faculty, Department of Cardiovascular Surgery, Konya, Türkiye

Abstract

Aim: This study aims to analyze the incidence and risk factors of venous insufficicency in nurses and was conducted on 100 nurses working at Konya Necmettin Erbakan University Hospital, as part of a national survey.
Results: Demographically 82% of the nurses were women,with average age of 36.5 yo (ranging 23-55 yo). Their average height was 164.8 cm (ranging between 155-185cm). The average weight was 70 kg (45-105 kg) and BMI was 25.6 kg/m^2 (16.3-41.9 kg/m^2). In the study group, 43% of female nurses have had two or more pregnancies and 40% have given birth two or more times. The average working years of nurses was 14.7 years (1-36 years) and 87% of nurses stay on their feet for at least 6 hours. In the study, 31% were smokers and 16% of nurses have been diagnosed with varicose veins before. When nurses were asked about the frequency of problems with their legs, 21% reported feeling fullness in their legs, and 35% experienced pain every day, 17% experienced night cramps every few weeks, and 16% reported feeling hot or burning every day. 18% experienced discomfort in their legs every day, and 18% experienced it every day. When the outpatient clinic numbers were analyzed 0.42% of the general population (4277/1009018) had the diagnosis of chronic venous insufficiency. When classified according to CEAP ranking, only 39% of nurses were in C0. Most of the nurses were in C1 (47%). About 14% were in C2 and C3. Symptomatically nurses noted that their leg problems were most severe at the end of the day (58%), and were slightly worse when compared a year ago (42%).
Conclusion: This study represents the higher incidence of symptomatic varicose veins in nurses when compared to normal population, and as with heavy working conditions and comorbidities, is seen more commonly with total working years.

Keywords: Chronic venous insufficiency, nurses, clinical-etiology-anatomy-pathophysiology

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NP-025

Analysis of prevalence, incidence and general characteristics of venous insufficiency and varicose veins in İzmir Atatürk Training and Research Hospital Nurses

Ayse Cetin, Ismail Yurekli

İzmir Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: The nursing profession is stated as a risky occupational group in terms of chronic venous insufficiency, as it requires working standing for long periods of time. This research was conducted to determine the extent to which signs and symptoms of venous insufficiency are observed in the nurses of our hospital.

Material and Methods: The research was planned in accordance with the cross-sectional and descriptive research type. The sample group consisted of 65 nurses working at IATRH. Two questionnaires were used; one for identification of demographic characteristics and one for quality of life (VEINES-QOL/Sym). The numerical data were expressed either as mean or percentage.

Results: The ages of the nurses included in the research vary between 23 and 55, and the mean age is 35.86±9.67. Females consisted 84.6% of the research group whereas 15.4% were male. Mean BMI was 23.17±3.89kg/m^2. Of these, 75.4% did not exercise, 96.9% didn't have pes planus, and 90.8% had regular bowel habits. 83.1% of the research group had not been diagnosed with varicose veins before, 76.9% have no family history of varicose veins. Most common symptom was plethora and pain in legs (33.7%). While there is no visible or palpable finding in terms of venous disease in the majority, 35.4% of them were classified as telangiectasia or reticular veins.

Conclusion: The results of this study may help identify risk factors and demographic characteristics that may lead to developing venous insufficiency in nurses. These findings can be used to identify potential lifestyle changes that nurses can make to reduce or prevent venous insufficiency. Additionally, it may contribute to the development of venous insufficiency prevention and treatment strategies by allowing current working nurses to be screened early for this problem.

Keywords: Varicose vein, prevalance, venous insufficiency

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NP-026

Investigation of the quality of life of health professionals

Gulver Hacioglu, Emrah Oguz, Tanzer Calkavur, Mustafa Ozbaran

Ege University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Health professionals suffer from Chronic Venous Disease (CVD) due to intense stressful working conditions. is at high risk. CVD, ranging from varicose veins to ulcers, is an important health problem in our country as well as in the world in terms of cost, loss of workforce and quality of life.

Material and Methods: The VEINES-Q0R/Sym quality of life survey, consisting of 23 questions, was administered face to face to healthcare professionals working at risk for CVD at Ege University Cardiovascular Surgery between 1 June 2023 and 31 August 2023.

Results: The study group consisted of 101 people, 29.7% male and 70.3% female, with a median age of 35.6% (25-57). When demographic data and risk factors are examined; Body mass index (BMI) of 25 and above is 41.6% of health professionals, and the rate of women giving birth is 33.6%. The rate of family history of CVD is 35.6% and the rate of smoking is 35.6%. When quality of life data is evaluated; The rate of standing for 6 hours or more was stated as 78.2%, and increasing problems in the leg in the last 4 weeks were stated as 57.4%. Additionally, when pain was evaluated, it was found that 56.4% described the presence of gradually increasing pain, while 86.1% were affected every day and 54.4% were found to have a negative impact on their social activities.

Conclusion: High body mass index, having given birth and the presence of pain negatively affect the quality of life in healthcare professionals. Reducing symptoms will positively affect the quality of life. Changing the lifestyle, compression socks, physical movements and changing the lifestyle will make a positive contribution.

Keywords: Chronic venous disease, nurse, incidence

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NP-027

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Education Research Hospital

Asiye Tufekci, Ugur Kisa, Cevdet Ugur Kocogullari

Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Education Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Varicose veins, which is a manifestation of chronic venous insufficiency, is an important health problem with its high prevalence, significant loss of labor force, negative effects on quality of life, and epidemiologic and socioeconomic consequences. The nursing profession is considered a risky occupational group in terms of chronic venous insufficiency because it requires prolonged standing work. This study was planned to analyze the risk factors and demographic characteristics of venous insufficiency in nurses working in our hospital.

Material and Methods: The study was conducted between June 1, 2023 and August 31, 2023 with 117 nurses working under the MoHHM who agreed to participate in the study. This descriptive, prospective study was carried out using the demographic characteristics of the nurses and the form for determining venous insufficiency risk factors, the Epidemiologic and Economic Study on Venous Insufficiency - Quality of Life Questionnaire (VEINES-QOL/Sym) and the Standard CEAP form for determining the level of venous insufficiency. Approximately 10 minutes was given to complete these forms. Then, part C of the standard CEAP form was completed by the physician. Data were evaluated in SPSS package program.

Results: Among the nurses who participated in the study, 55.6% were working in intensive care unit and 49.6% of them had been working between 1-5 years. It was found that 70.1% of our nurses' Body Mass Indexes were in the normal range and that they did not exercise regularly in daily life and that they stood for 6 hours or more when they came to work. When the working quality of life was examined, although the undiagnosed group was high, they stated that they had recently experienced pain, fullness and throbbing in the legs and that they usually experienced this at the end of the day. This was found to slightly affect their activities of daily living. According to CEAP screening, 62.4% had no visible or palpable signs of venous disease.

Conclusion: Although nurses express their complaints in terms of varicose veins symptoms, their diagnosis rates are low. Considering the fact that nurses are young and dynamic and have few working years, it should be emphasized that they should take measures to prevent varicose veins in the early period, not stand for too long, use compression stockings, exercise, and elevate their legs. It is recommended to improve the working conditions for nurses to work in ergonomic conditions.

Keywords: Varicose veins, varicose veins symptoms, nursing

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NP-028

Analysis of venous insufficiency risk factorsand demographic characteristics in nurses; Ahi Evren Thoracic and Cardiovascular Surgery Training and Research Hospital

Oznur Gumrukcuoglu, Suna Caglar, Sefer Usta

Ahi Evren Thoracic and Cardiovascular Surgery Training and Research Hospital, Trabzon, Türkiye

Abstract

Aim: Although the exact causes of venous insufficiency are unknown; It is stated that family history, gender, age, occupation, obesity, pregnancy, trauma and infections are etiological factors that play a role in the formation of venous insufficiency. There are few studies on venous insufficiency complaints in nurses in our country. This research aims to determine the venous insufficiency development status of nurses and related factors. has been made.

Material and Methods: 100 volunteer nurses working at Trabzon Ahi Evren Hospital, Thoracic and Cardiovascular Surgery E.A. Hospital participated in the study. A survey form prepared by the researchers, consisting of 15 questions regarding the nurses' introductory characteristics, health history, working conditions, family history and venous insufficiency diagnoses, was used to collect the data. FisherExact Test, Pearson Chi-square and Mann Whitney U tests were used for statistical analysis of the data.

Results: 82% of the nurses participating in the study were women and 18% were men. The average age was obtained as 37.4±7.46. 73% of the nurses were diagnosed with venous insufficiency, and 88% of those diagnosed received treatment for venous insufficiency. Additionally, 20% have an accompanying comorbidity. When the unit where they work is evaluated, it is seen that the majority of them work in intensive care (48%), and the group whose daily standing time is 6 hours or more is more common (83%). Additionally, it was found that the majority of them do not exercise regularly on a weekly basis (73%) and 30% smoke.

Conclusion: Variables such as family history, bowel movements, and foot sole characteristics were found to be associated with venous insufficiency in nurses ($p<0.05$). In addition, a statistically significant difference was obtained between the average ages of nurses diagnosed with venous insufficiency and those without ($p<005$).

Keywords: Chronic ınsufficieny, nurse, venous ınsufficiency

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NP-029

Analysis of venous insufficiency risk factors and demographic characteristics in nurses; Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training Research Hospital

Dilek Korkmaz, Unal Aydin

Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The aim of the research is to examine the incidence of venous insufficiency and the affecting risk factors in the nurses of Health Sciences University İstanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital.
Material and Methods: This study was carried out with 93 nurses working in different units such as service, intensive care, operating room and emergency room of the University of Health Sciences İstanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, who met the inclusion criteria and participated in the study voluntarily. in the study. In collecting data, survey questions prepared with the "Socio-demographic information form" and the "Epidemiological and Economic Work-Life Quality Survey in Venous Insufficiency" were directed to the participants face to face.
Results: It has been determined that the majority of nurses work standing for more than 6 hours a day in units such as service, intensive care, operating room and emergency department. When the time spent in working life is evaluated together with demographic characteristics and other risk factors, the incidence of venous insufficiency is higher in female nurses than in male nurses.
Conclusion: According to this study, working standing for long periods of time in nurses, increasing time spent in working life and socio-demographic characteristics (age, female gender, etc.) increase the risk of venous insufficiency. Reorganizing the working hours and ergonomic working conditions of nurses who stand for long periods of time is one of the most important measures to reduce the frequency of venous insufficiency.

Keywords: Venous ınsufficiency, risk factors, demographic characteristics, nurses

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NP-030

Venous insufficiency in nurses demographic characteristics and analysis in terms of risk factors; Antalya Training and Research Hospital

Simge Alp, Ali Umit Yener, Adnan Yalcinkaya

Antalya Training and Research Hospital, Department of Cardiovascular Surgery, Antalya, Türkiye

Abstract

Aim: It is known that venous insufficiency is more frequent and common in occupational groups requiring prolonged standing. We tried to analyze the demographic characteristics and risk factors by conducting a questionnaire in our nurse colleagues who have one of these professions.

Material and Methods: We organized a questionnaire for 100 fellow nurses working in the more intensive units of our hospital and evaluated the questionnaires we organized. In our questions about venous insufficiency, we identified 24 of our colleagues who had clinically diagnosed symptoms and signs or who were still being followed and treated. In the analysis of demographic characteristics, the mean age was similar in those with and without venous insufficiency, with an overall mean of 35.9 (23-59). The female sex ratio was 91.7% (22/24) in patients with venous insufficiency. The mean body mass index was 25.1 in patients with venous insufficiency and 23.7 in patients without venous insufficiency. Venous insufficiency rates were relatively higher in nurses working in units requiring more standing time such as operating rooms, intensive care units and wards. In terms of risk factors, smoking rate was 58.3% in those with venous insufficiency and 39.5% in those without venous insufficiency. In addition, those who did not exercise (66.7%), women with a high number of births (75%) and those with a positive family history (70.8%) were more prone to venous insufficiency. Of the 100 participants in our survey, 2 patients had a previous diagnosis of DVT and both of these patients were still being followed and treated for venous insufficiency.

Results: Risk factors significantly associated with venous insufficiency include female gender, overweight, smoking, sedentary lifestyle, pregnancy, genetic inheritance and prolonged standing hours, while DVT has come back to the agenda as an important comorbid factor.

Conclusion: We believe that a more serious awareness about venous diseases and preventive strategies should be raised among our fellow nurses, who are a high-risk professional group.

Keywords: Chronic venous insufficiency, nurses, incidence, risk factors

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Poster Presentations

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PP-001

Knowledge and behaviors of individuals diagnosed with diabetes mellitus and developing diabetic foot regarding dressing care and frequency of applying it

Yakup Akyuz[1], Ercan Keles[2]

[1]Bakırçay University, Çiğli Training and Research Hospital, Cardiovascular Surgery Intensive Care, İzmir, Türkiye
[2]Bakırçay University, Çiğli Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: To determine the knowledge and behavior of individuals diagnosed with Diabetes Mellitus and developing Diabetic Foot regarding dressing care and dressing frequency.
Material and Methods: This descriptive study was conducted in a university hospital between June 1, 2023 and August 31, 2023, with 70 patients diagnosed with Diabetes Mellitus and developing Diabetic Foot. A survey form containing 25 questions developed by the researchers was used to collect data. Data were evaluated with descriptive statistics.
Results: The median age of the patients participating in the study was 60 years (interquartile range 53-70 years) and 30% (n=21) had been diagnosed with diabetes for more than ten years. 70% of the patients were male (n=49), 80% were married (n=56), 50% (n=35) were primary school graduates, and 52.9% were considered overweight or obese. 61.4% (n=43) of the patients had an additional disease, and 58.6% (n=41) had diabetes and hypertension together. 54.3 (n=38) of the patients had undergone any intervention due to diabetes, and 77.1% (n=54) were found to have diabetes in their families. 62.9% (n=44) of the cases stated that they cleaned their feet every day, 68.6% (n=48) stated that they had not received any training regarding diabetes and dressing, and 47.1% (n=33) Although they stated that they did dressing every day, 35.7% (n=25) stated that they did not use any products when dressing, they only cleaned and dressed. Although 30% (n=21) of the patients checked their feet/legs every day, 74.3% (n=52) did not use a mirror during the check, 78.6% only checked the presence of wounds, 98% 6% (n=69) did not check their pulse, 100% (n=70) did not check their skin temperature, 64.3% (n=45) did not pay attention to shoe selection, 80% (n=56)) was found to not pay attention to the choice of socks.
Conclusion: In our study, it was concluded that the majority of the patients did not have adequate dressing care and dressing frequency, did not receive training on diabetes, had insufficient knowledge of the disease, made incorrect practices, and had low awareness of desired behaviors.

Keywords: Diabetes mellitus, diabetic foot, disease, knowledge, behavior

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PP-002

A study on nurses' interest and decisions in cardiovascular surgery: A cross-sectional study

Caner Das[1], Zekeriya Sakman[1], Remzi Cinar[1], Serkan Sunger[1], Mehmet Karacalilar[2], Veysi Tor[1]

[1]Batman Training and Research Hospital, Department of Cardiovascular Surgery, Batman,Türkiye
[2]Dicle University, Faculty of Medicine, Department of Cardiovascular Surgery, Diyarbakır, Türkiye

Abstract

Aim: In this study, we aimed to investigate the current interest of operating room nurses to pursue a career in cardiovascular surgery and to identify possible factors which positively or negatively affected their decisions.
Material and Methods: Between June 2023 - August 2023, Google A cross-sectional survey of 20 questions using the Forms online research platform created. Demographic characteristics of the participants, general surgeries and cardiovascular surgery. Their level of interest four-point likert scales to assess their relevance evaluation questions were asked.
Results: A total of 180 Nurse were reached who were balanced to 3 province regions (Batman, Siirt, Diyarbakır) across Türkiye participated in the questionnaire. Of the respondents, 68 were males and 112 were females with a mean age of 32.8±0.5 (range, 19 to 47) years. More than half of the nurses surveyed (68.2%) cardiovascular surgery nursing evaluated the consideration of training programs. Cardiovascular surgery nurses, while stressful surgeries, intense and tiring night shifts, and a relatively poor social life/work balance were the main deterrent factors. Attendance to cardiovascular surgeries positively affected the decisions of nurse ($p=0.06$).
Conclusion: We believe that guiding operating nurse by using their current potential and encouraging the nurses to attend cardiovascular surgeries more frequently throughout their education life are essential in choosing cardiovascular surgery nurse as a future career option.

Keywords: Nurse, cardiovascular surgery, cardiac surgery

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PP-003

Wound care process of a patient with active venous ulcer: A case study

Ilknur Senel[1], Sevcan Avci Isik[2], Hakki Tankut Akay[3]

[1]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Başkent University, Faculty of Health Sciences, Nursing Department, Ankara, Türkiye
[3]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Venous ulcers are the most serious consequence of chronic venous insufficiency. It is an important health problem with its epidemiologic and socioeconomic consequences due to its high prevalence, high cost of diagnosis and treatment, significant labor loss and negative effects on the patient's quality of life. In its treatment, the underlying pathology should be identified very well and a radical solution should be sought. Here, we aimed to present how we handled the wound care process of a 37-year-old patient with active venous ulcer who applied to our clinic. Patient İÖ; 37-year-old male patient. He was admitted to the vascular surgery outpatient clinic of our hospital on 11.11.2022 with the complaint of a wound on the left leg. The patient had previously undergone ultrasound at an external center but had not received treatment for the wound. Treatment and follow-up was started with the diagnosis of venous insufficiency and active venous ulcer. Since the patient lived outside the city, she was trained to perform dressings for venous ulcer treatment at home. Before starting the dressing, he was asked to wash his leg with baby shampoo once a day and then dry it with paper towels. He was told to apply anti-bacterial wound solution (sterilox) on it and then, when it dried, apply wound dressing gel (flaminal hydro) and cover it with sterile sponge. Then, they were asked to wet the dressing with physiological saline 3-4 times a day. Since the patient came outside the city, the wound was followed up by sending photos once a week. The wound closed after 2 months. Afterwards, first ultrasound and then varicose vein surgery were performed and the treatment was finalized. Our patient is followed up with routine controls every 6 months. It is thought that providing health care services with multidisciplinary and modern approaches in wound care contributes significantly to the healing process.

Keywords: Venous ulcer, venous insufficiency, wound care

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PP-004

Nursing care according to gordon's functional health pattern model in a patient with left tibia open fracture and popliteal artery injury secondary to trauma: A case report

Gulcin Aydin[1], Hakki Tankut Akay[2], Bahtiyar Haberal[1], Donay Deniz

[1]Başkent University Ankara Hospital, Cardiovascular Surgery Service, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Peripheral vascular injuries are an important health problem that affects the patient's life and limb loss. It is possible to reduce mortality and morbidity with early diagnosis and effective treatment. Although vascular injuries are most commonly seen in the extremities, their incidence is higher in men than in women. It is stated that 50-60% of peripheral vascular injuries occur in the femoral or popliteal artery, and the popliteal artery is the second most frequently damaged vessel in the lower extremity. In vascular injuries, autogenous grafts are widely used as the first choice grafts. Especially saphenous vein graft; It has good results because it does not have a supply problem, provides ease of adaptation to the vessel diameter to be revascularized, and increases the rate of limb salvage.Ş.A. The 65-year-old male patient is a farmer. He fell off the tractor while working in the field, resulting in a comminuted fracture in his left tibia and vascular damage in the same leg. The patient applied to an external center and was referred to our institution. On May 31, 2023, an immediate orthopedic surgery decision was made and the comminuted fracture in the tibia was intervened. Vascular injuries were intervened on June 01, 2023. In the intervention, a bypass was applied between the popliteal artery and peroneal artery using the greater saphenous vein.For postoperative tetanus prophylaxis, piperacillin sodium tazobactam sodium 3x4.5 gr. and teicoplanin 1x600 was applied. Low molecular weight Heparin 2x60mg, ASA 1x100mg, clopidogrel hydrogen sulfate 1x75mg were applied in the treatment. One of the general aims of nursing is to support and maintain the health of individuals and increase their level of health. Gordon's Functional Health Patterns (FHS) model allows comprehensive nursing care to be provided by addressing the needs of individuals in eleven functional areas. In this case report, nursing care was used according to Gordon's Functional Health Patterns Model to the patient; Pain, fall risk, trauma risk, fluid electrolyte imbalance, bleeding risk, ineffective coping, self-care deficiency syndrome, disruption in sleep patterns, lack of information, anxiety, fear, disruption in the continuity of family processes, and constipation were diagnosed.

Keywords: Vascular injuries, functional health patterns, nursing care, vascular surgery

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PP-005

Evaluation of satisfaction with nursing services of patients undergoing carotid endarterectomy

Gulsen Kilic[1], Halenur Yilmaz[2], Ziyafet Ugurlu[2]

[1]Başkent University Ankara Hospital, Cardiovascular Surgery Service, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Carotid endarterectomy is currently the standard revascularization method for the treatment of severe carotid artery stenosis. Patient-nurse collaboration is an important determinant in the treatment processes in the intensive care unit after the procedure and patient adaptation after discharge and forms the basis of patient satisfaction. This study was planned to evaluate the satisfaction of patients who underwent carotid endarterectomy with nursing services.

Material and Methods: The retrospective descriptive study was completed by contacting patients by telephone from patients who underwent carotid endarterectomy between July 2020 and July 2023 in the cardiovascular surgery intensive care unit of a foundation hospital in Ankara. Data were collected using the Patient Identification Form and the Newcastle Nursing Care Satisfaction Scale.

Results: Of the 46 patients reached, 67.4% were 71 years and older, 56.5% were male, and 45.7% had previous intensive care experience. The mean total score of the Nursing Care Satisfaction Scale was 79.63±15.86.

Conclusion: Patients were found to be highly satisfied with nursing care.

Keywords: Carotid endarterectomy, nursing, patient satisfaction

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PP-006

According to Ida Jean Orlando's Interaction Model; Examination and nursing care of a patient with congenital heart diseases who had pulmonary endarterectomy: Case

Gulcin Aydin[1], Hakki Tankut Akay[2], Dogan Karan[3]

[1]Başkent University Ankara Hospital, Cardiovascular Surgery Service, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Başkent University, Faculty of Health Sciences, Department of Nursing, Ankara, Türkiye

Abstract

Chronic thromboembolic pulmonary hypertension (CTEPH) is one of the potentially treatable causes of pulmonary hypertension (PH). CTEPH causes significant morbidity and mortality. CTEPH has different risk factors. Congenital heart diseases are also one of these risk factors. The case is a 17-year-old male patient. Patient; He was diagnosed with right atrial isomerism, complete atrioventricular septal defect (CAVSD), double outlet right ventricle (DORV), left ventricular hypoplasia, secundum atrial septal defect (ASD), and secondary pulmonary atresia. The patient underwent left Blalock Taussig (BT) shunt in 2005, and Bidirectional cavopulmonary connection (BCPC) and pulmonary artery ligation in 2009. The patient, who applied to our institution in March 2022, had shortness of breath, fatigued easily, and bruising when she cried. He can walk 500 meters on a flat road and has difficulty going uphill. The patient's blood pressure is 100/60 mmHg, pulse is 87 beats/min, and blood oxygen saturation is 71%. The patient's height is 152 cm and weight is 40.5 kg. In this case, the behavior of a patient with a congenital valve defect, diagnosed with CTEPH, and pulmonary endarterectomy was evaluated in line with Orlando's interaction theory, and the problems and care needs were determined. In line with the collected data, the patient's verbal and non-verbal behaviors were evaluated and care needs were determined. At the end of the care given to the patient in line with the model; Nursing interventions were implemented by making diagnoses such as activity intolerance, excess fluid volume, risk of infection, decrease in cardiac output, risk of bleeding, self-care deficiency syndrome, ineffective breathing pattern, nutritional deficiency, lack of information, anxiety and fear.

Keywords: Congenital heart defect, chronic thromboembolic pulmonary hypertension, nursing care

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PP-007

Evaluation of a pulmonary endarterectomy patient according to Gordon's functional health patterns model: A case study

Hulya Karaer[1], Seren Altinkopru[1], Ozlem Gumus[1], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Chronic Thromboembolic Pulmonary Hypertension (CTEPH) is a chronic progressive disease that develops due to obstructions in the pulmonary vascular bed. In its surgery, with pulmoner endarterectomy, nurses have important roles and responsibilities in maximizing cardiopulmonary function, administering pharmacological treatment, symptom management, education and counseling. The use of models plays an important role in developing critical thinking skills. One of these models is Gordon's Functional Health Patterns model which determines the needs in 11 functional areas. In this case report, it was aimed to determine the needs of a 41-year-old patient who was followed up in the intensive care unit after Pulmonary Endarterectomy surgery in line with Gordon's Functional Health Patterns Model. The patient was admitted with complaints of shortness of breath and exertional dyspnea and was diagnosed as CTEPH. Pulmonary Endarterectomy was performed and the patient was kept in intensive care unit in the postoperative period. The patient was evaluated in the intensive care unit in the postoperative period with 11 functional health patterns including "health perception, nutrition, metabolic status, excretion, movement, sleep, cognitive perception, self-perception/self, role/relationship, sexuality/reproduction, coping, belief/value" and nursing care was planned in accordance with the North American Nursing Diagnoses Association (NANDA) nursing diagnoses. Accordingly, the nursing diagnoses of lack of information, risk of falls, nutrition less than body needs, risk of deterioration in electrolyte balance, activity intolerance, decrease in cardiac output, deterioration in sleep patterns, anxiety/fear, ineffective individual coping and bleeding risk were made. In line with the goals, care was applied using the Nursing Interventions Classification Systems (NIC) and its effectiveness was evaluated. As a result of the case using Gordon's Functional Health Patterns Model, the model was found to be effective because it enabled holistic assessment, holistic approach to care and was easily applicable. In addition, the nursing care provided to individuals with pulmonary endarterectomy according to the this model will contribute to the improvement of patient outcomes, increase the quality of life, create a common language among nurses and determine the needs of the individual in a more systematic way.

Keywords: Endarterectomy, nursing model, case study

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PP-008

Nursing care of a carotid endarterectomy patient according to Orem's self-care deficit theory: Case report

Hulya Karaer[1], Gizem Goktas[1], Firides Yildirim[1], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Carotid artery stenosis caused by atherosclerotic plaque is the second leading cause of cardiovascular mortality and morbidity. Carotid Endarterectomy performed to prevent ischemic stroke. Before and after surgery, individuals face problems that affect their lives physiologically, psychologically and socially. It is very important to provide holistic and evidence-based nursing care. Orem's Self-Care Theory, which constitutes evidence for nursing practices, is one of the theories frequently used to form the basis of nursing care. The model is based on the fact that human beings are independent, capable of self-control and have the ability to take care of themselves. The aim of this case report was to collect data, plan and evaluate care using Orem's Self-Care Disability Model and to determine its effect on the patient's self-care ability in a female patient who was followed up in intensive care unit after Carotid Endarterectomy. The patient, who was admitted to our hospital in March 2023 with complaints of headache and numbness, was diagnosed with 70% stenosis of the left internal carotid artery, underwent Carotid Endarterectomy and was followed up in the intensive care unit in the postoperative period. In order to accelerate the healing process of the patient in the intensive care unit and to ensure compliance with the treatment, the patient's history, diagnosis, previous surgical operation and personal characteristics, support resources, etc. were evaluated, data on universal, developmental and health deviation self-care needs within the scope of Orem's Self-Care Disability Model were collected, and self-care power was measured. In this direction, nursing diagnoses were determined by utilizing NANDA-International (NANDA-I) and NIC (Nursing Interventions Classification Systems) interventions, care was planned, implemented and its effectiveness was evaluated. In this case, the care provided according to Orem's Self-Care Disability Model was effective. In this direction, it is thought that Orem's Self-Care Disability Model contributes to the holistic evaluation of the patient, planning the needs, and providing effective care after Carotid Endarterectomy. It is recommended to plan nursing care that addresses the adaptation of patients with different diagnoses, age groups and characteristics according to Orem's Self-Care Disability Model.

Keywords: Endarterectomy, nursing model, case study

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PP-009

Nursing care of a patient receiving ECMO support after pulmonary endarterectomy: A case report

Hulya Karaer[1], Gulcin Aydin[1], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Chronic thromboembolic pulmonary hypertension is a chronic progressive disease caused by obstruction of the pulmonary vascular bed. PEA is a surgical method defined for chronic thromboembolic pulmonary hypertension in which the thromboembolic material in the pulmonary artery is excised from the affected vascular structures. In recent years, mechanical circulatory support systems (ECMO) have been utilized to reduce morbidity and mortality in cases where traditional treatment methods are inadequate and difficult to manage in cardiopulmonary system surgery. It is seen that studies on the nursing care of ECMO patients are limited. The aim of this study was to investigate the nursing care of a patient who underwent ECMO after pulmonary endarterectomy in the postoperative period. A 37-year-old presented with upper respiratory tract infection and was diagnosed with pulmonary thromboembolism. She was followed up in intensive care unit after pulmonary endarterectomy followed by peripheral VA-ECMO. Hemodynamic monitoring was provided and cardiac parameters were closely monitored. Life signs and pain were evaluated and medical treatment was administered when necessary. Skin color and temperature were closely monitored with blood gas monitoring for tissue perfusion. Incision site, cannula entry sites and drains were monitored hourly for bleeding risk after anticoagulant therapy. Central venous pressure and intake were monitored hourly for fluid-electrolyte balance, and fluid and Ca, K, Mg replacements were made when necessary. Measures were taken for the risk of patient infection. The patient was informed about the movement restriction required to prevent dislocation of the cannulas and to maintain their position. The areas under pressure due to immobilization were evaluated for pressure injury using the Braden Scale, and no pressure injury developed in the patient. The patient was mobilized in the early period after ECMO. It is thought that qualified nursing care is important in increasing the success of treatment and reducing mortality-morbidity rates in patients undergoing extracorporeal membrane oxygenation after pulmonary endarterectomy. In this case, the nursing care provided to the patient was individualized and systematic to prevent complications related to the disease and interventions.

Keywords: Endarterectomy,nurcing care, case study

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PP-010

Vascular laboratory, peripheral artery disease, ABI and practical follow-up

Alime Asli Gozler Arslan[1], Elif Budak Erturk[2], Okay Karslioglu[1], Denizhan Akpinar[1], Ecem Tugba Yamac[1], Elshad Mansimzada[1], Endri Bala[1], Zoukou Mariefrancedominique Seri[1], Hakki Tankut Akay[2], Ilknur Senel[1]

[1]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Başkent University, Faculty of Health Sciences, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Peripheral arterial disease (PAD) is the name given to all diseases that lead to narrowing and blockages in all arteries except the vessels that feed the heart. For the diagnosis of PAD, it is important to first take the patient's detailed history and physical examination findings, as well as the necessity of invasive and noninvasive methods used as additional examinations. In particular, the 'Ankle Brachial Index (ABI) stands out in terms of its clinical applicability as well as noninvasive.

Material and Methods: At Başkent University Faculty of Medicine, Department of Cardiovascular Surgery, 249 patients who applied to our outpatient clinic with complaints of inert claudication between March 2022 and August 2023 were evaluated. Using the 'MESI' brand ABI device to measure the Ankle brachial index (ABI) of the patients; Pulse examination and blood pressure measurement were performed and recorded in the tibialis anterior and posterior arteries of the left arm and both legs, and ABI measurements were calculated. Patients with an ankle brachial index (ABI) of 0.90 and below were considered to be peripheral artery patients. In patients with suspected PAD, a definitive diagnosis of PAD was made by performing color artery Doppler USG, CT or MR angiography as further examination. All patients were evaluated by the same team. The patients' risk factors, body mass index were calculated and recorded.

Results: 108 (43.3%) of our patients were female and 119 (56.6%) were male. The mean age was 58±6.7 years. The smoking rate in male patients was 71%. It was found statistically significant.($p<0.01$). Other significant findings were the presence of diabetes mellitus, high blood pressure and high cholesterol. Obesity was not found to be a risk factor. It is of great importance that ABI measurement is performed routinely in outpatient controls. When the ankle-brachial index is <0.9, it is abnormal and indicates PAD.

Keywords: Peripheral, arterial disease, ankle brachial index

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PP-011

Patient safety practices in femoral crural bypass surgery: Case report

Sila Senem Dilek[1], Esin Yargul[1], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Femoral Crural Bypass remains one of the most common open vascular reconstructions for the treatment of patients with critical limb ischemia (ischemic rest pain, ischemic ulceration and toe gangrene). It is of paramount importance to implement patient safety protective practices based on minimizing risks in surgery. The aim of this study was to present surgical patient safety practices in a 55-year-old patient who underwent femoral crural bypass surgery. The patient admitted to our hospital with severe leg pain was diagnosed with "Peripheral Arterial Disease" and transferred to the operating room for Femoral Crural Bypass surgery. Nursing practices were carried out in line with patient safety goals during the peroperative period. Before leaving the clinic, the patient and family were informed and their consent was obtained. The patient was fasted for eight hours before surgery, hydration was administered, and anesthesia preparation was made. The patient was delivered to the operating room with an operating gown, antithrombotic stockings and cap after checking the patient's identification information, surgical procedure and presence of prosthesis. Before anesthesia was administered, the patient was welcomed by the surgical team by checking identity, surgical procedure and consent. Pulse oximetry and imaging devices, blood preparation and allergies were checked. Before the incision, materials and medication were reviewed, appropriate positioning was given and safety precautions were taken against falling. Before leaving the operation, the procedure, instrument sponge/compress and needle counts were made, the specimen label was checked and the patient was transferred to the intensive care unit. It is possible to ensure safe surgery by acting in line with multidisciplinary and patient safety goals at every stage of care and treatment processes in the clinic, operating room and postoperative intensive care unit. Ensuring surgical safety is possible with the effective use of the Safe Surgery Checklist. It is recommended that in-service trainings should be planned for healthcare professionals for Safe Surgery practice and healthcare personnel should be encouraged to transfer evidence-based practices to the clinic.

Keywords: Femoral crural bypass, patient safety, nursing care

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PP-012

Nursing care of carotid endarterectomy patient according to roy adaptation model: Case report

Sila Senem Dilek[1], Alime Aslı Arslan[2], Hakki Tankut Akay[2]

[1]Başkent University Hospital, Directorate of Nursing Services, Ankara, Türkiye
[2]Başkent University Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Carotid endarterectomy is a revascularization method applied in the treatment of carotid artery stenosis, which can result in stroke and death, and is a surgical method with a high probability of postoperative complications. In the postoperative period, individuals face problems that affect their lives physiologically, psychologically and socially. Considering the effects of this situation on the individual and his/her family, it is very important to provide holistic and evidence-based nursing care. For this purpose, Roy Adaptation Model is frequently used. According to the model, the human being is an entity to which nursing care is provided and is a "holistic adaptive system". The primary aim of nursing should be to ensure human adaptation to this system and increase life expectancy. This case report aims to present the nursing care of a patient diagnosed with carotid artery stenosis who underwent carotid endarterectomy surgery using the Roy Adaptation Model. A 62-year-old man was admitted to our hospital with complaints of chest pain and numbness, and left carotid stenosis was detected. Surgery was decided and he underwent carotid endarterectomy in May and was followed up in intensive care unit. In order to ensure the patient's compliance with the treatment processes in the post op intensive care process, care was planned and implemented by utilizing NANDA diagnoses and NIC interventions according to the Roy Adaptation Model. Accordingly, the patient's airway patency and oxygenation, nutrition, excretion, activity and rest, situations that threaten the physical and personal self in the "Physiological Domain", roles, tasks and routines in the "Role Function Domain", communication with other people in the "Interdependence Domain", commitment and dependence processes were evaluated and interventions were applied according to the results. In the case, evidence-based nursing care prepared according to the Roy Adaptation Model provided evidence-based nursing care and the patient's adaptation to the process was facilitated. It is recommended to plan nursing care that addresses the adaptation of patients with different diagnoses, in different age groups and with different characteristics according to the Roy Adaptation Model.

Keywords: Nursing care, carotid endarterectomy, roy adaptation model, case report

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PP-013

Nursing practices in the process of cathater-directed thrombolytic treatment in the patients with pulmonary embolism

Hilal Ozturk, Aysen Tutar

Şehit Prof. Dr İlhan Varank Training and Research Hospital, İstanbul, Türkiye

Abstract

Aim: Pulmonary embolism (PE) is the 3rd most common acute cardiovascular syndrome with increased mortality rate if untreated. Immobility, cancer, venous thromboembolism, surgical operations, obesity, and genetic predispositions are the risk factors for PE. The symptoms are acute dyspnea, chest pain, back pain, tachypnea, and hemoptysis. Although low molecular weight heparin is used in the conservative treatment of PE; in current treatment modalities, systemic or catheter-directed thrombolytic (CDT) therapy is increasingly preferred due to rapid clinical recovery and decreased risk of mortality and morbidity. This report emphasizes the importance of nursing practices in patients treated with catheter-directed thrombolytic therapy due to PE.

Material and Methods: Patients who received CDT treatment due to PE, in the cardiovascular surgery department of Sancaktepe Training and Research Hospital between 01.01.2019 and 10.09.2023 were retrospectively analyzed. Nursing care of the patients during their intensive care follow-up and their contributions to the treatment were investigated.

Results: During the study, 67 patients with PE, were treated with CDT. The patients were followed in the intensive care unit throughout the treatment period. Due to the presence of a catheter in the pulmonary artery, patients were monitored for arrhythmia and rhythm changes on the ECG. Invasive interventions (new vascular access, naso-tracheal aspiration, urinary catheterization) were avoided due to the risk of bleeding. The groin area, which is the entry side of the catheters, was checked for signs and symptoms of bleeding and hematoma. Patients were protected from hypertension by monitoring arterial blood pressure to avoid intracranial bleeding and GLASKOW follow-up was performed. Patients were educated about mandatory bed rest, and risk of catheter fracture and bleeding with sudden and/or extreme movement of the extremity. Prothrombin time, fibrinogen level, ACT interval, INR, hemoglobin and hematocrit values were monitored. In terms of pressure wound, a suitable bed was used and appropriate position was given to the patient with protecting catheter.

Conclusion: Bleeding and arrhythmia are serious life-threatening complications in patients receiving thrombolytic therapy for PE. Monitoring and close follow-up of these patients in the ICU contributes to the success of the treatment by reducing the risk of morbidity and mortality.

Keywords: Pulmonary embolism, thrombolytic treatment, nursing, bleeding, arrhythmia

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PP-014

Treatment compliance and nursing care of patients with deep vein thrombosis: Case report

Ilkyaz Aydin

Ege University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Deep vein thrombosis refers to the blockage and blood flow interruptions caused by thrombi in the extremity veins and their branches. Although approximately 90% of DVT cases are asymptomatic, symptoms appear when venous obstruction occurs. Pallor, which is a preliminary symptom of venous obstruction, is replaced by peripheral erythema after superficial thrombophlebitis occurs. The case presented in this article is a 25-year-old male patient who was diagnosed with DVT, which started with nausea and vomiting and started to appear with an increase in symptoms approximately 2 weeks later. The case was evaluated with the "Functional Health Patterns (FNS)" model developed by Gordon and NANDA nursing diagnoses and NIC nursing interventions were applied. Individual-specific nursing care was applied and success was achieved.

Keywords: Patients with deep vein thrombosis, vascular interventions, perioperative nursing

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PP-015

Percutaneous transluminal angioplasty (PTA) and nursing care

Sevim Akbulut, Gulsin Turan Bagis, Duygu Karaemir

Ankara Bilkent City Hospital, Cardiovascular Surgery Clinic, Ankara, Türkiye

Abstract

PTA: An angioplasty is a procedure we use to restore blood flow through your arteries. A percutaneous transluminal angioplasty (PTA) of the femoral artery is a minimally invasive type of angioplasty, restoring blood flow to your femoral artery. This study was obtained based on the patient files, hospital records, multidisciplinary nursing care plan, and patient observation forms of 48 years old A.A., who was hospitalized in Ankara Bilkent City Hospital. On 19.09.2023, male patient A.A. applied to our CVS outpatient clinic with the complaint of pain in the right leg that increased with exercise and movement. The patient was admitted to the ward for examination and further examination on the same day. Pre-op preparations were made and the patient was discharged with an elective operation plan. He was taken into surgery from the outpatient clinic on 25.09.2023. He was taken to the Surgical Intensive Care Unit in a stable general condition. Mobilization restriction was achieved for the first 6 hours. The importance of using a sandbag was explained. It was checked frequently whether the sandbag was in place or not.The extremities were monitored for ischemia (temperature, pulse, color) and hematoma and bleeding at the intervention site. Afterwards, the right leg was allowed to be mobilized without putting any load on it. He was transferred to service on 26.09.2023. He stated that he had no pain in his right leg. The patient was discharged from the service with medical treatment and outpatient clinic follow-up recommendations. Therefore, the control and treatment of complications in the postoperative period seriously affects the hospitalization process. Therefore, postoperative nursing care is very important.

Keywords: Percutaneous transluminal angioplasty, nursing care, attention

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PP-016

Acute embol diagnosed patient's embolectomy pre and after surgery pain management

Kubra Ozturk, Dostkulu Kesikli

İstanbul Health Sciences University Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Acute peripheral artery occlusions are important clinical tables that occur due to embolism or thrombosis, which can cause severe ischemic changes in the tissues where the relevant artery provides perfusion. In this study, Pain management using the Vizual Analog Scala (VAS) scale for the purpose of assessing the patient's pre-surgical and post-surgical pain severity, which was performed by the heart and vascular surgery clinic due to acute embolism by contacting our hospital emergency room intended. VAS scale was used in pain diagnosis. Case presentation permission was obtained from the relevant patient. The patient, named P.T. who is 77 years old, has hypertension. and COPD. The patient applied to the emergency room with a complaint of pain, drowsiness and loss of sensation in the right leg. Pain severity of the patient with acute pain is three severity on the VAS scale. The anamnesis, physical examination and arterial system from the patient were diagnosed with colored doppler ultrasonography tetkiki. In the lower right extremity, coldness, cyanosis, pain, peripheral pulses could not be palpated and could not be taken with the hand dopp device were considered as signs of acute arterial occlusion and the patient was taken into an emergency embolectomy operation. In the postoperative period of the patient, a pulse tracking, temperature and color tracking was made every four hours. No femoral, dorsal and popliteal pulse was obtained from the patient. The limb looks cold and Zionized. Pain severity of the patient in the postoperative period is eight severity according to the VAS scale. Drug practices related to pain management and non-drug practices such as hot practice, massage, position-reducing position, breathing exercise have been observed to significantly reduce the patient's pain severity. Post-operative pain levels are affected by nursing approaches. As a nursing approach to effective pain management in the postoperative period, strengthening knowledge and skills in drug and non-drug pain management and raising awareness is of great importance.

Keywords: Pain management, nursing care, Vizual Analog Scala

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Evaluation of the patient passing cerebrovascular event after carotid endarterectomy according to the Henderson nursing model

Dostkulu Kesikli, Kubra Ozturk

İstanbul Health Sciences University Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Carotid endarterectomy is the main method of revascularization, which is applied in the treatment of severe carotid artery stenosis. It is intended to evaluate the patient who had acute stroke after Karotis Endarterectomy surgery in our clinic according to the Henderson Nursing Model. According to the Henderson model, planning of care is done to meet basic human needs and regain the individual's independence. Glaskow Coma Scale, Idaki Fall Scale were used to collect data. Henderson nursing model was used in planning nursing care. Case presentation permission was obtained from the relevant patient. 61-year-old female patient S.T.' has diagnoses of hypertension, hyperlipidemia and diabetes. In the first assessment of the postoperative fifth hour, the right limbs had muscle strength and movement, while the left limbs had no movement and motor power, and the result of neurology assessment was drawn from carotid brain-computer tomography, brain diffusion magnetic resonance. The left total plegic patient has spontaneous eye opening, verbal answer with meaningless words, babinski refleski in the lower left limb. The patient with dysphagia was fitted with nasogastric catheter. Because the patient had left hemiplegia, there was a disorder in physical movement. The patient who had a cerebrovascular event was examined according to the Henderson nursing model. Henderson nursing model; It focuses on 14 basic requirements in the physiological, psychological and sociological field, hence with a holistic perspective. Patients who have cerebrovascular event cannot meet basic human needs. Therefore, the focus of nursing functions is to meet the requirements that the individual cannot realize on his own and require the help of the nurse. While the use of this model is effective in reducing serious symptoms caused by the disease; is an easy model to apply. In addition, beyond fulfilling physician requests, this model reflects the essence of nursing.

Keywords: Carotid endarterectomy, Henderson nursing model, nursing care, cerebrovascular incident

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PP-018

Follow-up and nursing care in patients undergoing carotid endarterectomy

Berna Doman[1], Berfin Tugrul[2], Seda Alabas[2]

[1]Gülhane Training and Research Hospital, Clinic of Cardiovascular Surgery, Ankara, Türkiye
[2]Etlik City Hospital, Cardiovascular Surgery Intensive Care, Ankara, Türkiye

Abstract

Aim: Carotid artery disease, which constitutes 20% of surgical interventions for peripheral arteries, is important in terms of causing cerebrovascular events. Carotid endarterectomy surgery is usually performed in patients at risk of ischemic cerebral stroke due to critical occlusion of the carotid artery. In this study, it is aimed to determine the importance of nursing care in patients who have undergone endarterectomy, thus to review the problems encountered in the follow-up of these patients under the influence of nursing services and to review the nursing care.

Material and Methods: In this study, myocardial, pulmonary and neurological functions of 15 patients who underwent carotid endarterectomy in Gulhane Training and Research and Etlik City Hospital CVS intensive care unit between January 2023 and June 2023 were evaluated. Myocardial and pulmonary functions were kept within normal limits with appropriate treatments. In follow-up neurological functions anisocoria and light reflex were controlled, and wakefulness and consciousness status were evaluated with Glasgow Coma Scale. In the evaluation between the two centers, there was no significant difference between the values of the operated patients (similar techniques were used). According to the Glasgow coma scale of 15 patients, patients were evaluated as ability to open eyes, motor response and verbal response and were scored between 3 and 15.

Conclusion: All 15 patients who underwent carotid endarterectomy were male. Medical and surgical treatment was recommended to the patients according to the degree of stenosis. The mean length of stay in intensive care unit was 2 days. During the intensive care period, myocardial and pulmonary functions were closely monitored and performed with the necessary medical treatment and care. Neurological functions were observed in 2 patients with the lowest score of 12 on the Glasgow coma scale. The scores of the other 13 patients ranged from 12 to 15. The duration of intensive care unit stay of 2 patients with low scores was 3 days, and on the 3rd day, their scores increased and the patients were transferred to the postoperative service with the necessary care, follow-up, treatment and education.

Keywords: Carotid endarterectomy, nursing care, Glasgow coma scale

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PP-019

Nursing follow-up in the preoperative and postoperative period in patients undergoing embolectomy in acute arterial obstructions

Berfin Tugrul[1], Seda Alabas[1], Berna Doman[2], Durdane Senol[1]

[1]Etlik City Hospital, Cardiovascular Surgery Intensive Care, Ankara, Türkiye
[2]Gülhane Training and Research Hospital, Clinic of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Acute arterial occlusions (AAT) are a serious clinical picture that causes related to organ damage and patient loss in patients who are not diagnosed and treated early. In AAT, it is important to make the diagnosis at the same time and to apply a multidisciplinary study and appropriate treatment approach. Early intervention greatly affects mortality and morbidity. In this study, the importance of nursing follow-up in the preoperative and postoperative period of patients with acute arterial occlusion who underwent embolectomy in our clinic was evaluated.

Material and Methods: In this study, 54 patients who were hospitalized due to acute arterial occlusion and underwent embolectomy at Etlik City Hospital and Gülhane Training and Research Hospital between January 2023 and September 2023 were followed. Of the patients followed-up, 18 underwent acute arterial occlusion of the upper extremities and 36 underwent embolectomy due to acute arterial obstruction of the lower estremitis were made.

Results: In the preoperative period, pain, coldness, pallor, sensory defect, motor loss, cyanosis were followed. All patients diagnosed with acute arterial occlusion were started on heparin, dextran-pentoxifylline infusion in the preoperative period and postoperatively 2. It has continued to the present day. In this process, attention was paid to the necessary ACT and INR value monitoring. In the nursing follow-up performed in the first 12 hours after lower extremity surgery, it was seen that coldness, cyanosis, pallor and pain continued in 5 patients. These patients required re-embolectomy. As a result of the notification of 4 patients who did not respond well to surgical treatment and heparinization, prostaglandin E1 treatment was started from the peripheral vein.

Conclusion: In this study, it was seen that nursing follow-up in patients with acute arterial obstruction is important in directing the treatment, performing early reembolectomy and preventing complications.

Keywords: Embolectomy, acute arterial obstructions, preoperative-postoperative period, nursing care

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PP-020

Nursing care in postop intensive care follow-up of thoracoabdominal aortic aneurysm surgery

Selda Gure, Meltem Oksuz

İstanbul Health Sciences University Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Aim: Aortic aneurysm is a condition caused by dilatation of the layers of the aorta. One of the definitive treatment of the patient is early surgery. The postoperative intensive care process requires qualified, complex and multifaceted nursing care. This study describes the nursing care process in the intensive care follow-up process of patients after thoracoabdominal aortic aneurysm.
Material and Methods: Nursing records in the archive files of patients who underwent 28 thoracoabdominal aortic operations in our clinic between 2018 and 2023 were analyzed.
Results: The patient is admitted to the intensive care unit, ventilation is provided, ECG, arterial and venous pressure monitoring is performed, hypothermia is prevented. Hemodynamic stability is monitored. Drainage from the drains is monitored. Blood gas, electrolyte and blood sugar are monitored at certain intervals. Hourly parenteral fluid intake and urine output are monitored. CSF pressure is monitored. Changes in brain oxygen concentrations are observed with Cerebral Oximeter NIRS Monitoring. In the intensive care unit after surgical intervention Individual-specific care planning is made for the problems that may occur in patients. Neurological pupil examination is performed, bowel sounds of the patient who is intubated in the first stage evaluated, monitored for nausea and vomiting, and the patient is monitored according to hemodynamics after extubation. nutritional support is started. Extremity examination is performed to evaluate muscle strength, then active passive exercise planning is done. Skin integrity is evaluated and hygienic care is provided. Necessary nursing interventions are performed according to the pressure ulcer prevention and care standard. Wound and drain sites care and follow-up are evaluated.
Conclusion: After thoracoabdominal aortic surgery operations, professional positive contributions of nursing care to the patient's recovery process and return to social life role in the process is very important.

Keywords: Thoracoabdominal, aortic aneurysm, nursing, intensive care

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PP-021

Nursing care of a patient undergoing thoracoabdominal aortic aneurysm surgery: Case report

Selda Gure, Meltem Oksuz

İstanbul Health Sciences University Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

An aneurysm is a weakening of the aortic wall and enlargement of the vessel by more than 50% of its normal diameter. They are referred to as thoracoabdominal aneurysms (TAAA) because they involve both the thoracic and abdominal parts of the aorta. Thoracoabdominal aneurysms have a high mortality rate and require both thoracic and abdominal exploration for surgical treatment. This study was conducted to evaluate the nursing care of the patient who underwent thoracoabdominal aortic surgery. In this study, patient data were obtained by retrospective method including file review. The recorded data were evaluated within the framework of nursing care created in line with the determined nursing diagnoses. A 53-year-old male patient was hospitalized in our clinic with a diagnosis of TAAA between 09.08.2023-08.09.2023. The patient who underwent thoracoabdominal aortic replacement was followed up in the ward for preoperative preparation and was taken to emergency surgery on the 12th day with complaints of fever, hypertension, nausea, vomiting, chest pain, and limitation of movement. After the operation, he was intubated, inotrope supported and sedated in the intensive care unit. The tampons placed to stop bleeding during the operation were revised and removed on the 1st postoperative day. On the 2nd day, the patient was extubated and inotropic support was turned off on the 4th day. The main nursing diagnoses during the intensive care period were determined as ineffective respiratory pattern, change in cardiac output, acute pain, bleeding risk, activity intolerance, and nursing interventions were applied accordingly. The patient was transferred to the ward in a stable condition at the end of the 7th day and discharged with healing on the 17th day. Follow-up of the patient by an experienced team of nurses after the surgical procedure and providing necessary and appropriate nursing interventions to the patient in accordance with the nursing diagnoses are of great importance in the patient's recovery process.

Keywords: Aortic replacement, thoracoabdominal aortic aneurysm, nursing care

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PP-022

Nursing care during the postoperative intensive care process of abdominal aortic aneurysm surgery

Irem Eren, Meltem Oksuz

İstanbul Health Sciences University Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Aim: Abdominal aortic aneurysms are a progressive vascular disease that occurs due to weakening of the arterial wall and intimal tears that occur as a result of the subdiaphragmatic aorta losing its normal structure as a result of atherosclerotic diseases. The follow-up of the patient, who was operated on with the diagnosis of an emergency abdominal aortic aneurysm with rupture, and where the intensive care nurse provided primary care during the preoperative and postoperative periods, was evaluated.
Material and Methods: Data was collected by obtaining verbal and written consent from the patient, obtaining information from the patient and their relatives, and evaluating the patient file. Using the VAS scale, the patient's holistic nursing care process was started.
Results: 66-year-old R.A. EF: 20%, a male patient with a permanent pacemaker was admitted to the emergency room with abdominal pain and nausea for three days. In the patient's examinations, a decrease in hematocrit was observed. Pain was evaluated according to the VAS scale. Pulse monitoring and extremity color and temperature monitoring were normal. Intestinal sounds were normoactive, and no bleeding was observed in the drainage monitoring.
Conclusion: 10 hours after the operation, the patient's hemodynamics stabilized and the patient was extubated. His pain was assessed twice. The patient was followed up with Regim 0, Regime 1 and Regim 2 respectively, supported by 5% dextrose lactate Ringer's supplement until gas and stool output was observed. Bowel movements were monitored and treatment for bowel movements was started upon the physician's request. The patient was mobilized. The patient, whose defecation was detected on the second postoperative day, was switched to Regimen 3 and transferred from the intensive care unit to our service. When we observed during the service period, it was determined that he had no mobilization, no respiratory distress, good hemodynamics, and healthy bowel movements. The patient was discharged with full recovery after being given discharge training on the 4th postoperative day. As a result, experienced and expert nurses have great responsibilities after cardiovascular surgery.

Keywords: Abdominal aortic surgery,holistic nursing care, Vizual Analog Scala

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PP-023

Postoperative nursing care in abdominal aortic aneurysm

Meltem Gur Tengilimoglu, Durdane Senol, Seda Alabas

Ankara Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Abdominal aortic aneurysm describes the enlargement and ballooning of the aorta, the largest artery in the body, located in the abdomen. Under normal conditions, our aortic vessel diameter in this region is around 2-2.5 cm. If this diameter is 4 cm or more, we can talk about an "aneurysm". The main factors that play a role in the development of abdominal aortic aneurysm are; atherosclerosis, high blood pressure, vascular diseases, infections in the aorta, traumas, age, gender, tobacco use, family history, previous aneurysm disease or presence, obesity and high cholesterol. AAA is the most common aneurysm and has a high mortality rate due to aneurysm rupture. It is a disease that requires careful follow-up. In this study; We aimed to discuss the importance of nursing care in the postoperative period in patients operated on due to abdominal aortic aneurysm.
Material and Methods: 28 patients with the diagnosis of abdominal aortic aneurysm were followed up in Ankara Etlik City Hospital Cardiovascular Surgery Intensive Care Unit between October 2022 and September 2023, and 9 ruptured patients who underwent emergency surgery were retrospectively examined.
Results: The research was conducted on 28 patients, 24 of whom were men and 4 women. The average age of the patients included in the study was 74 and their stay in the intensive care unit was 1-2 days. The bladder pressure of the patients included in the study was measured twice a day.
Conclusion: Nursing follow-up and care for complications that may develop in these patients in the postoperative period after AAA is important. Circulation and pulse monitoring of patients, gas and stool output monitoring, metabolic, hemodynamic monitoring should be done closely and the slightest changes should be reported. Attention should be paid to the entry points of cannulas and catheters in terms of infection risk and bleeding-hematoma.In conclusion; Decreasing the mortality and morbidity rate after Abdominal Aortic Aneurysm surgery, preventing complications or making necessary interventions by detecting them in the early period; Professional nurse follow-up, care have an important place in order for the patient to quickly return to his social life.

Keywords: Abdominal aortic aneurysm, postoperative, nursing care, anevrizma

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PP-024

How to provide multidisciplinary approach to prevent CLTI recurrence

Kaori Mine, Makoto Sugihara, Takafumi Fujita, Shin Ichiro Miura

Fukuoka University School of Medicine, Department of Cardiology, Fukuoka, Japan

Abstract

Aim: Chronic limb threatening ischemia (CLTI) is a terminal stage of atherosclerotic vascular disease and is known to have a poor prognosis. We have previously reported that malnutrition is a factor of delayed wound healing. However, even if wound healing is achieved after revascularization, there is a risk of recurrence, with reported the recurrence rates of 2-8% at 1 year, 6-13% at 2 years, and 9-17% at 3 years after wound healing.

Material and Methods: We evaluated 124 patients who underwent EVT for CLTI from April 1, 2016 to March 31, 2021 and achieved wound healing. The primary end point of this study was the recurrence rate within 12months after wound healing. The recurrence rate was 15.7% (n=18), death was 5.6% (n=1), major amputation was 0%, minor amputation was 27.8% (n=5). In univariate analysis, Δclinical frailty scale and ΔCONUT score, a nutritional index, were independent factors related to the recurrence.

Conclusion: It is important to prevent the recurrence by maintaining and improving nutritional status even after wound healing is achieved. In addition, we provide a foot care clinic once a week on remote island. If patients cannot be treated there, they are transported to our hospital at an early stage for multidisciplinary approach. We have also introduced tablet devices to provide both onsite and online support, thus preventing lost consultation opportunities. We would like to discuss the importance of establishing a multidisciplinary system that includes not only revascularization but also adjuvant therapy, recurrence prevention, and assurance of consultation opportunities.

Keywords: Chronic limb threatening ischemia, nutrition, reccurence

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PP-025

Careers in vascular and endovascular surgery in a country lacking an integrated vascular surgery residency program

Tariq Alanezi[1], Hesham Alghofili[2,3], Abdulmajeed Altoijry[4], Kaisor Iqbal[4], Sultan Alsheikh[4]

[1]King Saud University, College of Medicine, Riyadh, Saudi Arabia
[2]King Salman Heart Center, Department of Vascular Surgery, King Fahad Medical City, Riyadh, Saudi Arabia
[3]University of Toronto, Department of Surgery, Division of Vascular Surgery, Toronto, ON, Canada
[4]Division of Vascular Surgery, Department of Surgery, College of Medicine, King Saud University, Riyadh, Saudi Arabia

Abstract

Aim: Vascular and endovascular surgery represents one of the most needed specialties in medicine, particularly in regions that lack an integrated vascular residency program. Indicators in the current market, such as long waiting periods for surgery or clinic appointments, suggest that the current demand for vascular surgeons surpasses the available supply. Unlike general surgery, medical students spend less time in vascular surgery rotations and have limited exposure, which can hinder their ability to make informed decisions about perusing a career in this field. In this study, we aim to identify the number of undergraduate students that are interested in vascular surgery, as well as their positive and negative perceptions about the specialty and the factors influencing their opinions to peruse a career in vascular surgery.

Material and Methods: A cross-sectional study was conducted using an online questionnaire that was distributed to medical students throughout the country via social media and email. Data was collected from 13 February 2022 to 1 March 2022.

Results: A total of 408 students participated. Among them, 152 students were interested in general surgery, of which 103 were considering vascular surgery as a possible future fellowship. However, only 29 out of 408 (7.1%) students picked vascular surgery as their 1st choice. The biggest motivating factors for students to pursue vascular surgery as a career were: an interest in vascular cases (cardiovascular science), the use of emerging technologies, and the endovascular capabilities of vascular surgeons. The negative factors were simply a preference for another specialty, followed by a lack of experience in vascular surgery.

Conclusion: This study reveals that only 7.1% of students consider vascular surgery their first choice. Both the lack of vascular surgeons and students' experience in vascular surgery affected awareness levels. Interaction with vascular surgeons through virtual rotations for under-served medical schools, and introduction of vascular sciences within the cardiology blocks in basic sciences years, are encouraged.

Keywords: Vascular eduction, vascular interest, students' perception

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PP-026

Superior mesenteric artery stenosis with hepatic portal venous gas: A case report

Yanni Chen[1], Yu Yang[2], Chengbo Liu[1], Yu Wang[1]

[1]Tsinghua University, School of Clinical Medicine, Beijing Tsinghua Changgung Hospital, Outpatient Clinic, Beijing, China
[2]Tsinghua University, School of Clinical Medicine, Beijing Tsinghua Changgung Hospital, Department of Vascular Surgery, Beijing, China

Abstract

VAn 88-year-old male patient presented with right umbilical abdominal pain for 7 hours. No nausea, vomiting, small amount of exhaust, no defecation, no fever, chills, chills. Symptom signs: Vital signs are stable. Whole abdomen soft, right umbilical tenderness, no rebound pain and muscle tension. Abdominal percussion drum sound, mobility dullness (-). Bowel sounds 3 times /min. Abdominal enhanced CT: acute intestinal ischemia; Superior mesenteric artery stenosis (proximal occlusion); Hepatic portal vein gas (HPVG). Treatment Methods: Superior mesenteric artery stent implantation was performed in emergency, and conservative treatment including antiplatelet, anticoagulation, antibiotics, water fasting, parenteral nutrition, and fluid rehydration was given after surgery. Vital signs and abdominal symptoms were continuously monitored. Clinical outcome HPVG disappeared 6 hours after the operation, diet was restored 1 week later, intestinal wall edema disappeared 2 weeks later, and the hospital was discharged successfully. The prognosis was good at 1 month after the operation.

Keywords: Superior mesenteric artery stenosis, portal vein gas, intestinal ischemia, intracavitary interventional therapy

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PP-027

Investigation of atherocyclic risk factors and prevalence of carotid-vertebral artery disease in patients undergoing surgical/ interventional treatment for peripheral arterial disease

Mehmet Isik[1], Abdullah Guner[2], Hasan Huseyin Kozak[3], Busra Yagmur Yildirim[3], Omer Tanyeli[1]

[1]Necmettin Erbakan University, Faculty of Medicine Hospital, Department of Cardiovascular Surgery, Konya, Türkiye
[2]Health Sciences University Beyhekim Education and Research Hospital, Department of Cardiovascular Surgery, Konya, Türkiye
[3]Necmettin Erbakan University Faculty of Medicine Hospital, Department of Neurology, Konya, Türkiye

Abstract

Aim: The aim of this study was to determine the rate of atherosclerotic risk factors and the frequency of concomitant carotid-vertebral artery disease in patients undergoing surgical/interventional treatment for peripheral arterial disease (PAD).

Material and Methods: Between 2020 and 2021, 55 patients who were hospitalised in the cardiovascular surgery clinic and underwent surgical/interventional treatment for PAH were prospectively analysed. Atherosclerotic risk factors were recorded and carotid-vertebral Doppler USG examination was performed.

Results: The study included 55 patients; 49 (89.09%) males and 6 (10.9%) females. There were 15 (27.2%) and 40 (72.7%) people below and above 55 years of age, respectively. Atherosclerotic risk factors were diabetes mellitus 16 (29%), hypertension 29 (52.7%), hyperlipidemia 21 (31.1%), smoking 50 (90.9%), obesity 6 (10.9%).Mean HbA1C was 6.6% (4.6-16.8) and mean BMI was 25.9 (17-33.2). Carotid-vertebral Doppler USG was normal in 37 (67.2%), and pathology was detected in 18 (32.7%) patients. Four patients had carotid system occlusion; 2 right and 2 left. Four patients had 90% or more stenosis in the carotid system, and all of these stenoses belonged to the right carotid system. There were 70%-90% stenosis in 4 patients, and the ratio of the right-left was equal. In 1 patient, 50-70% stenosis was detected in the left carotid system. Stenosis below 50% was detected in 9 patients. Left vertebral artery flow direction was reversed in 2 patients, 3 patients showed hypoplasia in the vertebral artery. Severe stenosis of the left vertebral artery was detected in one patient. Interventional procedures performed were as follows: 11 surgical operations, 10 right superficial femoral artery (SFA), 7 left SFA, 6 right iliac artery, 3 left iliac artery, 8 combined procedures, 4 bilateral SFA, 3 bilateral iliac artery, 3 below the knee interventional procedures.

Conclusion: The most common atherosclerotic risk factor found in patients who underwent surgical/interventional treatment for PAH was smoking (90.9%). Carotid or vertebral system pathology was detected in 18 (32.7%) patients. The presence of large vessel disease should be carefully investigated in patients who undergo interventional treatment for PAH and in whom atherosclerotic risk factors are identified. It may be possible to reduce or prevent clinical conditions with high mortality and/or morbidity by controlling modifiable risk factors in these patients.

Keywords: Peripheral arterial disease, carotid-vertebral artery disease, atherocyclic risk factors

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PP-028

A case of isolated penetrating gluteal stab injury with uncontrolled bleeding

Ali Metehan Celep, Gorkem Yigit, Ayla Ece Celikten, Kudret Atakan Tekin, Ufuk Turkmen

Hitit University Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye

Abstract

Arterial injuries with a knife from the gluteal region are rarely seen important injuries and may cause mortality rates of up to 25%. The management of a young male patient admitted to the emergency department in hypovolemic shock with uncontrollable bleeding after isolated penetrating gluteal injury and and the details of the surgical method applied are presented in this case report.

Keywords: Buttock, injury, penetrating

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PP-029

Percutaneous versus cutdown access for endovascular aortic repair

Tariq Alanezi[1], Sultan Alsheikh[2], Badr Aljabri[2], Mohammed Aldossary[2], Kaisor Iqbal[2], Abdulmajeed Altoijry[2]

[1]King Saud University, College of Medicine, Riyadh, Saudi Arabia
[2]King Saud University, College of Medicine, Department of Surgery, Division of Vascular Surgery, Riyadh, Saudi Arabia

Abstract

Aim: This study aimed to compare the outcomes of percutaneous and open surgical cutdown access approaches in patients undergoing thoracic/abdominal endovascular aortic repair (T/EVAR).

Material and Methods: We retrospectively reviewed 59 patients who underwent T/EVAR at a single tertiary care hospital between 2015 and 2022. Based on their femoral access type, the patients were categorized into the "percutaneous" or "cutdown" groups. The operative duration, complication rates, mortality rates, intensive care unit admission and stay durations, and total hospital stay were compared between the 2 groups. The primary outcomes were differences in the postoperative morbidity and mortality associated with the 2 approaches. Odds ratios with 95% confidence intervals were estimated using bivariant regression models to evaluate risk factors for higher complication and mortality rates.

Results: The cutdown and percutaneous groups comprised 24 (41%) and 35 (59%) patients, respectively. The 2 groups displayed comparable demographic and clinical characteristics (P>.05). However, the vascular anatomy differed with the common femoral artery (CFA) diameter being larger in the percutaneous group compared to the cutdown group (9.63±1.81 mm vs. 8.49±1.54 mm, P=.014). The sheath:CFA ratio was significantly lower in the percutaneous group compared to cutdown (0.73±0.16 vs. 0.85±0.20, P=.019). A ratio of ≥0.74 was associated with a higher risk of complications (odds ratio, 12.0; 95% confidence interval, 1.4–102.2; P=.023) and mortality (odds ratio, 5.79; 95% confidence interval, 1.13–29.6; P=.035). Additionally, operative duration was significantly shorter in the percutaneous group compared to cutdown (141.43±97.05 min vs. 218.46±126.31 min, P=.01). Compared to the cutdown group, the percutaneous group experienced a shorter total hospital stay (21.54±21.49 days vs. 11.60±12.09 days, P=.027) and lower intensive care unit-admission rates (66.7% vs. 40%, P=.044).

Conclusion: The percutaneous approach is a viable and more time-efficient alternative to the traditional cutdown method for delivering vascular endografts. It is associated with a significantly shorter operative duration and briefer hospital stays. Additionally, the ratio of the sheath diameter to the common femoral artery diameter can help surgeons preoperatively predict and anticipate the risks of complications and mortality. Future in-depth research is necessary to better understand the association between this ratio and the postoperative outcomes and complications.

Keywords: Aortic aneurysm, femoral artery, endovascular procedures, percutaneous, cutdown access

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PP-030

A novel extra-catheter guide wire technique for in situ exchange of dysfunctional tunnelled central venous hemodialysis catheter

Qiangqiang Nie[1], Jianbin Zhang[1], Xiaojie Xu[2], Bin He[1],
Xuming Wang[1], Feng Wang[1], Xueqiang Fan[3], Peng Liu[1], Zhidong Ye[1]

[1]China-Japan Friendship Hospital, Department of Cardiovascular Surgery, Beijing, China
[2]The Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Endocrinology, Beijing, China
[3] Chinese Academy of Medical Sciences, Graduate School of Peking Union Medical College, Beijing, China

Abstract

Aim: Tunneled central venous catheters (tCVC) exchange may be difficult in some situations. We retrospectively report our preliminary experience of a novel extra-catheter guide wire technique for exchange of dysfunctional tCVC.

Material and Methods: We retrospectively analyze the demographics, treatment details and outcomes data of 39 patients received tCVC exchange from January 2018 to January 2019. According to whether guide wire could pass through the catheter lumen, patients were divided into in-catheter group and extra-catheter group. The technical successful rate, peri-operative complications, 1-month and 6-month catheter flow rate was recorded and compared between the 2 groups.Catheter exchange process: We made a small incision around the jugular vein puncture site to isolate the catheter. Then catheter was pulled out from the jugular vein partially. We firstly punctured into the catheter lumen with a puncture needle, then advanced the 0.035 inch guide wire through the needle into the catheter lumen.If the guide wire could not pass through the catheter lumen (extra-catheter group), we punctured through the catheter wall and punctured back. Next we introduced the guide wire through the needle, thus the guide wire was present as 'U' shaped through the catheter wall. Then we pushed the catheter back to the jugular vein and pulled the guide wire back slowly under the guidance of fluoroscopy. The guide wire tip then 'jumped' toward the front direction once back from the second puncture tunnel. We advanced the guide wire to the inferior vena cava to establish the working pathway and removed the dysfunctional catheter.

Results: The final study population consists of 39 patients, including 16 in-catheter group and 23 extra-catheter group. The technical successful rate was 100% in both groups. All patients achieved restoration of line patency and completed at least 1 hemodialysis section. The 1-month (267.69±20.12 vs. 274.13±17.69, p=0.604) and 6-month (255.81±12.93 vs. 256.97±11.20, p=0.403) catheter flow rate was comparable between the 2 groups.

Conclusion: The novel extra-catheter guide wire technique was helpful for in situ exchange of dysfunctional tCVC, especially when the guide wire could not pass through the catheter lumen.

Keywords: Hemodialysis, tunnelled catheter, vascular access

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PP-031

Predictive value of the neutrophil-to-lymphocyte ratio in peripheral blood for complications after elective endovascular repair of abdominal aortic aneurysm

Zhiyuan Wu[1], Wenxin Zhao[2], Yuqing Miao[1], Zhichao Li[2], Xihao Zhang[2], Ruihao Li[2], Zuoguan Chen[1], Yongpeng Diao[1], Yong Lan[1], Yongjun Li[1]

[1]Chinese Academy of Medical Sciences, Institute of Geriatric Medicine, National Center of Gerontology, Beijing Hospital, Department of Vascular Surgery, Beijing, P. R. China
[2]Chinese Academy of Medical Sciences, Peking Union Medical College Graduate School, Beijing, P. R. China

Abstract

Aim: To explore the predictive value of neutrophil-to-lymphocyte ratio (NLR) in peripheral blood for postoperative complications of elective endovascular repair for abdominal aortic aneurysm (AAA).

Material and Methods: From August 2016 to November 2021, the clinical data of patients with AAA who received endovascular isolation repair for the first time in the Department of Vascular Surgery of Beijing Hospital were retrospectively analyzed, including the basic information of the patients, comorbid diseases, and the largest diameter of AAA, preoperative blood labotry test, postoperative complications, long-term survival rate and other indicators. The optimal NLR in peripheral blood was determined, and the differences in postoperative complications and long-term survival rates between thehigh NLR group and the low NLR group were analysed.

Results: A total of 120 patients with AAA underwent endovascular isolation for the first time were included in this study, including 105 males and 15 females. The age ranged from 52 to 94 years, with an average of (73.3±8.26) years. The largest diameter of abdominal aortic aneurysm was 35 to 100 mm, with an average of (58.5±12.48) mm. The best cut-off value of NLR for predicting postoperative complications of AAA was 2.45 by using Yoden index screening. Those with NLR ≥2.45 were in the high NLR group (n=66), and those with NLR <2.45 were in the low NLR group (n=54). There was no statistically significant difference between the two groups in the incidence of overall complications and the incidence of sub-complications (P>0.05). The results of logistic regression analysis suggested that NLR was an independent risk factor for complications after endovascular repair of AAA (P<0.05). The median survival time of patients in the high NLR group and the low NLR group was 31.47 months and 35.28 months, respectively, and there was no statistically significant difference between the two groups (P>0.05).

Conclusion: NLR can be used as a reference predictor of complications after elective endovascular repair of AAA, but more research results are still needed to confirm.

Keywords: Abdominal aortic aneurysm, neutrophil-to-lymphocyte ratio, endovascular repair, postoperative complication, prediction

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PP-032

Investigation of the frequency of cerebrovascular events in patients underwent endarterectomy and stenting for carotid artery stenosis

Mehmet Isik[1], Hasan Huseyin Kozak[2], Abdullah Guner[3], Busra Yagmur Yildirim[2]

[1]Necmettin Erbakan University, Faculty of Medicine Hospital, Department of Cardiovascular Surgery, Konya, Türkiye
[2]Necmettin Erbakan University Faculty of Medicine Hospital, Department of Neurology, Konya, Türkiye
[3]Health Sciences University Beyhekim Education and Research Hospital, Department of Cardiovascular Surgery, Konya, Türkiye

Abstract

Aim: This study was to determine the rate of cerebrovascular events (CVE) and areas of vascular involvement in patients who underwent carotid endarterectomy (CE) and carotid stenting (CS) for carotid artery stenosis (CAS).
Material and Methods: Cases who underwent CE and CS for CAS between 2020 and 2021 were prospectively analysed in two groups. A comparison was made between the two groups in terms of risk factors, preoperative old cerebrovascular lesions, prevalence of new postoperative CVE and areas of involvement.
Results: A total of 39 patients, 30 (67%) were male and 9 (23%) were female. Fifteen patients underwent CE and 24 patients underwent CS. Distribution of risk factors: Mean age 69.2-70.3, smoking 14 (58%)-12 (80%), DM 12 (50%)-9 (60%), hyperlipidaemia 12 (50%)-8 (53%), HT 16 (66%)-11 (73%) were found for CS and CE, respectively. Among CS and CE patients, 17 (71%)-2 (13%) had a history of previous CVE, 7 (29%)-13 (86%) had a history of TIA, and atrial fibrillation was 5 (20%)-2 (13%) and antiaggregant use was 20 (83%)-11 (73%). The mean preoperative modified Rankin scoring (mRS) was 1.5 and postoperative mRS was 1.75 in CS patients. The mean preoperative and postoperative mRS in CE patients was 0.According to diffusion MR and clinical findings, hemisphere involvement before CS was as follows: (17 CVE, 7 TIA) 12 right, 11 left and 1 bilateral. Hemisphere involvement before CE (2 CVE, 13 TIA) was found as 5 right and 10 left sides. The preoperative carotid artery lesion distribution of patients with CE and CS were: right 4-7, left 5-8 and bilateral 6-9.Distribution of stroke vascular involvement area after CE and CS were: TACI (total anterior circulation infarct) 0-2, PACI (partial anterior circulation infarct) 1-1, POCI (posterior circulation infarct) 0-5, LACI (lacunar infarct) 0-1, MTI (multiple territorial infarcts) 0-0.
Conclusion: The most common atherosclerotic risk factors found in patients who underwent surgical/interventional treatment for CAS were smoking (58%CS, 80%CE) and hypertension (66% CS, 73% CE). The rate of post-procedure CVE was higher in the CS group (37.5%-6.6%). mRS did not change before and after the procedure in the CE group, whereas it increased after the procedure in the CS group. The high preoperative mRS and CVE rates of patients who underwent CS may be effective in this result.

Keywords: Carotid artery stenosis, cerebrovascular events, carotid endarterectomy, total anterior circulation infarct, partial anterior circulation infarct, posterior circulation infarct

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PP-033

The effect of plaque morphology on symptoms in carotid artery disease

Ayse Gul Buyukbas[1], Dogac Oksen[2], Mehmet Gul[1], Esra Erturk Tekin[1], Bahar Aydinli[3], Murat Ozeren[4], Ayhan Uysal[5]

[1]Mersin City Education and Research Hospital, Department of Cardiovascular Surgery, Mersin, Türkiye
[2]Altınbaş University, Department of Cardiology, İstanbul, Türkiye
[3]Mersin City Education and Research Hospital, Department of Anesthesia and Reanimation, Mersin, Türkiye
[4]Mersin University, Department of Cardiovascular Surgery, Mersin, Türkiye
[5]Fırat University, Department of Cardiovascular Surgery, Elazığ, Türkiye

Abstract

Aim: In carotid artery disease, the morphology of the plaque forming this stenosis is as effective as the degree of stenosis. Carotid artery stenosis characterized by an unstable plaque structure is more complicated and has a high risk of stroke. With various radiological methods, plaque structure can be predicted and associated with the patient's symptoms. The aim of our study to determine the relationship between the morphology of plaques surgically removed by carotid endarterectomy (CEA) and patient symptoms.
Material and Methods: A total of 152 patients who underwent CEA were included in the study, carotid plaques removed from the patients were grouped as stable and unstable. Demographic characteristics, symptom types and symptom frequencies of both groups of patients were compared.
Results: Between the demographic characteristics and symptom types of the patient groups with stable and unstable plaque structure, there was not statistically significant difference observed. Patients with unstable plaques had more symptoms than stable plaques and the difference was statistically significant (59.2% vs. 82.8%; p=0.001). The presence of symptoms in the patient has a statiscally significant predictive value for unstable plaques (OR=3.34; 95% CI, 1.57-7.08, p=<0.05).
Conclusion: Unstable atherosclerotic plaques tend to show symptoms more frequently. Considering the effects of unstable plaques that increase the risk of stroke, examination and treatment should be planned with priority and precision, especially considering that symptomatic patients can be easily complicated.

Keywords: Carotid artery disease, carotid endarterectomy, plaque morphology, unstable plaque

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PP-034

Evaluating the sclerosing agent injection performed in our clinic results with comparison to existing literature results

Ozgur Coban, Mete Kubilay Kasap

Adana City Training and Research Hospital, Cardiovascular Surgery Clinic, Adana, Türkiye

Abstract

Aim: In this study, our aim was to compare the sclerosing agent injection procedures performed at our clinic with the literature.
Material and Methods: In this study, sclerosing agent injections were administered to 54 patients. Out of the treated patients, 29 were male. The mean age was 63 (range: 38-76). All patients had reflux lasting longer than 2 seconds before the procedure was applied. All sclerosing agent injection procedures were performed by the same surgeon. After 10 minutes of compression and 20 minutes of observation, the patients were discharged. The use of compression stockings was recommended. When the patients came for their 3-month follow-up, the reflux levels in the saphenous vein were measured with a control Doppler ultrasound performed in the radiology department.
Results: Out of the 54 patients who received sclerosing agent injections, 3 patients returned to our hospital before 3 months. They received treatment due to developing phlebitis. After treatment, their symptoms improved. Reflux levels decreased to below 1 second in 47 of the 54 patients. Although the symptoms of the other 4 patients initially improved in the first few months, they later persisted.
Conclusion: Our study demonstrated that the outcomes of the patients we treated with sclerosing agent at our clinic are consistent with the literature. We believe that the use of sclerosing agent provides benefits in terms of day-care admission and discharge convenience, reduction in the total cost to the hospital, and effectiveness in terms of labor utilization.

Keywords: Sclerosing agent, saphenous vein, reflux, phlebitis, doppler

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PP-035

Contraindication limit in infrareanal aneurysm accompanied by unilateral iliac artery occlusion: A successful propensity-matched EVAR case

Volkan Yurtman

Manavgat Private Akdeniz Hospital, Cardiovascular Surgery Clinic, Antalya, Türkiye

Abstract

Although there are some relative contraindications for aneurysms with infrarenal location, there is no absolute contraindication. The key to successful EVAR is pre-procedural assessment and appropriate planning in case of potential complications. An older male patient presented with complaints of sudden onset of abdominal pain and nausea that persisted for several days. Physical examination revealed a pulsatile mass in the middle of the abdomen. Contrast-enhanced computed angiography revealed critical stenosis in the left renal artery ostium and infrarenal AAA with diffuse calcific wall structure reaching 52mm in diameter at its widest point in the 120mm segment. Considering the patient's acute symptoms, the possibility of impending AAA rupture could not be completely ruled out; therefore, EVAR was considered first. Endovascular treatment was chosen based on the patient's age, fragility (Clinical Frailty Scale 6)5, and anatomical suitability of the intervention site.In this case, we did not follow a generally accepted and generally practiced way while making our technical planning and preparation. The procedure was performed under local anesthesia and conscious sedation to prevent aspiration pneumonia due to vomiting in tracheal intubation. After exposing the bilateral main femoral artery, the left iliac artery was opened and the main body of the endoprosthesis was placed in the ipsilateral leg. AAA was successfully treated by placing an endoprosthesis. The procedure was terminated by placing an additional stent graft on the left side. The procedure time was 102 min and was completed without complications. Ancillary procedures and experiential insight are sometimes required to increase the technical success of EVAR. These; Correct planning before the intervention includes angioplasty of the native vessel and graft stenoses after the intervention, embolization of the branch vessels to prevent endoleakage, and stent reinforcement of the endograft extremity. AAA was successfully treated by placing an endoprosthesis (Anaconda Terumo Aortic Bolton Medical Inc.) Postoperative abdominal pain decreased and physical examination revealed a decrease in aneurysmal pulse. In cases of interventional aorta, if you have touched that vascular system by hand before, it is possible to develop successful interventional treatment trends with the help of CTA images.

Keywords: Vascular surgery, abdominal aortic aneurysm, endovascular repair

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PP-036

Giant aneurysm of the high internal carotid artery: Interesting CTA results at 10 and 30 months after surgical treatment

Volkan Yurtman

Manavgat Private Akdeniz Hospital, Cardiovascular Surgery Clinic, Antalya, Türkiye

Abstract

In this article, we present the successful surgical treatment of a patient with a giant aneurysm in the high internal carotid artery with resection of the aneurysm without cutting the stylohyoid and digastric muscles and end-to-end anastomosis at the skull base. No shunt was used and no significant neurological deficit was observed. They were compared with CTA images at 10 months and 30 months after surgery. The repaired artery was evaluated for distal perfusion, patency, angulation, and residual aneurysm development. Surgical treatment of high carotid aneurysms is possible. Excision of the aneurysm followed by restoration of continuity of the carotid ends should be the treatment of choice regardless of the location of the aneurysm.

Keywords: Surgical treatment, giant aneurysm, internal carotid artery

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PP-037

Clinical outcomes of in situ graft reconstruction in treating infected abdominal aortic stent grafts following endovascular aortic aneurysm repair: A single-center experience

Sang Ah Lee[1], Seonjeong Jeong[1], Jun Gyo Gwon[1], Youngjin Han[1], Yong-Pil Cho[1], Tae-Won Kwon[2,3]

[1]University of Ulsan College of Medicine, Asan Medical Center, Department of Surgery, Division of Vascular Surgery, Seoul, Korea
[2]Korea University Guro Hospital, Department of Acute Care Surgery, Seoul, Korea,
[3]Korean Armed Forces Capital Hospital, Armed Forces Trauma Center, Seongnam, Korea

Abstract

Aim: This study aimed to review our experience with the explantation of infected endovascular aneurysm repair (EVAR) grafts.
Material and Methods: This single-center, retrospective, observational study analyzed the data of 12 consecutive patients who underwent infected aortic stent graft explantation following EVAR between January 1, 2010 and December 31, 2019, of which 11 underwent in situ graft reconstruction following graft removal. The presentation symptoms, infection route, original pathology of abdominal aortic aneurysms (AAA), graft materials, and clinical outcomes were analyzed.
Results: Six patients underwent total explantation, whereas 5 underwent removal of only the fabric portions. For in situ reconstructions, prosthetic grafts and banked allografts were used in 8 and 3 patients, respectively. Four mechanisms of graft infection were noted in 11 patients: 4 had bacteremia from systemic infections, 3 had persistent infections following EVAR of primary infected AAA, 3 had ascending infections from adjacent abscesses, and 1 had an aneurysm sac erosion resulting in an aortoenteric fistula. No infection-related postoperative complications or reinfections occurred during the mean 65.27-month (standard deviation, ±52.51) follow-up period. One patient died postoperatively because of the rupture of the proximal aortic wall pseudoaneurysm that had occurred during forceful bare stent removal.
Conclusion: Regardless of graft material, in situ graft reconstruction is safe for interposition in treating an infected aortic stent graft following EVAR. In our experience, the residual bare stent is no longer a risk factor for reinfection. Therefore, it is important not to injure the proximal aortic wall when removing the bare stent by force.

Keywords: Abdominal aortic aneurysm, endovascular aneurysm repair, infected aneurysm

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PP-038

Treatment outcomes of patients with ruptured abdominal aortic aneurysms in Korea

Tae Won Kwon[1], Hyangkyoung Kim[2], Yong Pil Cho[3], Jun Gyo Gwon[3], Youngjin Han[3], Sang Ah Lee[3]

[1]Armed Forces Trauma Center, Department of Acute Care Surgery, Bundang, Korea
[2]Ewha Womans University, Department of Surgery, Seoul, Korea
[3]University of Ulsan, Department of Surgery, Seoul, Korea

Abstract

Aim: Ruptured abdominal aortic aneurysm (rAAA) is a serious complication of abdominal aortic aneurysm associated with high operative mortality and morbidity rates. The present study evaluated the perioperative and long-term outcomes of Korean patients with rAAA based on national health insurance claims data.

Material and Methods: The National Health Insurance Service (NHIS) database was searched retrospectively to identify patients with rAAA who underwent endovascular abdominal aortic aneurysm repair (EVAR) and open surgical repair (OSR) from 2009 to 2018. Perioperative (≤30 days), early postoperative (≤3 month), and long-term (>3 month) survival, reinterventions, and complications were assessed.

Results: The search identified 1034 patients with rAAA, including 594 who underwent EVAR and 440 who underwent OSR. When the study period was divided into two, the total numbers of patients with rAAA, patients who underwent EVAR, and octogenarians were higher during the second half. The perioperative mortality rate was 29.8% in the EVAR and 35.0% in the OSR group (P=0.028). Hartmann's procedure for bowel infarction was performed more frequently in the OSR than in the EVAR group (adjusted odds ratio: 6.28; 95% confidence interval (CI): 2.33–21.84, P=0.001), but other complication rates did not differ significantly. All-cause mortality during the entire observation period did not differ significantly in the EVAR and OSR groups (adjusted hazard ratio: 1.17, 95% CI: 0.98–1.41, P=0.087). AAA-related reintervention rate was significantly lower in the OSR group (adjusted hazard ratio: 0.31, 95% CI: 0.14–0.70, P=0.005).

Conclusion: Although EVAR showed somewhat superior perioperative outcomes for rAAA, the long-term outcomes of EVAR after excluding initial 3 months were significantly worse than OSR. When anatomically feasible for both treatments, the perioperative mortality risk and reasonable prospects of long-term survival should be considered in ruptured AAA.

Keywords: Aortic aneurysm, abdominal, aneurysm, ruptured, mortality, complication, peroperative, endovascular abdominal aortic repair, open abdomen techniques

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PP-039

Treatment of reperfusion complications after arterial reconstructions on the lower limb

Maxim Vyacheslavovich Yashkov[1], Evgeny Petrovich Krivochokov[2]

[1]Ulyanovsk Regional Hospital, Ulyanovsk, Russian Federation
[2]Samara State Medical University of the Ministry of Health of Russia, Samara, Russian Federation

Abstract

Aim: To evaluate the effectiveness of treatment of reperfusion complications in patients with chronic ischemia of the lower extremities after reconstructive surgery on the main arteries.

Material and Methods: The study involved 54 patients with obliterating atherosclerosis of the arteries of the lower extremities of various localizations, operated on for chronic ischemia of the lower extremities. The classification of chronic arterial insufficiency R.Fontaine (1954) was used. The study included patients with IIB-IV stage. The age of the examined is from 50 to 68 years. The patients underwent reconstructive operations on the femoral-popliteal, ilio-femoral segments. Control group 1-28 (52%) people with chronic ischemia of the lower extremities, who underwent surgical treatment and standard postoperative therapy. Study group 2-26 (48%) patients with chronic ischemia of the lower limb, who underwent surgical treatment, as well as lymphotropic therapy in the first interdigital space and used a combination of drugs (venotonic, antigregants, anticoagulants, angioprotectors and neuroprotectors) elastic compression of the lower extremities. On the 3rd and 7th days after the operation, the patients underwent ultrasound examination of soft tissues.

Results: An important feature of the postoperative period is the development of reperfusion edema of the operated limb on the 3rd day after revascularization. In the control group of patients who underwent standard treatment, reperfusion edema of the lower extremities did not significantly regress in all follow-up periods, the opposite picture was observed in the study group. Lymphorrhea after surgery in the control and study groups did not exceed the generally accepted indicators. According to the ultrasound examination of soft tissues in both groups on the 3rd day of the postoperative period, reperfusion edema of the soft tissues of the lower extremities was noted. On the 7th day in the control group there was a slight decrease in the thickness of the edema of the subcutaneous fat, in the study group a significant decrease in the edema of the subcutaneous fat ($p<0.05$).

Conclusion: The proposed method of treatment has a positive effect on the regression of reperfusion complications.

Keywords: Reperfusion complications, reconstructive vascular surgery, reperfusion edema, lymphorrhea

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PP-040

Modified eversion carotid endarterectomy technique versus conventional patch angioplasty in the surgical treatment of carotid artery stenosis: Current results of a multicenter but single surgeon study

Volkan Yurtman

Manavgat Private Akdeniz Hospital, Cardiovascular Surgery Clinic, Antalya, Türkiye

Abstract

Aim: Two techniques are commonly used for carotid endarterectomy(CEA): Carotid patch angioplasty (CPA) and Eversion (eCEA). In the Modified Eversion (meCEA) technique, the arteriotomy is extended not from the common carotid artery (CCA) to the external carotid artery (ECA). The plaque is then removed by eversion and delivery of the ECA into the carotid bulb. In this retrospective study, it was aimed to compare the complication rates of the modified eversion carotid endarterectomy (meCEA) technique versus conventional carotid patch angioplasty (CPA).

Material and Methods: We tried to stabilize the variability as much as possible by selecting the subjects to be included in the study among the patients who had carotid surgery with the same demographic data and comorbidity. For the same reason, operations performed by the same surgeon were included. We retrospectively reviewed the patients who applied to our hospital for carotid surgery due to carotid artery stenosis between November 1, 2016 and July 1, 2023. We included patients who were operated on with the CAS and meCEA technique without shunting. We chose the development and rates of perioperative death, stroke, and acute myocardial infarction as the primary endpoint. In addition, we compared total cross-clamp times for both techniques.

Results: Of the 112 patients admitted for carotid surgery 28 (25%) underwent CPA and 84 (75%) underwent meCEA. There was no statistically significant difference in mortality and MI rates in both groups. The CPA group showed a statistically significantly higher stroke rate than the meCEA group(2/28 patients 7.1% vs 1/84 patients 1.1%). Again, higher total cross-clamp times were found in the CPA group compared to the meCEA group (21.6±5.4; 14.2±3.8).

Conclusion: The composite endpoint risk did not differ significantly among those administered meCEA versus CPA. The CPA Group showed a significantly higher rate of periprocedural stroke. We do not think that this difference is due to medical comorbidities and variation in symptom status. For the last 3 years, we have been using the meCEA technique widely, as it shortens the operation time, eliminates the use of prosthetic materials, prevents the ICA from angling or bending, and thus reduces restenosis rates.

Keywords: Carotid artery surgery, modified eversion tehnique, conventional patch angioplasty

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PP-041

Extra-anatomical bypass using saphenous vein graft for hepatic artery revascularization

Masayuki Sugimoto, Changi Li, Shuta Ikeda, Yohei Kawai, Kiyoaki Niimi, Hiroshi Banno

Nagoya University Graduate School of Medicine, Division of Vascular and Endovasular Surgery, Nagoya, Japan

Abstract

Aim: In extensive gastrointestinal (GI) surgery, there are cases where in-situ hepatic artery (HA) reconstruction is compromised due to concerns about postoperative pancreatic fistula. In response to requests from GI surgeons, we have performed HA reconstruction by extraanatomical bypass using the great saphenous vein (GSV).

Material and Methods: Ten cases of HA reconstruction with GSV grafts were performed from November 2017 to October 2022 (4 cases of cholangiocarcinoma, 4 cases of pancreatic head tumor, 1 case of recurrent gastric cancer, and 1 case of HA aneurysm occupying common HA to right and left HAs). Pancreaticoduodenectomy was performed in 6 cases (4 pancreatic head tumors and 2 distal cholangiocarcinomas), and in 3 of them, the portal vein was also resected. Hepatectomy with combined resection of the portal vein was performed in 3 cases (all cholangiocarcinoma). HA aneurysm patients underwent resection of aneurysm and extrahepatic bile duct. In all but one case, GSV was used in reversed fashion. The right iliac artery was selected as the inflow in all but one case, in which the GSV was not long enough and the terminal aorta was selected. The graft was placed in the retroperitoneal space in a cephalad direction and was anastomosed to the target arteries (right HA in 5 cases, gastroduodenal artery in 2 cases, proper HA in 1 case, left HA in 1 case, posterior superior pancreaticoduodenal artery in 1 case) with a 7-0 Prolene.

Results: Median follow-up of bypass was 5.5 months [IQR 3.1-14.1, range 0.3-41.1]. The longest patency was 41.1 months. In contrast, bypass graft failure was confirmed in 3 cases (occlusion at 0.6, 3.1, and 3.3 months).

In one case, graft rupture due to pancreatic fistula occurred on postoperative day 5. In this case, ViaBahn was placed for emergency bailout, followed by assisted patency for another 4 months.

Conclusion: The advantages of this procedure include: it can be performed with a combination of basic vascular surgery techniques, the running bypass graft does not interfere with GI surgery, and it is easy to perform endovascular treatment to maintain patency because it is directed cephalad from the right iliac artery.

Keywords: Visceral artery, saphenous vein graft, hepatic artery resection

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PP-042

Median arcuate ligament syndrome: Which is the best treatment?

Ihsan Alur[1], Bilgin Emrecan[2]

[1]Private Egekent Hospital, Department of Cardiac and Vascular Surgery, Denizli, Türkiye
[2]Pamukkale University Faculty of Medicine, Department of Cardiac and Vascular Surgery, Denizli, Türkiye

Abstract

Median arcuate ligament syndrome is a rare condition that is usually recognized late. Symptoms such as chronic postprandial abdominal pain, weight loss, loss of appetite, nausea and diarrhea are usually seen. The reason is that the Median arcuate ligament makes mechanical compression on the celiac trunk and celiac plexus. The gold standard in treatment is to eliminate the mechanical compression. A forty-nine-year-old female patient had complaints of abdominal pain, fear of eating (cytophobia), weight loss, abdominal distention, belching, constipation, loss of appetite, and nausea that had persisted for 5 years and had increased since the last 6 months. With the conventional mesenteric angiography method, 80-90% stenosis was detected in the celiac artery and the stenosis was opened by placing a 6x27 mm stent. The patient's abdominal pain complaints disappeared temporarily, but started again after 1 week. In the control angiography performed by the interventional radiologist, the stent was found to be broken and surgical intervention was recommended to the patient. Written informed consent was obtained from patient. A median laparotomy was performed above and below the umbilicus, following staining and covering under sterile conditions under general anesthesia bypass grafting was performed between the infrarenal aorta and the main hepatic artery using an 8 mm Dacron graft. The patient, who had no postoperative problems, was discharged after medical treatment was arranged. The existence of this disease is unfortunately still controversial and its diagnosis depends on the elimination of other possible causes of abdominal pain. The symptoms of MALS may not cause chronic mesenteric ischemia (CMI), and the pathophysiology of this disease is still not fully understood. In this case, an endovascular intervention was performed 1 month ago, a stent was placed, but the patient's complaints started again, as stent fracture occurred 1 week later. Bypass grafting seems to be the most appropriate treatment for the surgical treatment of such cases.

Keywords: Median arcuate ligament, surgery, compression, celiac plexus

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PP-043

Right subclavian artery true aneurysm: A rare cause of dyspnea

Ihsan Alur[1], Bilgin Emrecan[2]

[1]Private Egekent Hospital, Department of Cardiac and Vascular Surgery, Denizli, Türkiye
[2]Pamukkale University Faculty of Medicine, Department of Cardiac and Vascular Surgery, Denizli, Türkiye

Abstract

Subclavian artery aneurysm (SAA) is a rare condition seen in less than 1% of peripheral artery aneurysms. It is usually asymptomatic. However, it may become symptomatic as a result of pressure on the surrounding organs due to the progressive growth of the aneurysm. Its complications are thrombosis, distal embolization, massive bleeding due to rupture, and sudden death. The standard treatment for SAA is surgery. A 63-year-old male patient presented with the complaint of progressive dyspnea. In the patient's anamnesis, he had been operated for aortic dissection 5 years ago. 8 months ago, tube graft interposition (for debranching) was performed between the right carotid and the left carotid artery due to the right SAA. In the right SAA, it was aimed to place a stent graft with the endovascular method, but endovascular procedure could not be performed because the aneurysm could not be crossed with the guide wire. Thoracic CT angiography showed a 56 mm (5.6 cm) right SAA with severe compression on the trachea. Surgical consent was obtained from the patient. An upper J mini sternotomy was performed with a redo saw under general anesthesia. Mural thrombi were removed. The proximal and distal parts of the SAA were ligated with sutured silk.Then, tube graft interposition was performed between the 8 mm PTFE graft and the mid segment from the proximal to the subclavian artery. SAA is a rare clinical pathological condition. Its symptoms include dyspnea, dysphagia, hoarseness, Horner's syndrome, deficits in sensory and motor nerves due to brachial plexus compression (paresis, plegia, paresthesia), superior vena cava syndrome, ischemia in the upper extremity due to thromboembolism or infarction due to cerebral embolism. In SAA cases, it is important to pay attention to the surrounding anatomical structures. The proximal and distal regions of the aneurysm and its lateral branches should be ligated, resected together with the thrombus inside the aneurysm, and interpositioned with a graft.

Keywords: Subclavian artery, aneurysm, dyspnea, tracheal compression, aneurysmectomy

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PP-044

Carotid body tumor in a 9-year-old patient

Ahmet Baris Durukan, Hasan Alper Gurbuz

Liv Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Carotid body tumors are rarely encountered pathologies in pediatric age group, but still exist in differential diagnosis of cervical painless masses. Due to its nature, genetic and familial background should be studied in addition to contrast imaging studies. Complete subadventitial resection, with or without prior embolization which is still controversial is the mainstay of therapy. Follow-up gains important due to its nature. Here, we report 9-year-old girl presented with a unilateral asymptomatic mass on neck with a diagnosis of carotid body tumor treated surgically without embolization. We emphasize on specific aspects of pediatric age group.

Keywords: Carotid body tumor, surgical procedures, operative

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PP-045

Varicocele is associated with varicose veins: A population-based case-control study

Ali Borekoglu[1], Esra Erturk Tekin[2], Bahar Aydinli[3], Kazım Aydin[2]

[1]Mersin City Training and Research Hospital, Department of Urology, Mersin, Türkiye
[2]Mersin City Training and Research Hospital, Department of Cardiovascular Surgery, Mersin, Türkiye
[3]Mersin City Training and Research Hospital, Department of Anesthesiology and Reanimation, Mersin, Türkiye

Abstract

Aim: The aim of this study is to analyze the potential relationship between varicocele disease and patients with varicose veins in Mersin province and to evaluate the differences of this relationship according to age groups.
Material and Methods: Comprehensive data on the characteristics of patients with varicocele and varicose veins in Mersin were analyzed between 2015 and 2022 through a retrospective, province-wide, population-based study. Data, TR. Obtained from the Ministry of Health Mersin Public Hospitals Research Database. A total of 1279 cases with varicose veins and 5091 randomly selected controls were included in this study. Conditional logistic regression analyzes were used to examine the association between varicose veins and varicocele.
Results: The prevalence of varicocele was 1.4% and 0.4% for cases (with varicose veins) and controls (without varicose veins), respectively (P<0.001). Adjustment was made for age, diabetes, heart disease, chronic obstructive pulmonary disease, liver and kidney disease with conditional logistic regression analysis. Additionally, the odds ratio was 5.76 (95% confidence) in patients <50 years old, 51-65 years old and over 65 years old, respectively. range 2.79–11.96), 4.24 (95% confidence interval 1.18–12.43) and 1.33 (95% confidence interval 0.44–9.18).
Conclusion: Our findings are important for determining the age group-specific relationship between both varicocele and varicose veins. suggests that there is a relationship. Additionally, this relationship is higher in patients younger than 50 years of age. Male patients with varicose veins should be recommended to be evaluated for varicocele.

Keywords: Varicocele, varicose veins, age, infertility

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PP-046

Correlation between hyperlipidemia and vascular function in diabetic nephropathy

Byeounghoon Chung[1], Seonyeong Ko[1], Hongpil Hwang[1], Heechul Yu[1], Gumhwa Lee[2], Sunhee Kim[2], Hanjeong Chae[2]

[1]Jeonbuk National University Medical School and Hospital, Department of Surgery, Jeonju, Korea
[2]Jeonbuk National University Medical School and Hospital, Pharmacology and Physiology, Jeonju, Korea

Abstract

Aim: Patients with diabetic nephropathy (DN) are susceptible to cardiovascular disease (CVD). Endothelial dysfunction has been suggested to play a significant role in the pathogenesis of DN and to associate with oxidative stress, lipid infiltration, the expression of inflammatory factors, and alterations in vascular tone. The specific effects of diabetic nephropathy and hyperlipidemia on endothelial dysfunction are well understood, but their cumulative impact has not been thoroughly explored. Thus, we aimed to identify molecular signals that differentially regulate DN and hyperlipidemia comorbidity.

Material and Methods: Vascular samples were obtained from patients who underwent live-donor and deceased donor kidney transplantation from January 2021 to December 2022. Experimental model was conducted on molecular factors related to the function of vascular endothelial cells using vascular sample.

Results: The main findings showed a decrease in endothelial nitric oxide synthase (eNOS) phosphorylation and SIRT1 expression in the iliac artery under morbid conditions of DN and hyperlipidemia. In addition, SIRT1-mediated eNOS deacetylation was increased in the patient's tissues compared to the normal group, and reactive oxygen species (ROS) and endoplasmic reticulum (ER) stress were also increased. NADPH oxidase 4 (Nox4) is a constitutively active ROS-producing enzyme that is highly expressed in the vascular endothelium in humans. The results showings lower serum NO levels, decreased eNOS phosphorylation, and increased nitrotyrosine means the decreased NO bioaviability in the iliac artery. The vasorelaxant response to acetylcholine (ACh) was attenuated in the iliac artery of patients with DN. Together, the study suggests that the modification of vasorelaxant response of iliac artery to Ach associated with the inhibition of NO bioavailability, potentially contributes to the increased vulnerability to vascular damage seen in patients with DN and hyperlipidemia comorbidities.

Conclusion: These important findings assist in understanding the relationship between vascular function in DN and hyperlipidemia, which helps to make appropriate clinical decisions.

Keywords: Hyperlipidemia, diabetic nephropathy, endothelial cell

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PP-047

Incidence of popliteal artery aneurysms in patients presenting with acute limb-threatening ischemi

Yusuf Erkal, Mehmet Keyfoğlu, Isa Civelek, Mehmet Emir Erol

Etlik City Hospital, Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The objective of this study is to determine the frequency of popliteal artery aneurysms in patients presenting with acute limb-threatening ischemia.

Material and Methods: Patients aged 18 and older who presented with acute limb-threatening ischemia to our clinic were included in the study. Patients who developed acute ischemia due to trauma and iatrogenic reasons were excluded from the study. Preoperative imaging of the patients was examined for the presence of popliteal artery aneurysms.

Results: A total of 49 patients were included in the study, 35 of whom were male and 14 were female. Popliteal artery aneurysms were detected in 4 patients. All patients with popliteal artery aneurysms were male. In addition to embolectomy, graft bypass or interposition procedures were also performed in these patients. Contralateral popliteal artery aneurysms were detected in two out of four patients. No abdominal or other arterial aneurysms were detected in our study patients.

Conclusion: The incidence of popliteal artery aneurysms is reported to be less than 1% in the literature. Consistent with our findings, it is known to predominantly occur in male patients (95%). The most frequent clinical scenario attributed to popliteal artery aneurysms is lower limb ischemia, observed in 17-46% of cases. This ischemia is caused by embolism or thrombosis. Among the patient group in our study, popliteal artery aneurysms were detected in 4 out of 49 patients. The incidence of popliteal artery aneurysms in patients with acute limb-threatening ischemia in this study was calculated as 8.1%. Consistent with the literature, contralateral popliteal artery aneurysms were detected in two out of four patients. No other arterial aneurysms were detected in patients. These findings suggest that screening for other vascular pathologies in patients with popliteal artery aneurysms would be appropriate. Popliteal artery aneurysm should not be overlooked when evaluating patients with acute limb-threatening ischemia. The incidence of popliteal artery aneurysms in this patient group may be higher than previously thought. Further studies with larger patient groups are needed in this regard.

Keywords: Acute limb ischemia, popliteal artery aneurysm, emergency surgery

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PP-048

Current therapies, guidelines and management of type B aortic dissections: Our clinical experience

Gorkem Yigit[1], Gokay Deniz[2], Servet Turgut[2], Sinan Ozcelik[2], Murat Gevrek[2], Ayla Ece Celikten[1], Naim Boran Tumer[2], Anil Ozen[2], Hakki Zafer Iscan[2]

[1]Hitit University Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye
[2]Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The purpose of this research was to investigate our management strategy and early-midterm outcomes of endovascular procedures for Type B Aortic Dissections (TBAD), in single tertiary center.

Material and Methods: Between January 2016 and January 2023, 66 eligible TBAD patients were enrolled in this single-center, retrospective cohort. The endpoints of this study were technical success, early and late morbidity and mortality, reinterventions throughout the follow-up period, as well as late open conversion.

Results: Technical success was achieved in all cases. Early mortality was seen in only 3 patients (4.5%). Only patients with one hyperacute and two acute complicated TBAD (cTBAD) had early death. The median follow-up period was 26.1±13.7 months. Six reinterventions were performed for extension of dissection or covering the entries distally (9.1%). No endoleak, graft infection or migration were observed. Complete thrombosis was achieved in 26 patients (40.6%). The late mortality was in an acute cTBAD patient, who developed retrograde type A dissection two months after thoracic endovascular aortic repair (TEVAR). Open surgical repair was performed however the patient could not survived.

Conclusion: Early results of TEVAR in elective TBAD is trouble-free. Carrying the patients to the subacute phase seems to be the most suitable timing for TEVAR. Anti-stimulus and anti-hypertensive treatment with surveillance programme is mandatory for this patient cohort. Pre-emptive TEVAR has satisfactory results however long-term results are mandatory for further recommendations.

Keywords: Endovascular aneurysm repair, type B aortic dissection, endovascular procedures

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PP-049

Melioidosis mycotic aortic aneurysms – A review of the North Queensland experience

Kevin Tian, Ramesh Velu

Townsville University Hospital, Queensland, Australia

Abstract

Aim: Melioidosis is an infection of Burkholderia pseudomallei, a gram-negative anaerobic bacterium endemic to North Queensland and South-East Asia; a disease with high mortality. Mycotic aneurysm from melioidosis is rare, with less than twenty described in the literature. These aneurysms tend to be saccular, with operative intervention including endovascular stent-graft coverage or ligation and excision with extra-anatomical bypass reconstruction. We reviewed our management of melioid mycotic aortic aneurysms, in a high-volume vascular surgery unit in North Queensland.

Material and Methods: We identified cases of melioid mycotic aortic aneurysms from local surgeons' experiences from the last eight years, using electronic medical records to collect data on patient presentation, demographics, operative details, outcomes including morbidity and mortality.

Results: Two cases were identified, both from 2023. Case-1 presented with chest pain and B. pseudomallei bacteraemia, with a ruptured thoracic aortic pseudoaneurysm of the descending thoracic aorta, in proximity to the left subclavian artery. An emergent carotid-carotid-subclavian bypass and coverage with a thoracic aortic graft was performed. Post-operative recovery was complicated by a left recurrent laryngeal nerve injury. Case-2, was an outpatient with an incidental finding of a 37x31mm saccular, aneurysmal penetrating aortic ulcer of the infrarenal aorta, that was a nidus of multi-drug resistant melioidosis which had twice failed eradication. He was treated semi-electively with an endovascular tube graft. Post-operative recovery was complicated by a left para-renal haematoma from a wire injury to the left kidney. Both patients were alive and had sealed aneurysms at follow-up. Case-1 was treated with 6 weeks of intravenous ceftazidime, followed by lifelong suppression with trimethoprim-sulfamethoxazole, whilst Case-2 had intravenous meropenem for 7 days, and suppression with amoxicillin-clavulanate.

Conclusion: Aortic manifestation is melioidosis are rare, even in endemic North Queensland. Successful management involves a vascular department with hybrid facilities, and liaison with infectious diseases physicians.

Keywords: Melioidosis, aortic aneurysm, hybrid procedure

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PP-050

Iliac pseduoaneurysm due to graft seperation

Tahsin Murat Tellioglu, Hasan Iner, Hidayet Onur Selcuk,
Muhammed Cagri Yalcin, Hami Can, Irem Yesiloren, Bortecin Eygi, Levent Yilik, Ali Gurbuz

İzmir Katip Çelebi University Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aim: Pseudoaneurysm cases have increased in recent years due to the widespread use of invasive methods for diagnosis and treatment. The most common etiology was atherosclerosis in true aneurysms, and iatrogenic causes in pseudoaneurysms.
Material and Methods: In this case, we present the successful surgery performed on a patient with iliac pseudoaneurysm.
Results: A 67-year-old male patient with complaints of abdominal pain, nausea, and vomiting was referred to our hospital for evaluation and treatment. His past medical history was significant for CABG and left iliac artery graft bypass surgery most probably due to a ruptured left iliac artery aneurysm. CT angiography revealed that there was no rupture and it was compatible with pseudoaneurysm. EIA that continued distally was totally occluded. Elective peripheral artery surgery was planned for the patient who was hemodynamically stable. Retroperitoneum was reached by left oblique incision under general anesthesia. Previously placed CIA-EIA Dacron graft was seen. Approximately 4cm pseudoaneurysm was palpated at the distal anastomosis level. Pseudoaneurysm sac was opened. The previous anastomosis was completely separated. Left EIA orifice w as ligatured. The separated distal end of Dacron graft was trimmed for the anastomosis. 8mm Dacron graft was anastomosed to this prepared graft (end-to-end).The distal end of the 8mm graft was passed through the tunnel created between two incisions and anastomosed to the left CFA (endtoside). Postoperative period was event-free.
Conclusion: Surgical repair in the rupture of iliac artery pseudoaneurysms has high mortality and morbidity, although its elective repair is done with reasonable mortality and morbidity rates. Careful preoperative evaluation and close perioperative monitoring are crucial for success.

Keywords: Ilıac pseudoaneurysm, graft seperation, peripheral artery disease

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PP-051

Coronary artery disease presenting with digital ischemia: A case report

Tahsin Murat Tellioglu, Hasan Iner, Nihan Yesilkaya, Irem Yesiloren, Busra Karaayak, Haci Anil Solak, Bortecin Eygi, Levent Yilik, Ali Gurbuz

İzmir Katip Çelebi University Atatürk Training and Research Hospital, İzmir, Türkiye

Abstract

Digital ischemia is a painful and often disfiguring event. Such an ischemic condition often leads to tissue loss and can significantly affect the patient's quality of life. Digital ischemia can be secondary to a vasculopathy, vasculitis, embolic disease, trauma, or extrinsic vascular compression. In this case report, we present a patient who was admitted to the clinic with digital embolism and subsequently diagnosed with subclavian artery stenosis and underwent coronary artery bypass surgery. A 68 year-old male ex-smoker patient with diabetes mellitus and hypertension was admitted to emergency department with cyanosis of 2., 3. and 4. distal phalanges of the fingers of left hand and difference between right and left arm blood pressures (right arm 142/88mmHg, left arm 102/56mmHg).70% left subclavian artery stenosis was detected in CT angiography.Coronary angiogram revealed multi-vessel disease.He underwent 3 vessel-CABG surgery. After the operation,the patient was transferred to intensive care unit. Peripheral artery disease was treated medically. The patient was discharged on 7th postoperative day without any complication and referred to the interventional radiology department for subclavian artery stenosis. In our case, examination for coronary artery disease in a patient with peripheral artery disease prevented possible cardiac complications. Coexistence of peripheral and coronary artery disease should be kept in mind. We think that performing ECG and echocardiography for patients with peripheral artery disease; and pulse examination for patients with coronary artery disease -with Doppler USG if necessary- can be useful in preoperative evaluation.

Keywords: Arterial occlusive diseases, coronary artery disease, peripheral artery disease, digital ischemia

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PP-052

Short-term result of VasoRing connector using graft cuff-fold method for ascending aorta replacement

Yitso Cheng[1,2], Shih Ming Huang[1,2], Ing Heng Hii[1], Chi Fu Cheng[1], John Chien Hwa Chang[1,2]

[1]Dalin Tzu Chi Hospital, Department of Surgery, Division of Cardiovascular Surgery, Dalin, Taiwan
[2]Tzu Chi University, Department of Medicine, Hualien, Taiwan

Abstract

Aim: VasoRing connector has been reimbursed by the Taiwan National Health Insurance since 2009. Post-operative stroke has been a concern owing to the rough surface of the titanium ring that contacts the bloodstream. We use the graft in cuff-fold method to eliminate the interior irregularity of the VasoRing. Hereby, we review our outcome in this modification.
Material and Methods: From 2022/01 to 2023/08, 15 patients who underwent various aortic surgery using VasoRing connectors to facilitate ascending aorta replacement were enrolled in this study. The VasoRing and graft composite in cuff-fold method was used for proximal anastomosis by 2 patients, distal anastomosis by 8 patients, and both end anastomoses by 5 patients. The clinical variables were retrospectively reviewed, including pre-operative condition, intra-operative values, and postoperative outcome.
Results: A total of 15 patients using 20 VasoRing connector were enrolled in this study. The median age was 74 years (interquartile range, 64–79.75 years), and 8 patients (53.3%) were men. Emergent operation in 9 patients (60%) for acute type A aortic dissection; elective operation for chronic dissection in 1; and ascending aortic aneurysm in 5 patients. Combined procedures, including aortic valve replacement or coronary bypass grafting in 5 patients (33.3%). The median operative time was 321 minutes (interquartile range, 281.5–389 minutes), medium cardiopulmonary bypass time was 155 minutes (interquartile range, 141.25–212.25 minutes), and the aortic cross-clamp time was 91 minutes (interquartile range, 50.75–114.5 minutes). No new onset postoperative stroke was observed during mean follow-up days in 250. Mortality in 1 patient due to post-operative acute hepatic failure.
Conclusion: This is a short-term report regarding the VasoRing connector by the cuff-fold method. Anastomosis could be facilitated and secured with less bleeding. Recovery is non-inferior to the conventional procedure. No new post-operative stroke was observed. Longer-term outcomes should be monitored.

Keywords: Sutureless, aorta, replacement, VasoRing

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PP-053

Urgent surgical treatment of dysfunctional aorta-femoral bypass grafts: Case report

Burak Bozkurt, Anil Karaagac, Mukan Kagan Kus, Ferhat Tumkaya, Mehmet Kaplan

Dr Siyami Ersek Throcic and Cardiovascular Surgery Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aorta-occlusive disease is a prevalent condition, often associated with risk factors such as diabetes mellitus (DM), hypertension (HT), smoking, advanced age, and chronic renal failure. The primary surgical approach this condition is aorta- femoral bypass surgery; however, graft failure can manifest during the early or late stages. Of particular concern is acute graft failure, which significantly contributes to morbitiy and mortality rates. Acute graft failure is an indication for urgent surgery. We are presenting two cases acute graft failure after aorta-femoral bypass surgery. A 54-year - old male, who had undergone aortic- left femoral artery bypass surgery via a retroperitoneal approach a year prior, presented with acute left leg ischemia. An urgent operatiion was performed, entailing proximal and distal graft embolectomy. Restoration of an antegrade aortic flow was achieved although femoral artery back-flow was subopitmal, and distal anastomosis exhibited stenosis. Subsequently, a decision was made to perform a distal bypass from the graft to superficial femoral artery (SFA) using an 8 mm ptfe graft. This aproach succesfully reestablished arterial blood flow, leading to the patient's discharge one week post- operation. A- 60 year -old female, previously subjected to aorta- bifemoral bypass surgery due to DM, HT, CRF, experienced right leg ischemia stemming from distal anastomotic site dysfuntion.Surgical intervention involved a saphenous patch plasty to the SFA and reconstruction of the aorta-femoral bypass. Although proximal and distal arterial flow was partially restored, it remained insufficient. Embolectomy was conducted on the graft anf SFA, resulting in the return of proximal arterial flow but inadequate distal flow. To adress this, a 7 mm PTFE graft was employed for an iliofemoral bypass, effectively resolving the distal blood flow issue. In scenarios similar to these cases, reanastomosis following patch plasty is a viable treatment option when feasible. In cases where tissue quality and adequate flow restoration are challenging, opting for a distal bypass represents a suitable strategy to mitigate ischemic risks and reduce the likelihood of re-intervention.

Keywords: Aorta occlusive disease, acute graft failure, distal bypass

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PP-054

Treatment with EkoSonic™ Endovascular System (EKOS®) of massive pulmonary thrombosis following recovery from COVID-19 infection

Ugur Cetingok[1], Cayan Akkoyun[2], Zulkuf Isik[3], Orhan Gungor[4]

[1]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Aktif Hospital, Department of Cardiology, Yalova, Türkiye
[3]Atakent Hospital, Department of Pulmonology, Yalova, Türkiye
[4]Cesme Public Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

COVID-19 infection caused by the new coronavirus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an infection with symptoms and results ranging from mild flu-like symptoms to severe respiratory failure leading to death. The risk of thrombosis increases due to hypercoagulation in COVID-19 infection. All causes (endothelial injury, stasis, and hypercoagulopathy) known as Virchow's triad contribute to thrombosis in COVID-19 infection. However, the pathogenesis of hypercoagulability in COVID-19 is still unknown. In this article, we discuss the unique multiple thrombosis events following recovery from COVID-19 infection and our treatment strategy for pulmonary thrombosis. The patient had symptoms of dry cough, fever, and myalgia two months ago. His polymerase chain reaction (PCR) test for COVID-19 was positive, but there was no need for hospitalization. His symptoms resolved within seven days. But, thrombosis of the superior mesenteric artery (SMA) occurred one month after the COVID-19 infection, and bowel resection was performed. He was admitted to our hospital with dyspnea, chest pain, palpitations, and hoarseness. Further evaluation showed tachycardia, hypotension, tachypnea, and anxiety. Peripheral oxygen saturation (SpO2) was 86% at room air. He had hemodynamic instability, right ventricular (RV) dysfunction, and D-Dimer elevation. Pulmonary Embolism Severity Index (PESI) was calculated as 149. The patient was in the high-risk group. Our Pulmonary Embolism Response Team (PERT) decided to apply catheter-directed thrombolysis (CDT) for the treatment of pulmonary thrombosis. The EkoSonic™ Endovascular System (EKOS) (Boston Scientific Corporation, Marlborough, USA) was used for the treatment.

Keywords: Accelerated thrombolysis, COVID-19 infection, ekos catheter, pulmonary artery thrombosis, pulmonary embolism, systemic thrombolysis

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PP-055

The first report of the retroaortic left renal vein aneurysm and current management algorithm for nutcracker syndrome

Ugur Cetingok[1], Ayse Ozcetin[2], Cayan Akkoyun[3]

[1]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara Education and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Aktif Hospital, Department of Cardiology, Yalova, Türkiye

Abstract

Nutcracker syndrome is a venous compression syndrome that results from the compression of the left renal vein between the aorta and the superior mesenteric artery as so-called anterior nutcracker syndrome, or less commonly and between the aorta and the vertebra as so-called posterior nutcracker syndrome. It is a rare condition, and is characterized by signs and symptoms reflecting pelvic and renal congestion such as hematuria, proteinuria, pelvic pain, flank pain, dysmenorrhea, dyspareunia, dysuria, gonadal varicose veins, and emotional disturbance. Compression of the left renal vein can remain asymptomatic for life through, or it can cause serious complications. If there is not any symptom, this anatomical variant is called the nutcracker phenomenon. An aneurysm may develop distal to the entrapment segment of the left renal vein in nutcracker syndrome. The left renal vein aneurysm in the setting of nutcracker syndrome is rare. Two cases of left renal vein aneurysm in the setting of anterior nutcracker syndrome have been published. The left renal vein aneurysm in the setting of posterior nutcracker syndrome has not been published. Renal vein aneurysms are mostly asymptomatic, and they are diagnosed incidentally. However, it may cause life-threatening complications such as thrombosis, thromboembolism, and rupture. In this article, we present first report of the left renal vein aneurysm in the setting of posterior nutcracker syndrome. After complete resection of the LRV aneurysm, graft interposition was performed between the IVC and the distal LRV using a self-made tubular graft with a bovine pericardial patch. It was anastomosed with end-to-end anastomoses to the distal LRV and end-to-side anastomoses to the IVC We also discuss the current diagnostic criteria, complications, and current treatment options of LRV entrapment.

Keywords: Nutcracker syndrome, renal ven compression, renal vein aneurysm, renal congestion, pelvic venous congestion, renal vein transposition

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PP-056

Endovascular treatment of isolated innominate artery stenosis due to thrombus in a patient with type B aortic aneurysm and review of the literature

Ugur Cetingok[1], Atilla Keskin[2], Ayse Ozcetin[2], Huseyin Goktas[2]

[1]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara Education and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

The innominate artery stenosis is a rare condition. Its treatment involves many difficulties. Endovascular treatment is a very safe and preferred treatment option compared to surgical treatment in suitable cases. In this article, successful endovascular treatment of the innominate artery stenosis due to thrombus in a patient with Type B aortic aneurysm is presented and the literature is reviewed.

Keywords: Endovascular treatment, innominate artery, brachiocephalic artery, stenosis, occlusion

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PP-057

Endovascular treatment of acute aorto-iliac occlusion

Ugur Cetingok[1], Ayse Ozcetin[2], Zeynep Ulusan Ozkan[2], Ali Cemal Duzgun[2]

[1]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara Education and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

The patients with aorto-iliac occlusions often have multiple comorbidities, practitioners are increasingly preferring an endovascular approach instead of surgical treatment in recent years, regardless of the type of lesion. The patient, who had coronary bypass a month ago, presented to the emergency department with sudden onset of pain, coldness and loss of sensation in both legs. CT angiography showed complete aorto-iliac occlusion. Considering the multiple comorbidities, the patient was treated by endovascular method and complete arterial restoration was achieved. Endovascular treatment can be safely prefered in most aorto-iliac occlusions.

Keywords: Endovascular treatment, aorto-iliac, occlusion

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PP-058

Surgical treatment of true aneurysm of common femoral artery

Mehmet Emir Erol, Isa Civelek

Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Atherosclerotic aneurysms of peripheral arteries are rare and have an incidence rate about 7 per 100000 people in the population. Only %3 of these aneurysms are femoral. Due to the location site it is diffucult to diagnose these aneurysms. We present the surgical repair of a true atherosclerotic femoralartery aneuyrsm in a 66 year old male. 66 year old male patient refered to a our centre with a pulsatile inguinal mass. He had a history of DM, HT and ex smoker. He had not have, trauma, vascular or cardiac intervention, Behçet Disease, Marfan Syndrome or other familial or genetic disordersfor aneurysm in prior histroy. Computed tomographic angiography of peripheral arteries revealed that a 5*5 cm common femoral artery aneurysm that did not involve SFA. Profunda femoris artery had an origin from the aneurysmal sac.Due to corrugated course of aneuyrsm and origin of PFA, we prefer a surgical repair. After general anesthesia, a longitudinal inguinal insicision was made. After heparin administiratiton (80IU/kg), adhesions are released from aneuyrsm sac. CFA, SFA and PFA are clamped and aneuyrsmectomy was performed. A 8 mm PTFE graft interposed with a 6-0 prolen with a end to end fashion. After the interposition of the graft, button of PFA was implanted to the graft with end to side fashion. After bleeding control insicion was closed in usual manner. After the operation, patient was discharged uneventfully on the 3rd postoperative day. Aneurysm of femoral arteries are rare and often associated with other medical conditions such as abdominal aort aneuyrsm, congenital disorders or polcystic kidney disease. Due to the localizations of these aneuyrsm it is difficult to diagnose and most common presentation is rupture. In the presence of a peripheral artery aneuyrsm, entire arterial system must be examined for coexisting aneuyrsms. With the guidance of this knowledge, in the first control of the patient a thoracoabdominal aort CT angioraphy was perfromed and a abdominal aort aneurysm with a 47mm diameter was detected.

Keywords: Aneurysm, peripheral arteries, surgical repair

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PP-059

Unilateral common iliac artery to internal iliac artery fusiform aneurysm: A case report

Karen Faye Serrano

The Medical City, Department of Surgery, Pasig City, Philippines

Abstract

Isolated iliac artery aneurysms are rare. Patient usually remains asymptomatic unless they it causes compression, thrombosis, or rupture. It is usually caused by atherosclerosis with strong association for male gender, smoking, hypertension, advanced age and a concomitant abdominal aortic aneurysm. This paper will discuss a case of an isolated unilateral common iliac artery aneurysm extending to the internal iliac artery in a 55 year old Filipino male with a one month history of intermittent left lower quadrant pain which was progressive with no other abdominal or urinary symptoms. The pathophysiology, clinical presentation, and management of iliac artery aneurysms are reviewed.

Keywords: Common, internal, iliac, artery, aneurysm

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PP-060

One-year results of long femoropopliteal lesions stenting with fasciotomy lamina vastoadductoria

Alexey Cheban, Alexander Gostev, Andrey Karpenko,
Pavel Ignatenko, Artem Rabtsun, Saaya Shoraan, Osipova Olesia

National research investigation center named by E.N. Meshalkin, Department of Cardiovascular Surgery, Novosibirsk Oblast, Russia,

Abstract

Aim: Fasciotomy can increase the mobility of the superficial femoral artery and reduce the frequency of stent breakdowns. The aim of this study was to compare the patency of drug-coated nitinol stents with and without fasciotomy in patients with prolonged occlusions of the superficial femoral artery.

Material and Methods: A randomized clinical trial was conducted in 60 (1:1) patients with long femoral-popliteal occlusal lesions of more than 200 mm. Patients of group 1 (Zilver) underwent recanalization of femoral-popliteal artery occlusion with stenting. In group 2 (Zilverfas), recanalization of femoral-popliteal occlusion with stenting and fasciotomy of lamina vastoadductoria was performed. Subsequent assessment of patency after 12 months.

Results: A randomized clinical trial was conducted in 60 (1:1) patients with long femoral-popliteal occlusal lesions of more than 200 mm. Patients of group 1 (Zilver) underwent recanalization of femoral-popliteal artery occlusion with stenting. In group 2 (Zilverfas), recanalization of femoral-popliteal occlusion with stenting and fasciotomy of lamina vastoadductoria was performed. Subsequent assessment of patency after 12 months.

Conclusion: Our study showed that decompression of the stented segment using fasciotomy significantly improves patency of the femoral-popliteal segment and significantly reduces the number and severity of stent fractures.

Keywords: SFA, Zilver, mobility, biomechaniks

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PP-061

Should screening for varicocele be conducted in patients with chronic venous insufficiency? A prospective study

Ferit Cetinkaya

Ağrı Education and Research Hospital, Department of Cardiovascular Surgery, Ağrı, Türkiye

Abstract

Aim: Chronic venous insufficiency (CVI), similar pathogenesis to varicocele in males, has been previously proposed in numerous studies. Varicocele has been identified as the most common cause of infertility in men, accounting for 40% of cases. This study investigates whether varicocele screening should be conducted in patients with CVI and, if so, which patients should undergo such screening.

Material and Methods: The study included 102 adult male patients with venous insufficiency complaints who presented to the cardiovascular surgery clinic between January 2023 and June 2023. Data was prospectively collected through medical history interviews and Doppler ultrasound measurements performed by a single radiologist. Measurements of the Great Saphenous Vein (Vena Saphena Magna, VSM) were conducted using Doppler ultrasound at the junctional level. A panpiniform vein measurement of 3mm or wider on either side was considered indicative of varicocele diagnosis. The relationship between non-normally distributed measurement data of the two groups was evaluated using the Mann-Whitney U test, while the association between categorical variables was assessed using the chi-square test. ROC analysis was employed for determining predictive value. A Type 1 error level of α=0.05 was accepted.

Results: The mean left VSM diameter of those with varicocele (6.6±2.3) is significantly larger compared to the mean left VSM diameter of those without varicocele (5.3±2.6) (p=0.004). The area under the ROC curve for left VSM diameter is 67% (p=0.005). When varicocele screening is performed in patients with a left VSM diameter of 5.35 cm and above, sensitivity is 71.4% and specificity is 61.2%.

Conclusion: There is a significant association between left VSM diameter and varicocele (p=0.004). Varicocele screening can be carried out with 71.4% sensitivity in adult male patients with a left VSM diameter of 5.35 cm and above. Both cardiovascular surgeons and radiologists can conduct varicocele screening by measuring panpiniform veins in patients with a left VSM diameter of 5.35 cm and above. This approach has the potential to reduce the incidence of varicocele and associated infertility.

Keywords: Chronic venous insufficiency, varicocele, screening, varicose vein

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PP-062

Exploring and analyzing the application effect of indwelling needle venous puncture in children's intravenous infusion

Bingmiao Cao

Beijing Tsinghua Changgeng Hospital, Beijing, China

Abstract

To explore and analyze the application effect of indwelling needle venipuncture in children's intravenous infusion. A total of 100 pediatric patients undergoing intravenous infusion in our outpatient department from November 2018 to March 2019 were selected as the subjects of this study. The 100 patients were randomly divided into a control group and an observation group based on their admission number, with 50 patients in each group. The control group received routine intravenous puncture, while the observation group received intravenous puncture with an indwelling needle. After the end of the study, the treatment and application of intravenous infusion in the two groups of pediatric patients were compared.

Keywords: Venipuncture, protecting children, optimize

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PP-063

The application of VR technology in reducing dressing change pain in children

Shu Ting Wang

Beijing Tsinghua Changgeng Hospital, Beijing, China

Abstract

Aim: To analyze the effect of virtual reality technology in reducing dressing pain in children.
Material and Methods: 84 children admitted to the outpatient department of our hospital from May 2019 to November 2021 were selected as the study object and randomly divided into control group and intervention group. The control group was given usual care to provide pain relief before the dressing change, while thechildren in the intervention group were given virtual reality distraction 10 min before the dressing change. The visual analog score (VAS), the stopping time of the children and the children and their families were compared and evaluated.
Results: There was no statistical difference in baseline data between the two groups ($P>0.05$); after 4 min, theimprovement of VAS score in the intervention group was significantly better than that of the control group ($P<0.05$); the crying time in the intervention group was 3.0±1.22 min, which was significantly shorter than the control group by 6.0±1.15 min; and the nursing satisfaction of the children and the patients' families was significantly higher than that of the control group ($P<0.05$).
Conclusion: The use of virtualcurrent technology nursing is helpful to reduce the operational pain degree of children's dressing change, shorten the crying time, and play an important supporting role in improving the satisfaction of nursing, medical experience and rescue benefit of children.

Keywords: Wise Information Technology of 120

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PP-064

Comparative characterization of VCSS assessment parameters in patients undergoing open surgical venectomy and EVLA

Nubar Fizuli Ismayilova[1], Vugar Ali Fattah Pur[2], Nazim Kasimov[2], Ramil Aliyev[3]

[1]Clinic "Istanbul NS",Department of Phlebology, Baku, Azerbaijan
[2]Azerbaijan State Advanced Training Institute for Doctors named by A. Aliyev, Department of Surgery, Baku, Azerbaijan
[3]Clinic of Oil Workers, Department of Cardiovascular Surgery, Baku, Azerbaijan

Abstract

Aim: A comparison was made between two groups of women who conceived and gave birth after open surgery and endovenous saphenous vein ablatio (EVLA). The results of evaluating the parameters of the VCSS evaluation system were compared. Comparative analysis of the VCSS scale of postpartum quality of life in women who underwent endovenous laser ablation and traditional-open phlebectomy.

Material and Methods: 9 women (29%) had no pain at all when they came to our examination after open surgery. 22 (71%) people had various types of pain. In the EVLA group, 19 people (61.3%) had no pain at all, and 12 people (38.7%) had episodic pain. ($\chi2=9.43$ $p<0.05$). Varicose veins in the lower limbs were found in all the women who underwent open surgery. Of the patients with EVLA, 4 (12.9%) had no varicose veins. In this group, folds in the form of reticular veins were observed in the majority of women (21 people - 67.7%). Edema was observed in 24 patients who underwent open surgery, and only in 15 patients in the EVLA group. ($\chi2=11.02$ $p<0.05$). Skin inflammation was not observed in any patient. Induration was observed in 1 person in the open surgery group. There were no patients with subcutaneous inflammation, induration and ulcers after EVLA. In the group of women who underwent open surgery, 5 people (16.1%) reported that they did not use compression stockings during pregnancy. 26 people stated that they wear compression knitwear irregularly (83.9%). After EVLA, 6 people (19.4%) did not wear compression socks at all, 25 people (80.6%) stated that they wear compression knitwear irregularly.

Results: The VCSS score was calculated for both groups as the sum of the noted parameters. VCSS=6.4±0.57 in the group of women with open surgery, and 3.6±0.3 in the EVLA group. As can be seen, VCSS is higher in the open group, which means that chronic venous insufficiency is more severe in that group of patients. indicates that it has progress. As a result of comparing both indicators, the difference was found to be statistically significant ($p<0.0001$).

Keywords: Endovenous saphenous vein ablatio, phlebectomy, VCSS, varicose veins, chronic venous insufficiency

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PP-065

Ruptured mycotic popliteal artery aneurysm secondary to peptostreptococcus anaerobius infection

Luca Borruso, Madeleine De Boer, Isuru Nammuni

Royal Prince Alfred Hospital, Department of Vascular Surgery, Sydney, New South Wales, Australien

Abstract

Mycotic aneurysms of the lower limb arteries are relatively rare. Typical causative organisms include gram positive skin cocci (such as Staphylococcus Aureus) and gram negative rods (such as E. Coli). Treatment requires a combination of intravenous antibiotics, local surgical debridement and planning for future vascular surgical reconstruction in the setting of a potentially contaminated operative field. Here we present the case of a 75 year-old male with a ruptured right popliteal artery mycotic aneurysm secondary to an uncommon causative organism; Peptostreptococcus Anaerobius, an anaerobic gram positive cocci typically found in gastrointestinal and vaginal microbiotia. Our diagnosis and management of this patient is presented alongside computed tomography (CT) angiographic reconstructions to help illustrate the case and aid other clinicians in managing this rare. After extensive investigation, the source of our patient's Peptostreptococcus Anaerobius infection remains unclear. Following a two-operation, staged-repair approach in which the ipsilateral superficial femoral and popliteal arteries were ligated without compromising lower limb perfusion the decision was made to not proceed with vascular reconstruction. At most recent follow-up the patient is pain free, ambulating independently and not experiencing any symptoms of limb ischemia.

Keywords: Aneurysm, mycotic, peptostreptococcus anaerobius

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PP-066

Midterm results of carotid endarterectomy in a tertiary hospital

Anh Tuan Vo

Dong Nai General Hospital, Department of Thoracic and Cardiovascular Surgery, Dong Nai, Viet Nam

Abstract

Aim: Stroke is one of the leading causes of death and disability worldwide. Carotid endarterectomy for atherosclerotic carotid stenosis has been proved to reduce the incidence of cerebral infarction. To evaluate the early and mid-term results of carotid endarterectomy at Dong Nai General Hospital from January 2017 to October 2023.
Material and Methods: All patients underwent carotid endarterectomy surgery patients at Dong Nai general hospital from January 2017 to October 2023. A retrospective descriptive study of a case series was performed.
Results: From January 2017 to October 2023, we have 89 patients underwent carotid endarterectomy, including 77 men (86.5%) and 12 women (13.5%), the average age is 65.2±11.1; 49 patients (55.1%) were symptomatic. Surgical methods: Conventional PTFE patch in 53 patients (59.6%), eversion carotid endarterectomy was performed in 36 patients (40.4%). Postoperative results: 1 patient (1.1%) had cerebral infarction after 6. Mean medium-term follow-up: 23.74 months. There was 1 patient died due to late surgical bleeding after 2 months, no recurrent cerebral infarction on the same side was recorded, 6 patients died from all causes (6.7%).
Conclusion: Carotid endarterectomy is a safe and effective method for stroke prevention. This method can be effectively deployed in provincial hospitals.

Keywords: Stroke, carotid endarterectomy, midterm results

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PP-067

Endovascular treatment for life-threatening hemoptysis due to rupture of descending thoracic aortic aneurysm: A case series

Anh Tuan Vo

Dong Nai General Hospital, Department of Thoracic and Cardiovascular Surgery, Dong Nai, Viet Nam

Abstract

Aortic aneurysm is an uncommon but life-threatening cause of hemoptysis. Treatments include surgery and/or endovascular intervention, each with its own advantages and disadvantages. Endovascular intervention is associated with good early and medium-term outcomes. We report three cases of hemoptysis due to ruptured thoracic aortic aneurysm who underwent endovascular intervention. In all three cases, endovascular grafts were placed in the descending thoracic aorta, the number of grafts used was 1, the average time to stop hemoptysis was 4 to 5 days, and the length of hospital stay was between 6 and 8 days. No intravascular fistula, renal failure, prolonged mechanical ventilation and other major cardiovascular events were reported. Endovascular treatment for descending TAA has been demonstrated to be safe and effective, particularly in emergencies in which patients presented with life-threatening hemoptysis, due to its rapid access to the aorta. In our experience at a tertiary hospital in southern Vietnam, the procedural time for a thoracic endovascular aortic repair is relatively brief and can last between 15 and 30 min. Thus, endovascular treatment for ruptured TAA can substantially improve patient prognosis, reduce mortality and complications. The implementation of endovascular intervention can help improve prognosis, reduce mortality and complications in patients with hemoptysis due to ruptured thoracic aortic aneurysm.

Keywords: Hemoptysis, ruptured aortic aneurysm, endovascular treatment

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PP-068

Free floating thrombus of the descending aorta

Zaur Guseinov, Ebuzer Aydin, Cemal Kocaaslan, Mehmet Senel Bademci

Medeniyet University Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Parietal thrombus of the aorta occur in any part of it and can be one of the main causes of distal embolism. Usually their genesis is due to the presence of an undermined atherosclerotic plaque, on the basis of which adhesion of thrombotic masses occurs. Intimate dissection can also be a prognostic aortic thrombosis. A 48-year-old female patient with a history of cancer was admitted to the general surgery clinic on 03.01.2022 for surgery because metastatic cancer was detected in the large intestine. The patient had abdominal pain for one month. Abdominal CT angio was revealed FFT in the descending aorta. The general condition of the patient who was at post op period of hemi-colonectomy was good, he was oriented. Many authors prefer anticoagulant therapy in combination with distal embolectomy or thrombectomy of the affected part of the aorta. Others find it appropriate to use only anticoagulant therapy, excluding any surgical intervention. The best strategy was defined in a meta-analysis by Z. Fayad, who argued that anticoagulant therapy should be started at the time of diagnosis, and he argued that surgical treatment is acceptable in patients with a low risk of postoperative complications and one or more presences.

Keywords: Computed tomography, free-floating thrombosis, medical therapy, descending aorta

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PP-069

Enhancing surgical medical education through 3D 360° virtual reality video blended teaching and problem-based learning

Chung Dann Kan[1,2], Wei Ling Chen[3]

[1]National Cheng Kung University Hospital, Department of Surgery, Division of Cardiovascular Surgery, Tainan City, Taiwan
[2]National Cheng Kung University, College of Medicine, Tainan City, Taiwan
[3]Taipei Veterans General Hospital, Department of Biomedical Engineering, Taipei City, Taiwan

Abstract

The landscape of medical education has changed dramatically, ushering in a new era of transformative learning methods. Traditional teaching paradigms have given way to more dynamic and engaging approaches that integrate digital transformation into formal education and lifelong learning. Blended teaching, which seamlessly combines face-to-face and online learning, has become a powerful tool to enhance the student experience and ensure continued effective learning. This presentation explores the innovative integration of 3D 360° virtual reality video blended teaching and problem-based learning in the surgical field of medical education. A notable application of this approach is the use of 3D 360° virtual reality video to capture routine surgical procedures. These immersive recordings offer new learners an unparalleled opportunity to experience the surgical environment in a realistic and engaging way. Interactive elements such as quizzes during video presentations encourage active participation and enhance understanding. Combining these technological advances, we developed the "360-degree panoramic virtual surgery guide" to enrich the multi-view virtual reality teaching plan. Initial courses developed include laser surgery for varicose veins, arteriovenous fistula creation, and percutaneous angioplasty for peripheral arterial occlusive disease. This breakthrough resource transcends the constraints of time and space, providing students with an unrestricted and valuable learning experience. Furthermore, it promotes the development of practical skills while adhering to the paramount importance of patient safety in clinical settings. This presentation will shed light on the implementation of blended teaching strategies, emphasizing the blending of traditional and modern learning methods. By combining the best of both worlds, we enable students to tackle complex surgical scenarios through problem-based learning. Based on student feedback and performance results, this approach is continually refined to ensure its relevance and effectiveness in the ever-evolving field of medical education. In conclusion, the integration of blended instruction and problem-based learning in surgical education is not just an evolution; it is a revolution. Our approach provides learners with the knowledge, skills and critical thinking skills required for real-world clinical practice while maintaining an unwavering commitment to patient safety. (supported by NSTC 112-2410-H-006-071-MY2; MOE Teaching Practice Research Project, Taiwan PMN1120940)

Keywords: 3D 360° virtual reality, blended teaching, immersive learning

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PP-070

Enhancing surgical skills and confidence: The impact of TSVS open distal arterial bypass surgery cadaver workshop

Chung Dann Kan[1,2], Wei Ling Chen[3]

[1]National Cheng Kung University Hospital, Department of Surgery, Division of Cardiovascular Surgery, Tainan City, Taiwan
[2]National Cheng Kung University, College of Medicine, Tainan City, Taiwan
[3]Taipei Veterans General Hospital, Department of Biomedical Engineering, Taipei City, Taiwan

Abstract

Aim: While endovascular therapy dominates the vascular field, the art of open distal arterial bypass surgery (opDABS) remains a cornerstone in treating advanced ischemic disease. However, there is a growing concern that surgeons are neglecting these fundamental skills in favor of endovascular techniques. This trend has led to a decline in opportunities for surgeons to become proficient in open surgery, potentially eroding their confidence and procedural abilities. In response, the Taiwan Society of Vascular Surgery (TSVS) has successfully organized a cadaveric workshop for three years. This workshop provides young surgeons with an immersive experience that replicates real surgery, allowing them to master these essential skills.

Material and Methods: Participants engaged in a 2-day cadaveric workshop focused on opDABS, comprising theoretical knowledge and hands-on simulations. To assess the workshop's impact, participants completed written tests evaluating their procedural knowledge and rated their surgical confidence and procedural competence.

Results: In 2022, 23 trainees completed the workshop, including assessments and feedback. Notably, 66.7% of participants had rarely performed opDABS, with the remaining 33.3% doing so about once a month. Before the workshop, participants had varying levels of confidence and familiarity with the procedure. About 2/3 were unfamiliar with the Valvulotome device. The workshop significantly improved in disease familiarity, operative confidence, and self-perceived competency (all $p<0.001$). The score of procedural knowledge increased from 49.62 to 65.22. All participants expressed high satisfaction with the workshop's relevance and realism, unanimously recommending the course to other trainees.

Conclusion: This cadaver workshop, featuring international collaboration among teachers, successfully imparted anatomical knowledge, surgical theory, and skills to participants. This course is expected to encourage participants to choose opDABS when endovascular therapy is not suitable, potentially leading to better long-term outcomes for patients. Now in its third year, this DABS cadaveric workshop, with international instructors and innovative teaching methods, consistently enhanced clinical surgeons' confidence and skills in opDABS. We invite surgeons across Asia to participate in this TSVS opDABS Cadaveric Workshop in July 2024 in Hualien, Taiwan. This cadaveric workshop organized by TSVS. This study received support from NSTC 112-2410-H-006-071-MY2 and the MOE Teaching Practice Research Project, Taiwan PMN1120940.

Keywords: Open distal arterial bypass surgery, cadaveric workshop, Taiwan Society of Vascular Surgery, surgical education

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PP-071

Determining the correlation between HbA1C level and diabetes stage during varicose disease in a diabetic population in one center in Azerbaijan

Ismayil Asgarov[1], Vugar Fattah Pur[2], Nazim Kasimov[2]

[1]Clinic "Istanbul NS",Department of Phlebology, Baku, Azerbaijan
[2]Azerbaijan State Advanced Training Institute for Doctors named by A. Aliyev, Department of Surgery, Baku, Azerbaijan

Abstract

Aim: The development of phlebosclerosis during long-term diabetes has been known to medical science for a long time. Phlebosclerosis causes stiffness of the vein wall. This problem is of particular importance during endovenous laser ablation as one of the modern treatment methods of lower extremity veins. Because it directly affects the effectiveness of the result.

Material and Methods: 140 patients with varicose veins and type 2 diabetes were included in the study. The average age of the patients was 57.1±0.62, ranging from 41 to 74 years. Patients were divided into 4 age groups: 41-50 age group - 30 patients; 51-60 age group - 58 patients; 61-70 age group – 46 patients; and the number of patients over 70 years old was 6. The average duration of diabetes (medical history) in the patients included in the study was 10.8±0.47 years. The longest medical history was recorded for 30 years. 29 (20.71%) patients included in the study had a history of diabetes for up to 5 years, 41 (29.28%) patients for 6-10 years, 35 (25%) for 11-15 years, 28 (20%) for 16 years. Between -20 years, and more than 20 years in only 7 (5%) patients. The average level of glycohemoglobin was 8.38%. The HbA1C indicator in the patient group with up to 5 years of diabetes experience was 6.45%, in the groups with 6-10 years, 11-15 years, 16-20 years, 21 years and more, 7.67%, 9.11%, 9, 96%, 10.63% tracked.

Results: As the duration of diabetes increases, glycemic control weakens. The development of angiopathy and phlebosclerosis should be taken into account during long-term uncontrolled diabetes. Special attention should be paid to this problem during effective endovenous laser ablation for varicose veins of the lower limbs.

Keywords: Phlebosclerosis, endovenous laser ablation, glycohemoglobin

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PP-072

Treatment of a giant near rupture arteriovenous graft pseudoaneurysm

Betul Nur Keser, Omer Arda Uslu, Kamil Emre Bicer, Fatih Avni Bayraktar, Ahmet Oztekin, Mehmet Senel Bademci, Cemal Kocaaslan, Ebuzer Aydin

İstanbul Medeniyet University Göztepe Prof. Dr. Süleyman Yalçın City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

A 56-year-old female with right brachiocephalic (BC) arteriovenous graft (AVG) was referred to an external hospital with swellings, erythema and severe pain in her right arm lasting for 2 months. She was suspected of AVG infection and started on intravenous antibiotic therapy. Afterwards, the patient was referred to our vascular access surgery experienced clinic. In physical examination two giant pulsatile masses with thinned skin were palpable. A duplex ultrasound examination revealed a prosthetic graft between the radial artery and axillary vein. Two pseudoaneurysms were seen, the distal one with a diameter of 48 mm and length of 9.3 cm, and the proximal one with a diameter of 15 mm and length of 3 cm. Nevertheless, we could not be sure whether the pseudoaneurysms originated from the brachial artery or the graft, since the masses were giant and the duplex ultrasound could not provide satisfactory imaging. Computed tomography angiography was planned for exact mapping of the vasculature of the upper extremity but could not be performed due to the history of anaphylaxis following exposure to contrast agent. The anastomosis site, distal brachial bifurcation and mid-brachial artery were marked preoperatively. Under general anesthesia, the artery is cross-clamped in these two spots following heparinization. The graft was cross-clamped at the anastomosis site and distally. Two pseudoaneurysms were seen in the graft. There were big tears in the huge one. The proximal site of the graft was ligated just distal to the brachial artery anastomosis. The distal site was ligated before the second pseudoaneurysm sac and a portion of the graft was excised hereby. The distal ligation site was supported via a transfixion suture. After declamping, the distal pulses were palpable and no ischemic signs were seen postoperatively. No new arteriovenous fistula anastomosis was planned in the same session because the tissues were remarkably fragile. The graft was not excised totally, because no infection was suspected in the surgical area. The tissue biopsy culture from the graft material revealed no microorganisms. The patient was discharged after completing her IV antibiotics for 14 days without any symptoms or complications.

Keywords: Arteriovenous graft, pseudoaneurysm, vascular access surgery

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PP-073

Results of treatment with foam sclerotherapy of large and deformed varicose veins in patients with CEAP clinical class C1-C3 venous insufficiency

Farid Gojayev, Adil Polat

Bağcılar Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Sclerotherapy is a widely used method in the treatment of reticular varicose veins. We used sclerotherapy as an alternative method in the surgical treatment of swollen and deformed varicose veins on the skin. The aim of our study was to provide both visual satisfaction and clinical improvement.

Material and Methods: A total of 40 patients (62 limbs) were included in the study. Venous clinical severity scoring (VCSS) of the patients was performed. According to the CEAP (Clinical, Etiological, Anatomical and Pathophysiological) classification, 0.5% polidocanol was used for patients with stage C0;C1 vein diameter 1-3 mm, and 1% polydocanol for patients with CEAP C2;C3-deformed varicose vein diameter >4 mm. Surveillance after sclerotherapy was performed at 10 days, 1 month, and 3 months.

Results: VCSS score was reviewed 3 months after treatment. Healing status of large venous swellings and reticular varices, adverse events (hyperpigmentation, atherosclerosis, duration of pain due to thrombosis), recurrence, cosmetic improvement, and quality of life analysis data were recorded and analyzed.

Conclusion: N=34 (86%) patients were satisfied with the results of foam sclerotherapy treatment of large and deformed varicose veins. While N=4 (9%) patients were hesitant to express their opinion, n=2 (5%) patients were not satisfied. If such venous packs cause cosmetic and clinical discomfort, foam sclerotherapy treatment can be performed safely and at low cost as an alternative method to surgery.

Keywords: Venous insufficiency, foam sclerotherapy, varicose swellings

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PP-074

Micronized purified flavonoid fraction and compression socks: A fresh perspective in chronic venous disease treatment beyond guidelines

Hakan Guven[1], Temmuz Taner[2]

[1]Heart and Arrythmia Hospital, Department of Cardiovascular Surgery. Bursa, Türkiye.
[2]Bursa City Hospital, Department of Cardiovascular Surgery Bursa, Türkiye

Abstract

Aim: The decision to perform ablation in cases of GSV insufficiencies is determined by the patient's symptoms and Doppler USG findings. In the guidelines, endovenous ablation methods are recommended as the first treatment option for vena saphena magna and vena saphena parva insufficiency. In this study, we investigated whether ablation is necessary for all CEAP 2 class patients with EVLA indication. We also examined whether the combined use of Micronized Purified Flavonoid Fraction (MPFF) and compression stockings is as effective as ablation in this patient group.

Material and Methods: 167 patients with CEAP 2 Class were evaluated for EVLA with Doppler USG, VCSS and CIVIQ-20. Preoperative measurements of VC, VRT, and VPC were performed. Pressure was applied to a 10 cm segment of GSV to simulate ablative occlusion. 120 patients (Group 1) with improved hemodynamics after compression underwent EVLA. 69 patients (Group 2) with no change in hemodynamics were followed up with Daflon® and compression stockings. Both groups were reevaluated at 6 months.

Results: In a study involving 167 patients with CVD, the mean age was 50.7 years, the average GSV diameter was 5.9 mm, and the insufficiency duration averaged 1.8 seconds. Demographic and GSV-related measurements did not significantly differ between the two groups. Group 1 exhibited superior initial venous hemodynamic values, which further improved after simulation. In contrast, Group 2 showed no significant improvement. Both groups demonstrated substantial enhancements in venous hemodynamics and clinical scores during the 6-month evaluation.

Conclusion: Endovenous ablation is recommended as the primary treatment choice for CEAP 2-6 patients displaying axial reflux in the vena safena magna. However, our research suggests that not every patient with an EVLA indication necessitates the procedure. Our study demonstrates that in a specific subset of CEAP 2 patients for whom EVLA is recommended, the use of Daflon® in combination with compression stockings yields comparable improvements. Even in patients with EVLA indications, we assert that the utilization of compression stockings alongside MPFF offers superior benefits in terms of safeguarding saphenous veins and alleviating the socioeconomic burden, particularly in those with normal or near-normal hemodynamic evaluations.

Keywords: Choronic venous disease, plethysmography, venous hemodynamics

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Hemodynamic model of the Abdominal Aortic Aneurysm using SimVascular

Sun Cheol Park[1], In Sung Moon[1], Mahmoud Elsayed[2], Ki Yoon Moon[1], Joseph Lee[1], Jang Yong Kim[1]

[1]The Catholic University of Korea, Seoul St. Mary's Hospital, Department of Vascular and Transplant Surgery, Seoul, Korea
[2]McMaster University, Faculty of Science, Department of Psychiatry and Behavioural Neurosciences, Canada

Abstract

Aim: Abdominal Aortic Aneurysm (AAA) is a condition where the large blood vessel that supplies blood to the abdomen, pelvis, and legs (the aorta) becomes abnormally enlarged or bulges. This can be dangerous because a weakened aneurysm could potentially rupture, leading to life-threatening internal bleeding. Monitoring and medical intervention are often necessary to manage AAA and prevent complications. Most of the medical intervention in AAA cases are made with preventive measures because it's very hard to defectively know if it's going to rupture due to the lack of our understanding to the hemodynamic portfolio. SimVascular is a software that helps in simulating the structure of an artery and its hemodynamics to help study conditions like aneurysms and stenosis. This project aims to building a methodological pipeline that would allow for developing a patient-specific simulation that predicts the rupture site and scenarios before the medical interventions in a way that would optimize it.

Material and Methods: The patient's CT scan would be fed to SimVascular where it underwent a few steps (i.e., path planning, segmentation, modeling, meshing) to simulate the mechanics of the blood flow and its interaction with the vessels' wall using the principles of CFD and FEA. Once the simulation has been executed the ParaView software is used to visualize the results. The simulation had a number of assumptions and hyperparameters that could be found in the Appendix I.

Results: Figures 1 and 2 show the visual representation of the wall sheer stress, pressure, and traction for control and AAA patients respectively. Given these visualizations along with the complete hemodynamical portfolio of the aneurysm, it would be possible to infer judgements on how likely the aneurysm is to rupture and thus design a patient specific intervention only when it's needed.

Conclusion: Building computational models like the one mentioned herewith offers a chance to have a better understanding of the hemodynamical portfolio of each patient's aneurysm and thus inform the medical decision that would help in providing the best patient-specific care.

Keywords: Abdominal aortic aneurysm, hemodynamic model, SimVascular

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PP-076

Limiting factor of interventional methods in peripheral arterial disease; reduced renal function

Ercan Kahraman

Amasya University, Faculty of Medicine, Department of Cardiovascular Surgery, Amasya, Türkiye

Abstract

Aim: Peripheral arterial disease can be seen together with many diseases, such as diabetes, hypertension, and coronary artery disease. However, kidney functions are also important as they can complicate imaging and interventional methods. In this study, we aimed to evaluate the renal functions of patients with peripheral arterial disease.

Material and Methods: Peripheral arterial patients (group1 1 n=101) and patients without peripheral artery disease (group 2 n=47) treated in our clinic between January 2021 and March 2023 were included in the retrospective and cross-sectional study. Patients undergoing hemodialysis due to chronic renal failure were not included in the study.

Results: The mean age of the patients included in the study was 61.54. There was no significant difference between the groups in terms of age ($p=0.290$) and gender ($p=0.44$). Diabetes, hypertension, and coronary artery disease were more common in the peripheral arterial disease group than in the control group. ($p<0.05$) In addition, HDL-C levels were lower in the peripheral arterial disease group than in the control group, while triglyceride levels were found to be higher. While BUN and creatine values were higher in the peripheral arterial disease group, GFR values were found to be statistically significantly lower ($p<0.001$). In the logistic regression analysis, HbA1C and pack-year of cigarette smoked had a positive and significant effect on peripheral arterial disease, while GFR and HDL-C were found to have a negative and significant effect ($p<0.05$).

Conclusion: Our study showed that patients with peripheral arterial disease have worse kidney functions than patients with similar characteristics. Today, the use of contrast is increasing in this patient group as interventional procedures are gradually increasing in the treatment of peripheral arterial disease. Even if the kidney functions of the patient who will undergo an interventional procedure are within normal limits, it should be taken into consideration that the kidney functions of this patient group have regressed. And in these patients, precautions such as renal function monitoring, pre-procedural hydration, and minimal contrast material use should be taken before imaging and interventional procedures.

Keywords: Peripheral artery disease, renal function, contrast exposure

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Treatment for pulmonary embolism with EKOS™ endovascular system and results up to ten years

Islam Yalic[1], Sedat Karaca[1], Yaprak Engin[1], Serkan Ertugay[1], Celal Cinar[2], Emrah Oguz[1], Fatih Islamoglu[1], Tanzer Calkavur[1]

[1]Ege University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye
[2]Ege University, Faculty of Medicine, Department of Radiology, İzmir, Türkiye

Abstract

Aim: Pulmonary thromboembolism (PTE) is a life-threatening disease in the acute and chronic settings. EKOS™ endovascular systems are one of the current treatment options for PTE which enable to use lower doses of fibrinolytics through echo sonic waves. We aim to investigate the effectiveness of EKOS™ Endovascular Systems in the treatment for PTE and the long-term results.

Material and Methods: This study included 10 patients treated due to massive PTE between 2014 and 2021. EKOS catheter was placed into the pulmonary arteries by using seldinger technique through femoral or popliteal vein. Alteplase was administered as a bolus and infusion through EKOS™ Endovascular Systems during the operation and postoperatively. During follow-up period, patients were evaluated by computed tomographic pulmonary angiography (CTPA) and telemedicine.

Results: The mean age of the patients was 60.2 years and 70% were female. Etiologic investigations revealed immobility after major surgery in 4 patients, oral contraceptive use in 2 patients, active cancer in 1 patient, and genetic predisposition in 2 patients. Postoperative CTPA showed recanalization and adequate flow in 9 patients, while minimal recanalization was observed in 1 patient. No major bleeding or death was observed in the early postoperative period. While 9 of 10 patients had uneventful follow-up, the patient with minimal recanalization and a diagnosis of breast cancer died of non-PTE-related causes in the sixth year after the procedure. No recurrent PTE was observed in 9 patients up to 10 years of follow-up, and deep vein thrombosis (DVT) was observed in 1 patient. Patients were anticoagulated with low-molecular-weight heparin in the early postoperative period and followed up with rivaroxaban in the post-discharge period. The patient with recurrent DVT was continued on apixaban.

Conclusion: PTE is a common and serious clinical entity, and several treatment modalities are available for this potentially fatal pathology. Less invasive treatment options can be lifesaving, especially in patients with poor general condition or with the risk of bleeding. Although the sample size of patients was low, EKOS™ application is found safe, reintervention is not needed, chronic thrombotic pulmonary hypertension was not observed in the long-term.

Keywords: Pulmonary thromboembolism, EKOS, echo sonic, endovascular, pulmonary embolism

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Schlerotherapy methods in venous insufficiency

Muhammet Murat Canturk

Bandırma Education and Research Hospital, Cardiovascular Surgery Clinic, Bandırma, Türkiye

Abstract

Aim: Schlerotherapy is a process that causes the formation of permanent obliteration and fibrosis in the vein as a result of endothelium damage, spasm, thrombosis and inflammatory reactions via the injection of the schlerosing fluid into the varicose vein. In this study; the early period results of the Schlerotherapy types applied in the treatment of varicose veins are compared.

Material and Methods: 39 patients who have applied to Bandırma Education and Researc Hospital Cardiovascular Surgery Clinic with varicose complaint with the determined grade I-II venous insufficiency and superficial varicose pakes via Doppler USG are included. The patients are specified randomly. Foam Schlerotherapy is applied to 22 patients and fluid Schlerotherapy is applied to 17 patients. Tessari method is used for the formation of the foam and air-fluid ratio is selected as 4/1. In both processes; 1% polidocanol is used as the agent. After the process, the bandages of the patients are removed after 3 hours and lidocaine cream and after that D-panthenol cream are applied throughout the injection area and the vessel traces. The patients are followed up for 3 months with calcium dobesilate and medium pressure compression socks. The satisfaction of the patients, tolerability against the treatment and the treatment complications during and after the process are recorded

Results: Ecchymosis, rash and hyper pigmentation are the most frequently seen complications in the patients and there is no significant difference in both groups. Only in 2 patients to whom fluid Schlerotherapy is applied, skin necrosis has developed and no severe allergic reaction is observed. IN terms of patient satisfaction; no significant difference is seen between both groups and patient satisfaction and tolerability against the treatment in the patients to whom foam Schlerotherapy is applied, are found better. The treatment period and the quantity of polidaconal in the patients received foam Schlerotherapy is lower than the other group.

Conclusion: In 1% polidaconal injection on the varicose pakes; it is shown that when foam Schlerotherapy method is preferred, it is more efficient despite it is not significant when compared to the fluid schlerotherapy.

Keywords: Schlerotherapy, foam, varicose vein

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PP-079

Is the Gensiri scale a guide in peripheral arterial disease?

Melike Elif Teker Acikel, Munevver Cevikkan, Mehmet Ugurcan Turhan, Ali Kubilay Korkut

University of Health Sciences Haseki Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Atherosclerosis is a generalized process involving the entire body vascular system. Peripheral arteries may be affected by atherosclerosis in patients who present with advanced coronary artery disease and are planned for coronary artery bypass grafting. The Gensini score indicates the severity of coronary artery disease. In this study, we investigated its relation with peripheral artery disease according to gensiri score in patients who underwent coronary artery bypass surgery.
Material and Methods: 102 patients who had coronary artery bypass surgery in our clinic between January 2021 and January 2023 were included in this study. The gens scale of the patients was evaluated. Peripheral contrast computed tomography was performed in all patients.
Results: The mean age of the patients was 52+2. 67 of the patients were male and 45 were female. Peripheral artery disease was detected in 38 of the patients. Peripheral artery disease was observed in patients with high Gensiri scale.
Conclusion: Peripheral arterial disease can be detected in advance in patients treated for coronary artery disease with the operative scale of the scale.

Keywords: Gensiri Scale, atherosclerosis, peripheral arteries

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PP-080

The endovascular treatment of vicereal artery aneurysms

Daehyun Hwang

Eulji University, Euijeongbu Eulji University Hospital, Department of Radiology, Euijeongbu, Republic of Korea (South Korea)
Injae University, Seoul Paik Hospital, Deaprtment of Surgery, Seoul, Republic of Korea (South Korea)

Abstract

Aim: Abdominal artery aneurysm may be treated by aneurysm exclusion,exscion,revascularization and endovascular techniques.The purpose of this study was to review the outcome of the management of abdominal artery aneurysm with catheter based technique.
Material and Methods: Between March 1997 and December 2022, 120 patients were identified with diagnosis of abdominal arterial aneurysm. This was iclusive of aneurysm disease of the celiac axix, superior mesentery artery (SMA),Inferior mesentery artery (IMA) and their branches. Surveillance without intervention occlurred in 23 patients and 19 patients underwent open aneurysmal repair (4 ruptures).The endovascular treatment of 48 consecutive patients (mean age 58, 60% men) with 20 visceral artery aneurysm (VAA) and 28 viceral artery pserudoaneurysm (VAPA) was the basis for this study. Original computed tomography(CT) scans and fluoroscopic imaging were evaluated.
Results: The endovascular treatment of visceral artery aneurysms was technically successful in 98% of 48 procedures,consisting 3 celiac axis repairs, 2 left gastric arteries, 1 SMA, 1 IMA, 12 hepatic arteries, 6 splenic arteries, 7 gastroduodenal arteries, 2 pancreaticoduodenal arteris and 5 renal arteries. Of thease 29 (60%) were performed for symptomatic disease (5 ruptured aneurysms). Procedures were performed in the endovascular suite under local anesthesia with conscious sedation (98%).
Conclusion: Visceral artery aneurysm and pseudoaneurym can be successfully treated with endovascular means with low periprocedual morbidity however, the urgent repaire of thease lesions is still associated with elevated mortality rates. Current catheter based techniques extended our ability to excluded visceral artery aneurysms.

Keywords: Endovascular, visceral, aneurysms

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PP-081

Major adverse limb events in traumatic acute arterial pathology patients

Funda Yildirim, Yusuf Kuscu, Halil Demren, Dilsad Amanvermez Senarslan

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Aim: We present polytravma patients due to gunshot injury, traffic accident or stab wound injuries and their associated vascular travma pathologies. Major Adverse Limb Events (MALE) of the patients were also evaluated.

Material and Methods: From the beginning of 2023, we operated 15 multiple travma patients resulted vascular injuries. We examined the patients at the emergency service and Computed Tomography Angiographic evaluation demonstrated the vascular travmas. The demographic characteristic of the patients and their MALE results were examined retrospectively. MALE was defined as severe limb ischemia leading to an intervention or major vascular amputation. The incidence of MALE, peripheral vascular interventions, and all peripheral vascular outcomes over a median follow-up of three months were evaluated.

Results: The demographic characteristics of the patients were 3 female, 12 male patients. The average age of the patients was 30. The travma types were as follows: 5 gunshot injury, 3 traffic accident, 7 stab wound injury. The peripheric bypass surgery were performed in 9 of the patients. The primer popliteal artery repair was done in one patient with stab wound injury. The two of the patients were treated as ligation of the affected artery: one is peroneal artery, the other is deep femoral artery and resolving hematoms. From 15 patients, only one patient had amputation and the travma type was crush injury.

Conclusion: Acute limb ischemia was defined as limb threatening ischemia that was confirmed by using limb hemodynamic parameters or imaging and led to an acute vascular intervention, peripheral artery surgery or reconstruction, peripheral angioplasty, or amputation within onset of symptoms. The development of MALE is mostly related the severity of the travma. Early intervention in vascular trauma affects the rate of MALE in the young patient population.

Keywords: Vascular trauma, major adverse limb events, acute arterial pathology

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PP-082

Guidewire removal 1 month later wire loss in the inferior vena cava during cathaterization: A case report

Halil Demren, Dilsad Amanvermez Senarslan, Aylin Yildiz, Funda Yildirim

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Aim: Central venous catheterization is the placement of a catheter in central veins like the superior vena cava, the right atrium or the inferior vena cava by the Seldinger technique. It is indicated when access for administration of drugs, extracorporeal blood circuits, haemodynamic monitoring, interventions or hemodialysis is needed. We present an old lady with need of urgent hemodialysis and the catheterized in the emergency service by way of the right femoral vein and the guide wire was lost in the intravascular space.
Material and Methods: The patient was consultated to our clinic. We observed the guidewire located in the inferior vena cava and it could be removed when the patient was appropriate hemodynamically. The scopic control was performed and the guide wire was removed surgically by right femoral incision under local anesthesia. The femoral vein was repaired.
Conclusion: When inserting a central venous catheter, appropriate preparation and asepsis, positioning of the patient, and the use of ultrasound should be considered. Complications of central venous catheterization can be mechanical, infectious or thrombotic complications that are mostly preventable. Retained guidewires increase morbidity and mortality, particularly when used in the vascular system. Several predisposing factors are proposed for retained guidewires after central venous catheter placement including inattention, inexperienced operator, inadequate supervision of trainees, lack of communication, and overtired staff. In order to reduce the rate of this complication, many facilities have a competency-based training process to prevent guidewire loss such as holding the guidewire and stopping the advancement of the guidewire upon encountering resistance. The use of standardized checklists during CVC insertion that includes the guidewire removal can further lower this complication.

Keywords: Central venous catheterization, complication, guide-wire loss

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PP-083

Endovenous interventions for hemodialysis access

Funda Yildirim, Dilsad Amanvermez Senarslan, Yusuf Kuscu, Halil Demren, Adnan Taner Kurdal

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Aim: Hemodialysis remains the most common treatment modality for chronic kidney failure. A functioning vascular access is the key point to providing adequate hemodialysis therapy. We present here our practice of endovascular interventions for hemodialysis access in the hybrid operating room- angiography laboratory.

Material and Methods: From the opening of angiography laboratory, approximately 1000 patients were treated for hemodialysis access for just simple catheter guiding or for complex pathologies as maintaining access patency. We retrospectively examined the patients since July 2016.

Results: From 1000 patients, 798 have catheterized by angiographic control and guiding. Because the guiding controlled by scopy system, the control chest X-ray was not required. This is the simplest way of endovenous interventions for hemodialysis access. For complex cases, maintaining the access patency, 38 patients needed ballon dilatations and stiff wire guiding to pass the stenosed segment of the main veins. For 54 patients, arteriovenous fistulas were present and venous enterance dilatations were performed by PTA ballooning. And for remainig 110 patients with redo arteriovenous fistula, we first evaluate the related extremity by venography. Then appropriate venous access method, either fistula or catheter was applied to the patients. To decrease the puncture site complications, ultrasound was used.

Conclusion: Finally, innovative solutions to treat stenosed and occluded thoracic central veins can provide an approach for creating a vascular access and allow patients with exhausted vasculature to remain on hemodialysis. Prolonging the vascular access patency with appropriate use of devices such as drug-coated balloons and stent grafts may complement the novel techniques of creating arteriovenous access.

Keywords: Hemodialysis, vascular access, endovenous intervention

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PP-084

Repair of primary aortoesophageal fistula with thoracic endovascular replacement and esophageal stent: A case report

Tahsin Murat Tellioglu, Hidayet Onur Selcuk, Irem Yesiloren,
Haci Anil Solak, Hami Can, Hasan Iner, Ismail Yurekli, Levent Yilik, Ali Gurbuz

İzmir Katip Çelebi University Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aortoesophageal fistula is usually observed after aortic aneurysm and reconstruction surgery. Primary aorto-enteric fistulas are rare and usually caused by aortic aneurysms. The fistula formation mechanism is most likely due to ischemia in the aorta, esophagus and intestinal walls. The esophageal wall is damaged by the pulsatile movements of the adjacent aortic aneurysm, followed by necrosis of the esophageal wall as a result. Aortoesophageal fistula is a clinical condition that is difficult to diagnose and treat, and has a high mortality when detected. In this case, we present the successful treatment performed on a patient with aortoesophageal fistula. A 72-year-old female patient was admitted to emergency department with hematemesis and dyspnea. Her general condition was critical, she was confused, hypotensive and tachycardic.(BP:80/50mmHg HR:110/min) On CT, an ulcerated aneurysmatic appearance was observed in the thoracic aorta, reaching 7 cm at its widest point, and approximately 2 cm of thrombus material and air densities around it. Clinical and radiological findings were significant for aortoesophageal fistula. Thereupon, urgent TEVAR procedure was planned for the patient. TEVAR was performed with a 40*36*150mm endovascular graft (Medtronic Valiant Captivia) through the right femoral artery under general anesthesia. No endoleak was detected in the control angiography. After the operation gastroenterology department was consulted. Upon detection of a 7-8 cm long tissue defect and active bleeding at the 20th cm of the esophagus in the endoscopy, a 15 cm long esophageal stent was placed. In the control contrast-enhanced CT angiography and endoscopy, no findings in favor of aortoesophageal fistula were detected. She was discharged on 7th postoperative day without any complication. Aortaesophageal fistula is difficult to diagnose and treat. Therefore, it should be kept in mind in an elderly patient presenting with upper gastrointestinal bleeding if there is a concomitant aortic aneurysm. We believe that the combined evaluation of CT and endoscopy for rapid diagnosis is the most reliable method in the diagnosis of fistula. We think that a multidisciplinary approach and emergency surgical treatment is the best and only chance for survival in these patients.

Keywords: Aortoesophageal fistula, descending aortic aneurysm, thoracic endovascular aneurysm repair

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PP-085

Glasgow Aneurysm Score: A predictor of long-term mortality following endovascular repair of abdominal aortic aneurysm?

Anil Ozen[1], Metin Yilmaz[2], Gorkem Yigit[3], Isa Civelek[1], Mehmet Ali Turkcu[1], Ferit Cetinkaya[1], Ertekin Utku Unal[4], Hakki Zafer Iscan[1]

[1]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]VM Medicalpark Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Hitit University, Faculty of Medicine, Department of Cardiovascular Surgery, Çorum, Türkiye
[4]Ufuk University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: To evaluate the value of Glasgow Aneurysm Score (GAS) in predicting long-term mortality and survival in patients who have undergone endovascular aortic aneurysm repair (EVAR) for abdominal aortic aneurysm (AAA).

Material and Methods: A retrospective single-center study of 257 patients with non-ruptured AAA undergoing EVAR between January 2013 and 2021. GAS scores were compared between the survivors (group 1) and the long-term mortality (group 2) groups. Cox regression analysis was used to determine independent predictors of late mortality. Receiver operating characteristic curve (ROC) analysis was used to determine the optimum cut-of values of GAS values to determine the efect on late-mortality. Survival analysis was conducted using Kaplan-Meier.

Results: The study included 257 patients with a mean age of 69.75±7.75 (46–92), who underwent EVAR due to AAA. Average follow up period was 18.98±22.84 months (0–88). Fourty-fve (17.8%) mortalities occured during long-term follow-up. A past medical history of cancer resulted in a 2.5 fold increase in risk of long-term mortality (OR: 2.52, 95% CI 1.10–5.76; p=0.029). GAS values were higher in group 2 compared to group 1 (81.02±10.33 vs. 73.73±10.46; p<0.001). The area under the ROC curve for GAS was 0.682 and the GAS cut-of value was 77.5 (specifcity 64%, p<0.001). The mortality rates in patients with GAS <77.5 and GAS >77.5 were: 12.8% and 24.8% respectively (p=0.014). Every 10 point increase in GAS resulted in approximately a 2 fold increase in risk of long-term mortality (OR: 1.8, 95% CI 1.3–2.5; p<0.001). Five year survival rates in patients with GAS <77.5 and >77.5 were 75.7% and 61.7%, respectively (p=0.013).

Conclusion: The fndings of our study suggests that an increase in GAS score may predict long-term mortality. In addition, the mortality rates in patients above the GAS cut-of value almost doubled compared to those below. Furthermore, the presence of a past history of cancer resulted in a 2.5 fold increase in long-term mortality risk. Addition of cancer to the GAS scoring system may be considered in future studies. Further studies are necessary to consolidate these fndings.

Keywords: Endovascular, aortic aneurysm, risk assessment, analysis, survival, mortality

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PP-086

Analysis of the postoperative hemodynamic changes in varicose vein surgery related with small saphenous vein reflux

Joonkee Park, Hyoshin Kim, Shin-Seok Yang, Dong-ik Kim

Sungkyunkwan University School of Medicine, Samsung Medical Center, Department of Surgery, Division of Vascular Surgery, Seoul, Korea

Abstract

Aim: To evaluate the postoperative hemodynamic changes in varicose vein surgery related with SSV reflux using APG.
Material and Methods: Totals of 181 limbs and 178 patients who underwent high ligation and stripping (HLS) (87 limbs), radiofrequency ablation (RFA) (43 limbs), or endovenous laser ablation (EVLA) (51 limbs) for SSV reflux from 1995 to 2022 were enrolled. We measured venous volume (VV), venous filling index (VFI), ejection fraction (EF), and residual volume fraction (RVF) preoperatively and at postoperative one and 6 months.
Results: Comparing preoperative results to those at postoperative 1 month, the reduction rates of VV, VFI, and RVF were 27, 53, and 31%, while EF increased by 18% ($p<0.001$). Comparing preoperative and postoperative 6 month, the reduction rates of VV, VFI, and RVF were 27, 45, and 35%, while EF increased by 27% ($p<0.001$).
Conclusion: There were hemodynamic improvement in the lower leg after varicose vein surgery including HLS, RFA, and EVLA.

Keywords: Air plethysmography, small saphenous vein, radiofrequency ablation, high ligation and stripping, endovenous laser ablation

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PP-087

Prospective cohort of type B intramural hematoma: Can we watch and wait?

Rosanna Yin Ting Chow, Stephen WingKeung Cheng

Queen Mary Hospital, Department of Surgery, Division of Vascular Surgery, Hong Kong, China

Abstract

Aim: Intramural hematoma has been a controversial area for aortic interventions. We aim to identify clinical and radiological predictors for progression of type B intramural hematoma (IMH) patients and review long-term clinical outcomes.

Material and Methods: This is a review of prospective collection of type B IMH in Division of Vascular Surgery of Queen Mary Hospital of Hong Kong from 2008 to 2023. Patients' demographics, co-morbidities, clinical presentation, radiological findings, and clinical progress were reviewed.

Results: Within a period of 15 years, 18 patients suffered from type B IMH. Median age was 66.9 years old. Patients most presented with back pain. Mean maximal aortic diameter was 37.9mm with mean maximal hematoma thickness of 9.62mm. Median time to first follow up computerized tomography (CT) aortogram was 14 days. Early progression is found in 38.9% patients. No statistically significant clinical predictor was identified. For radiological markers, IMH length great than or equal to 26mm on initial CT was the only positive predictor for early progression (hazard ratio 10.1; 95% CI: 1.06-96.4; p=0.044). The median follow up was 5 years. Majority of patients had regression upon follow up despite initial progression. Upon the latest CTs, only 5.9% of type B IMH patients had IMH progression. Although 29.5% of patients had aortic complications, none needed aortic intervention and there was no IMH related mortality.

Conclusion: Despite radiological progression in type B IMH, clinical complication might not entail. Close monitoring and surveillance might avoid excessive aortic intervention.

Keywords: Type B intramural hematoma, intramural hematoma, acute aortic syndrome

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PP-088

Treatment approach to frightening complication lesion that may cause necrosis after sclerotherapy

Ilknur Cihan

Beykoz State Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Sclerotherapy is the gold standart treatment method that is frequently used in the treatment of reticular veins and telangiectasias. The treatment and results applied to heal the complication lesion that may cause skin necrosis in a large area after sclerotherapy in a female patient are described.

Material and Methods: Sclerotherapy was planned to be applied to three different reticular veins of a 70 kilograms, 43 years old female patient with normal Doppler ultrasonography results and only cosmetic complaints. Procedure doses were determined according to the Peripheral Artery and Vein Diseases National Treatment Guideline 2021. 0,5ml of the drug, 1 ampoule of which is 2 ml and include 10mg lauromacrogol was applied to each reticular vein as liquid sclerotherapy with low pressure. No skin fading or pain was observed during the procedure. Bandage was applied after procedure and recommended to wear compression stockings for 3 weeks. Cream was prescribed for possible ecchymosis etc. Two days after procedure, the patient came to our clinic with complaints of severe pain, discoloration in the area of the reticular vein, which is thought to flow into the Saphenous vein, close to the ankle. In Doppler ultrasonography, arterial structures and saphenous vein were normal. In the anamnesis, it was learned that the compression stocking with an open toe was raised to the ankle level and the ankle was stuck. In the treatment, compression was stopped, comfortable shoes without high heels are recommended. Diosmin used as a venoactive drug and massage with oils were used regularly to increase circulation every day. It was observed that the skin lesion become to heal with enzyme alginogel and bacterial collagenase derived from the non-pathogenic Vibra Algynolyticus chain and hyaluronic acid.

Results: Starting to heal was reported as ten days and full recovery was reported as three months.

Conclusion: Although sclerotherapy is a gold standart treatment method for reticular veins, it can occasionally cause serious complications even if the procedure is performed in accordance with the rules. Sharing experiences in treating complications and the measures taken to prevent complications from occurring can increase our success and control over the procedure.

Keywords: Sclerotherapy, telengiectasias, necrosis, complications, treatment, reticular

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PP-089

Peripheral vascular injuries

Ali Cemal Duzgun, Ayse Ozcetin, Salih Fehmi Katircioglu

Ankara Training And Research Hospital, Cardiovascular Surgery Clinic, Ankara, Türkiye

Abstract

Aim: To review the treatment methods applied to patients admitted to the emergency department with peripheral vascular injuries in the light of the literature.
Material and Methods: 50 patients admitted to the emergency department of SBÜ Ankara Training and Research Hospital between 2018 and 2022 with peripheral vascular injuries were evaluated.
Results: A total of 50 patients, 41 males, 9 females, mean age 31.94 (17-61).Injury sites were as follows: lower extremity 32, upper extremity 12, neck region 6; injury type 23 gunshot wounds, 25 penetrating and sharp instrument injuries, 1 fall from height and 1 patient with spiral stone injury.35 patients underwent saphenous vein interposition to the injured vascular structure, 13 patients underwent primary repair, 2 patients underwent ligation procedure.4 patients died.

Keywords: Peripheral injury,lower extremity,upper extremity

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PP-090

Challenges and innovative approaches in cardiac surgery: A case of gaucher type 3C with porcelain aorta, severe aortic stenosis, and mitral insufficiency

Melih Alma, Timucin Sabuncu, Murat Guvener

Hacettepe University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Gaucher type3C disease with porcelain aorta can cause severe hemodynamic impairment. Gaucher disease is an autosomal recessive lysosomal storage disorder caused by a deficiency of the enzyme glucocerebrosidase. Gaucher type3C features mitral and aortic calcification, oculomotor apraxia, and hepatosplenomegaly. Gaucher is the most frequent lysosomal storage disease, subtype 3C is extremely rare. We present a case patient with Gaucher type 3c have severe aorticstenosis and mitral insuffiency underwent TAVR and fibrillating heart mitral valve surgery. 16 year old boy, as a known gaucher type3c referred chest pain,after cardiac assesment severe aortic stenosis and widespread aortic calcifitication noted, all asending was aort fully calcified its compatible with porcelain aort, there was no proper place to cross clamp aort so he underwent tavr he is discharged uneventfully, after 2years later he admitted lung edema,further test relaeved severe mitral insuffiency with corda rupture,after further assestment decided mitral valve surgery. Known previous history of that there is no crossclamping area we decided to perform fibrillating heart mitral valve surgery. Right femoral artery and vein canulated, redo sternomy and further blunt and sharp dissection made,temporary pace implanted and connected to fibrillating device and fibrillation started, co2 given to mediastanium for preventing air embolism, left atriotomy done and mitral valve inspected, severely malformed anterior and posterior valve seen both of them severely enlarged and prolaped 2 of çorda tendiniae rupture seen,repair was not an option we decided to perform mitral valce replacement. Mvr made and standart fashion after 1 day icu follow up,he discharged uneventfully po 7th day. In patients with porcelain aorta, cardiac surgery is still challenging. Cardiac surgeons need to recognize the growing importance of this condition to increase the possibility of preoperative diagnosis and optimization of the therapeutic approach. To reduce the risk of strokeand aortic dissection, appropriate preoperative evaluation and adoption of suitable strategy are required for cardiac surgery in patients with porcelain ascending aorta.TAVR has been established as a reproducible and safe technique for treating severe aortic stenosis in high-risk patients. Several authors have reported acceptable outcomes of TAVR in patients with porcelain aorta. Inpatients who have porcelain aorta,it is preferable to perform mitral valve surgery without aortic crossclamping by employing hypothermia and a fibrillating heart.

Keywords: Porcelain aort, TAVR, gaucher, mitral valve

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PP-091

Intravascular lipoma diagnosed as Angiomyolipoma with surgical excision: A case report

Ho Jung Park, Young Jin Han

University of Ulsan, College of Medicine and Asan Medical Center, Department of Surgery, Division of Vascular Surgery, Ulsan, South Korea

Abstract

Intravascular lipomas are rare venous tumors, typically localized within the inferior vena cava (IVC) but infrequently observed in other major veins. Despite their predominantly benign nature, they can mimic other pathologic conditions, necessitating careful diagnosis and management. We present a case initially suspected as an intravascular lipoma, which, following surgical excision, was diagnosed as an angiomyolipoma. We report the case of a 56-year-old woman referred due to incidental findings on an abdominal CT scan, showing a 1.5cm-sized mass characterized by fat density and extending from the right renal vein to the IVC. While the initial assessment raised suspicion of an intravascular lipoma, its mobility within the IVC raised concerns regarding potential thromboembolic events. Moreover, its origin from the renal vein emphasized the need for histological diagnosis, prompting the decision to proceed with surgical excision. The surgical intervention involved mass excision through venotomy on the right renal vein. The patient was discharged on the third postoperative day without any complications. Subsequent pathology revealed an angiomyolipoma, an unexpected diagnosis given the suspicion of an intravascular lipoma based on CT findings. Angiomyolipomas, typically benign renal mesenchymal neoplasms, can lead to complications when they invade the renal vein or IVC. This case shows the necessity of close evaluation and surgical excision when encountering unusual vascular masses. While intravascular lipomas are rare and usually benign, achieving a precise diagnosis and management becomes essential, especially when thromboembolic risks or malignancy concerns are present.

Keywords: Intravascular lipoma, angiomyolipoma, inferior vena cava, renal vein, surgical excision, differential diagnosis

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PP-092

Surgical management of low pressure pulmonary artery aneurysm associated with bicuspid pulmonary valve

Berent Discigil[1], Isa Bolat[1], Emre Pinar[1], Sevil Gulasti[2]

[1]Adnan Menderes University, Faculty of Medicine, Department of Cardiovascular Surgery, Aydın, Türkiye
[2]Adnan Menderes University, Faculty of Medicine, Department of Cardiology, Aydın, Türkiye

Abstract

Pulmonary artery aneurysm (PAA) is a rare entity, reported incidence of 1:1400. Bicuspid pulmonary valve association is even rarer. We present a case of pulmonary artery aneurysm associated with bicuspid pulmonary valve. A 45 year old hypothyroid woman with insulin dependent diabetes presented with effort related dyspnea. Chest X-ray showed a round mass in the left middle lung field. Contrast-enhanced chest computed tomography revealed a PAA with a diameter of 59 mm at the level of main pulmonary artery extending to left pulmonary artery. Transthoracic echocardiography showed severe pulmonary regurgitation and pulmonary valve stenosis with a peak systolic pressure gradient in the transpulmonary valve of 57 mmHg with preserved systolic function of both left and right ventricles. Pulmonary artery pressure was measured 35mmHg. There was no other intracardiac anomaly. A coronary angiogram showed stenosis in her right coronary artery. Her blood screening showed no evidence of connective tissue disorder or vasculitis. The patient was decided to proceed for surgical management of her PAA. She was put on total cardiopulmonary bypass through median sternotomy. Her pulmonary valve was found bicuspid on inspection. On beating empty heart, pulmonary valve was replaced with 29mm bioprosthesis, possible largest one. PAA wall was resected 9cm long and 5cm width anteriorly down to the left pulmonary artery and aneurysmorrhaphy was performed. Her right coronary artery was bypassed with saphenous vein graft. Her postoperative period was uneventful and discharged home on day 7. On echocardiography, main pulmonary artery was measured 30 mm with normal functioning pulmonary prosthesis. Histologic examination of resected pulmonary artery wall showed degenerative changes. In her own words, she described “lightness” on her chest one month later. She remained symptom free one year after surgery. Literature is unclear about the management of low pressure PAA with no significant left to right shunts. However, the patient presented here had severe pulmonary regurgitation. By having her pulmonary valve replaced along with aneurysmorrhaphy, her right ventricular volume overload was relieved and the associated haemodynamic burden of volume overload due to pulmonary regurgitaion on the pulmonary artery wall was eliminated.

Keywords: Pulmonary artery aneurysm, bicuspid pulmonary valve, aneurysmorrhaphy, pulmonary valve replacement

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PP-093

NIRS follow-up and neurological complication results of patients who underwent carotid endarterectomy with shunt in patients with contralateral total occlusion

Mehmet Ali Yesiltas, Cihan Yucel, Ismail Haberal, Mehmet Kursat Kurt, Ilhan Sanisoglu

İstanbul Prof. Dr. Cemil Tascioglu City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The risk of stroke is higher in patients with carotid artery stenosis whose contralateral side is completely occluded. Although there has been a trend towards carotid stenting in this patient group in recent years, it is still seen as the gold standard when looking at many carotid endarterectomy (CEA) results in the literature. We aimed to share the results of CEA with shunt, which we performed on patients with contralateral total occluded carotid stenosis in our clinic, and our NIRS results in these patients.

Material and Methods: All CEA patients who underwent CEA in our clinic between January 2020 and June 2023 were retrospectively examined. Among these patients, patients with occlusion in the contralateral carotid artery and those who underwent CEA were included in the study. All of these patients underwent CEA with shunt and their peroperative NIRS values were checked. We evaluated it in terms of postoperative neurological complications.

Results: 46 patients were included in the study. 18 patients (39%) were women. The average age was 68.25 (min: 56, max: 81). 14 patients (30.2%) were asymptomatic, 18 patients (39.2%) were presented with stoke, 10 patients (21.8%) with transischemic attack, 4 patients (8.8%) with Amaurosis fugax clinic. The pre-clamp NIRS value was 61.6±7.8. After shunt placement, NIRS value was 58.1±10.3. There was a 20% or more decrease in NIRS value in 5 patients (10.9%). There was no significant NIRS change in other patients. In terms of neurological complications in the postoperative period, transient ischemic attack was observed in 2 patients (4.3%). In 1 patient (2.2%), a motor deficit showing side symptoms developed. One of the patients who had a transient ischemic attack was in the group of patients whose NIRS decreased.

Conclusion: Especially in contralateral total occluded carotid stenosis, the use of shunt during CEA does not cause a significant decrease in NIRS value. In this patient group with a high risk of neurological complications, performing CEA using a shunt and monitoring with NIRS during CEA protects against cerebral hypoperfusion.

Keywords: NIRS, carotid endarterectomy, neurological complication, carotid disease

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PP-094

Vascular graft infection: Results of two-decade's clinical experience on aortoiliac and infrainguinal reconstruction

Ilya Karasov[1], Vladimir Samartsev[1], Andrey Oparin[2]

[1]Perm State Medical University, Department of General Surgery, Perm, Russia
[2]Perm Clinical Hospital №4, Department of Vascular Surgery, Perm, Russia

Abstract

Aim: Vacular graft infection is a big problem in arterial reconstructive surgery with significant morbidity and mortality. The paper aims to analyse the vascular graft infection treatment experience in a single medical centre.
Material and Methods: A single-centre retrospective study. Medical records of patients treated for vascular graft infection from 1999 to 2022 were observed.
Results: The final group included 94 patients (P0,P1 and P2 for Bunt classification). 83 patients (88.3%) were men, 11 (11.7%) were women. 79 of them had previously been operated in our department(the complication rate was 3.8% - 79 out of 2088). The minimal time for the treatment of PI was 13 days after graft implantation, the maximum was 23 years. 51 patients (56.0%) were primary operated with polytetrafluoroethylene (PTFE) prostheses, 37 patients (40.7%) received a Dacron graft. In 3 cases (3.3%), a combination of these materials was observed. In 3 cases, the material of the prosthesis could not be determined. Thirty-day mortality was 27.7% (26 people), overall - 29.8% (27). The amputations rate was 23.4% (22 patients). The most common causative agent of infection was Staphylococcus aureus. There was no significant difference of age on the number of hospitalizations in the vascular department, prosthesis material, sex and age of the patient on the development of lymphorrhea. The material of the prosthesis also did not affect the formation of the external fistula.

Keywords: Vascular graft infection, vascular graft, infrainguinal reconstruction, surgery complications

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PP-095

Spontaneous rupture of splenic artery aneurysm complicated by rupture of the celiac trunk

Zaur Guseinov, Ebuzer Aydin, Cemal Kocaaslan, Mehmet Senel Bademci

Medeniyet University Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

In this case, we presented the emergency surgical treatment of a ruptured splenic artery aneurysm (SAA), which was complicated with intraoperative celiac artery injury during splenectomy and was sent to our hospital from an external center with a preliminary diagnosis of gastric bleeding. A 39-year-old patient was diagnosed with a splenic artery aneurysm. The patient was sent to the interventional radiology department of our hospital for coil embolization due to the development of gastric bleeding after gastric biopsy, considering that there was a mass in the stomach by the gastroenterology department of the external medicine center. During transfemoral angiography, embolization of the splenic artery aneurysm was performed. Due to insufficient hemostasis, it was decided to have an open splenectomy with resection and ligation of the splenic artery aneurysm. During the operation, it was observed that the celiac body was completely cut. The splenic artery aneurysm sac eroded and punctured the stomach. The stomach was performed by general surgery. A cardiovascular surgery team was invited. The celiac artery was performed by end-to-end anastomosis. The postoperative period proceeded without complications. The patient's condition is stable. Emergency surgical treatment of rupture of the splenic artery aneurysm requires a different treatment strategy compared to routine treatment of non-ruptured SAA. Preference should be given to endovascular methods, but in some cases the method of choice is open surgery. In this case, minimizing the trauma of surgery does not affect the severity and fullness of the main volume of surgery. Clinical suspicion, early diagnosis, resuscitation, early surgical intervention, along with adequate preoperative and intraoperative blood and fluid replacement are the main elements of treatment.

Keywords: Aneurysm, rupture, splenectomy, celiac artery, embolization

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PP-096

Loeys-Dietz syndrome presenting with abdominal aortic aneurysm with bilateral iliac artery aneurysms and superior gluteal artery aneurysm; Case report

Kazuki Tsukuda, Yohei Yamamoto, Ai Kazama, Yoshiki Wada, Hiroki Uchiyama, Toru Kikuchi, Toshifumi Kudo

Tokyo Medical and Dental University Hospital, Department of Vascular Surgery, Tokyo, Japan

Abstract

Loeys-Dietz syndrome (LDS) is a genetic connective tissue disorder associated with a Transforming Growth Factor Beta Receptor (TGFBR) 1 or TGFBR2 mutation, often characterized by tortuous arteries and aortic aneurysms. It is known that the thoracic aorta is commonly involved. However, we report a previously undiagnosed patient who presented with an abdominal aortic aneurysm and a superior gluteal artery aneurysm without thoracic aortic involvement. The patient is a 28-year-old woman with a history of lumbar scoliosis, Attention-Deficit Hyperactivity Disorder (ADHD), migraine, and dysmenorrhea. A pulsatile mass in her abdomen brought her to our hospital. The CT scan revealed an abdominal aortic aneurysm (53 mm), bilateral iliac artery aneurysms, and a saccular right superior gluteal artery aneurysm (16 mm). She had numerous other abnormalities such as marked tortuosity of the cerebral arterial system and multiple arterial dilatations throughout the body. Genetic testing revealed TGFBR1 mutation. Therefore, we diagnosed her as having LDS. She did not have physiologic findings characteristic of this disease such as hypertelorism and a split uvula or cleft palate. At first, we performed coil embolization to the right superior gluteal artery aneurysm and then open repair for the abdominal aortic aneurysm as a secondary surgery. Because of the bilateral common iliac artery aneurysms, the distal anastomosis was placed at the left common iliac artery, right external iliac artery and right internal iliac artery with a quadrifurcated prosthetic graft. There were no intraoperative complications, and the postoperative course was good.

Keywords: Loeys-Dietz syndrome, abdominal aortic aneurysm, iliac artery aneurysms, superior gluteal artery aneurysm, open surgery

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PP-097

A case report of aortobifemoral bypass due to stent stripping during percutaneous angioplasty

Elnur Mammadli, Salih Ozcobanoglu, Rauf Onder, Ozan Erbasan, Ilhan Golbasi, Cengiz Turkay, Omer Bayezid

Akdeniz University, Department of Cardiovascular Surgery, Antalya, Türkiye

Abstract

A 68-year-old female patient came to our hospital with a disabling bilateral lower extremity claudication. According to the results of the examination, percutaneous angioplasty was planned for the patient's bilateral external iliac artery. First, angioplasty was performed on the right external iliac artery. Then, a balloon-deployed stent was placed in the right external iliac artery. By imaging, it was determined that full patency was achieved. Afterwards, a guide was sent from the right external iliac artery to perform angioplasty on the left external iliac artery. At this stage, the guide was attached to the stent of the right external iliac artery and stripped off the stent. In this case, the procedure was terminated and the patient was taken to the emergency operating room. The patient underwent aortobifemoral bypass surgery using a 14/7 dacron graft. In the postoperative bilateral lower extremity arterial doppler USG, FA, PA, TPA and DPA flows were evaluated as triphasic.

Keywords: Peripheral arter disease, percutaneous transluminal angioplasty, aortobifemoral bypass

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PP-098

Successful treatment of a patient with occlusion of all infrapopliteal arteries

Ahmet Kayan[1], Ali Fuat Karacuha[2]

[1]Kırıkkale High Specialization Hospital, Department of Cardiovascular Surgery, Kırıkkale, Türkiye
[2]Trabzon Kanuni Training and Research Hospital, Department of Cardiovascular Surgery, Trabzon, Türkiye

Abstract

Revascularization is currently the most effective treatment method in patients with peripheral artery disease below the knee. Percutaneous treatments are preferred instead of surgical treatment in patients with high surgical risk, poor runoff and risk of wound infection. We present percutaneous angioplasty in a patient with total occlusion of all infrapopliteal arteries from the popliteal artery. A 42-year- old male patient was admitted to our hospital with severe claudication and ulcerated lesion on his foot. He had no comorbidities other than dyslipidemia and hypertension. Our patient, who had previously visited an external center, was told that they made a medical decision as a result of DSA digital angiography. CT angiography showed total occlusion of the infrapopliteal arteries on the right side. We decided to perform percutaneous procedure because of the lack of runoff. We made retrograde access from the left side and found that the iliac arteries and right-sided main femoral, superficial artery and profunda femoral artery and popliteal artery were open. After we saw that all 3 vessels were completely occluded at the infrapopliteal level, we performed balloon angioplasty by opening the posterior tibial artery with atherectomy. Afterwards, the anterior tibialis artery was opened with the help of intermittent pta and atherectomy device by turning from the plantar arch and proceeded to the popliteal artery. When we took the final image, we saw that the patient's 2 infrapopliteal arteries were also opened. The patient was discharged the next day after medical treatment was arranged and the ulcer on his foot had healed and the complaint of claudication had completely disappeared when he came for a follow-up visit 1 month later. Today, use of percutaneous treatments inaddition to or in combination with surgical treatment is advantageous for both patients and physicians. However, as in the case, high-risk patients should be treated by experienced teams for both surgical and percutaneous procedures.

Keywords: Balloon angioplasty, infrapopliteal occlusion,atherectomy

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PP-099

Baloon expandable aortic stent implantation in a patient with aort coarctation acompanied by right aberran subclavien artery

Ali Fuat Karacuha[1], Ahmet Kayan[2]

[1]Trabzon Kanuni Training and Research Hospital, Department of Cardiovascular Surgery, Trabzon, Türkiye
[2]Kırıkkale High Specialization Hospital, Department of Cardiovascular Surgery, Kırıkkale, Türkiye

Abstract

Patients with aortic coarctation at the isthmus level accompanied by right aberrant subclavien artery (ARSA) are very scarce at adult population. Aortic coarctation makes up 5 to 7 percent of all congenital cardiovascular malformations. The current treatment modalities are surgery, balloon angioplasty and endovascular stenting. Here we report, an adult female with coarctation of aorta accompanied by ARSA originating distal to aortic interruption and how successfully percutaneous reconstruction with covered stent that chimney at the orifice of ARSA was made. A 31-year-old female with coarctation was referred to us with history of hypertension, shortness of breath (NYHA II) for the last year and right arm pain during exercise and dysphagia. There was no claudication. On physical examination, the pulsations in the lower limbs were faint. Routine blood chemistry and urine analysis was normal. Echocardiogram showed a bicuspid aortic valve, left ventricular hypertrophy and 80 mmHg max gradient on descending aorta. A contrast CT angiogram showed a coarctation of the descending aorta at the isthmus narrowing the lumen to 11mm. Also an ARSA was shown originating distal to coarctation. Transcatheter stent implantation inside coarctation and chimney stent at the orifice of ARSA under general anaesthesia was the planned treatment strategy. A 6F-11 cm sheath was placed in the right femoral artery via a surgical cut down. A 8F-11cm sheath was placed in the right bracial artery via a surgical cut down. Also an access was employed on left brachial artery for safety. First the 20x37mm BeGraft balloon expandable aortic stent was implanted. Than, a 'kissing'12x60mm Advanta balloon expandable stent implanted at the orifice of ARSA. The 3 months follow-up CT imaging has shown that both stents were patent. To our knowledge this is one of the first case reports to show chimney aortic stent implantation as a treatment approach to patients with aortic coarctation cooccuring with ARSA. Our attempt is advancing the endovascular approaches for the management of aortic coarctation in adult population, therefore we can avoid morbidity and mortality associated with more invasive procedures.

Keywords: Aort coarctation, right aberran subclavien artery, baloon expandable aortic stent implantation, chimney

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PP-100

Treatment of femoral pseudoaneurysm with USG guided percutaneous glue injection

Mehmet Ceber

Gaziosmanpaşa University, Faculty of Medicine, Department of Cardiovascular Surgery, Tokat, Türkiye

Abstract

Aim: With the increasing prevalence of endovascular procedures performed through femoral artery access, femoral pseudoaneurysms are frequently encountered. While open surgical techniques were traditionally employed for treatment, non-surgical options have expanded in recent years. One of these treatment modalities is percutaneous glue injection under ultrasound guidance. Our study aims to evaluate the results obtained using this technique in light of the literature.

Material and Methods: We retrospectively reviewed the data of patients diagnosed with pseudoaneurysms who were treated with percutaneous glue injection under ultrasound guidance between November 2021 and August 2023 at our clinic. Short-term and long-term outcomes following treatment were assessed.

Results: Of the patients, 15 (51.7%) were female, and 14 (48.2%) were male. The age range varied from 52 to 87 years. Among a total of 29 patients, 28 developed femoral pseudoaneurysms following coronary angiography. One patient had a carotid pseudoaneurysm related to jugular vein catheterization in the intensive care unit. The sizes of the pseudoaneurysms ranged from 70x40 mm to 10x6 mm. Complications included distal embolization in one patient (3.57%), who underwent emergency surgery for acute arterial occlusion. No pseudoaneurysms were detected in the other 27 patients during Doppler ultrasound examinations on post-procedure day 1, day 7, and day 30.

Conclusion: Ultrasound-guided percutaneous glue injection is a safe and effective method for the treatment of femoral pseudoaneurysms. It offers advantages such as feasibility of application, minimal anesthesia requirements, favorable postoperative outcomes, and the absence of common wound healing issues associated with surgical techniques, making it a preferred choice for treatment.

Keywords: Femoral artery, pseudoaneurysm, ultrasonography, angiography

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PP-101

Surgical treatment of brachial aneurysm associated with arteriovenous fistula

Ahmet Kayan[1], Ali Fuat Karacuha[2]

[1]Kırıkkale High Specialization Hospital, Department of Cardiovascular Surgery, Kırıkkale, Türkiye
[2]Trabzon Kanuni Training and Research Hospital, Department of Cardiovascular Surgery, Trabzon, Türkiye

Abstract

Brachial aneurysm is a very rare complication in patients with arteriovenous fistula for hemodialysis. A 35-year-old male patient was admitted to our clinic with the complaint of swelling and pain in the forearm for the last one year.According to the anamnesis obtained from the patient, it was learned that he had been followed up for renal failure for 12 years and a radial basilic arteriovenous fistula was opened 11 years ago.There was no trauma or serious infection.The patient had no history of aneurysm or connective tissue disease in his family history and only hypertension as an additional disease. The patient was dialyzed from this fistula for about 1 year and then underwent kidney transplantation and the fistula was closed.The patient had no complaints until the last 1 year, but on physical examination, which developed independently of the fistula opened 1 year ago, there was a 6x7 cm painful mass with a trill on the forearm.Doppler ultrasonography was diagnosed as a mass compatible with brachial artery aneurysm.Distal pulses were palpable, there was no evidence of digital embolism. The patient was operated under general anesthesia.Skin incision was made along the aneurysm and then the aneurysm sac was explored.The aneurysm was observed to originate from the brachial artery.The brachial artery was rotated with tape proximally and distally to the aneurysm. An aneurysmectomy was performed by placing a vascular clamp on the proximal part of the aneurysm.The defect in the brachial artery was closed with patch angioplasty.Subcutaneous and dermal tissue was closed with Jackson pratt redon.Postoperative distal pulses were patent. The exact cause of brachial artery aneurysm after arteriovenous fistula is not fully understood.The creation of an arteriovenous fistula increases the blood flow velocity in the brachial artery.To compensate for this increase, vasorelaxing factors may be released and cause arterial dilatation. It has also been suggested that immunosuppressive drugs given after kidney transplantation cause arterial dilatation. In patients in whom arteriovenous fistula is opened for hemodialysis, it is necessary to be careful in terms of brachial aneurysm after fistula closure.

Keywords: Brachial aneurysm, arteriovenous fistula, kidney transplantation

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PP-102

What is the practical estimation in determining the length of peripherally inserted central catheter (PICC)?

HaengJin Ohe, Dae Hyun Hwang

Haeundae Paik Hospital, Inje University, Busan, South Korea

Abstract

Aim: Intracavitary electrocardiogram is a feasible technique to verify tip location of PICC. But there are still many institutions to use classic methods such as measuring and summing anatomic landmarks to estimate the length of PICC before insertion. The aim of this study is to help the latter's who do not use intercavitary electrocardiogram by practical and simple equation.
Material and Methods: 110 patients who were schedule to insert PICC on their right arm was enrolled and collected the distance of elbow crease to axillar (ECA) as well as height, weight, and catheter length. The location of catheter tip was located carina and verified by helping of fluoroscopy.
Results: The formula for estimated length of elbow crease to carina was determined by regression analysis. The optimal formula was determined to be 21.919 + (-2.046 for female) + (0.962 * ECA) + (0.066 * body weight) which yielded an R2 value of 0.561.
Conclusion: The simple and practical formular proposed for the length of elbow crease to carina are "43 + (0.066 * body weight)" for male, "40 + (0.066 * body weight)" for female. The distance from elbow crease to catheter insertion point should be subtracted to acquire complete result of catheter length estimation.

Keywords: Peripherally inserted central catheter, catheter, length

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PP-103

Polymorphisms of the MMP-2 AND MMP-9 gene in development of aortic aneursyms in patients with bicuspid aortic valve

Ihsan Alur[1], Ali Baran Budak[2], Emre Kulahcioglu[3], Tevfik Gunes[4], Yavuz Dodurga[5], Ibrahim Goksin[6]

[1]Private Egekent Hospital, Department of Cardiac and Vascular Surgery, Denizli, Türkiye
[2]Ulus Liv Hospital, Department of Cardiac and Vascular Surgery, İstanbul, Türkiye
[3]Kilis Prof. Dr. Alaeddin Yavaşça State Hospital, Department of Cardiac and Vascular Surgery, Kilis, Türkiye
[4]Private Akut Kalp Damar Hospital, Department of Cardiac and Vascular Surgery, İzmir, Türkiye
[5]Pamukkale University, Faculty of Medicine, Department of Medical Biology and Genetics, Denizli, Türkiye
[6]Pamukkale University, Faculty of Medicine, Department of Cardiac and Vascular Surgery, Denizli, Türkiye

Abstract

Aim: Bicuspid aortic valve (BAV) is a condition that affects a small percentage of the population and can lead to aortic stenosis and regurgitation. Additionally, BAV increases the risk of thoracic aortic dilatation/aneurysm and aortic dissection. Aortic dilatation can develop because of various factors including aging, hypertension, atherosclerosis, infection, inflammation, trauma, and genetic conditions. In the pathogenesis of aortic aneurysm, matrix metalloproteinases (MMP) have been found to play a role in the degradation of aortic wall proteins. This study delves into the MMP2 and MMP9 gene polymorphisms in patients with BAV and ascending aortic aneurysm.

Material and Methods: Total of 83 patients (44 patients admitted to the outpatient clinic, 39 control) participated in this study. Genomic DNA isolation was extracted from peripheral leukocytes of the subjects using MagNA Pure LC DNA Isolation Kit I on the MagNA Pure LC Instrument (Roche Applied Science). Analysis of the MMP2 (C1306T) and MMP9 (C1562T) gene polymorphisms were performed by using specific primers with the LightCycler® 480 High Resolution Melting Master Kit (Roche Applied Science).

Results: Both groups had a similar gender distribution. (p=0.41) However, the patient group had a higher presence of mmp2 and mmp9 expression compared to the control group. Hypertension and smoking were more prevalent among both patient groups (p=0.0001), (p=0.03). Interestingly, individuals with mmp2 expression had a lower proportion of larger aneurysms and lower smoking prevalence, but there was no significant difference in aneurysm diameter. Similarly, the severity of aortic regurgitation did not differ based on mmp9 expression, but individuals without mmp9 expression had a higher incidence of aortic stenosis. Finally, the proportion of individuals with mmp9 expression who also had hypertension was lower than those without.

Conclusion: It appears that those with bicuspid aortic valves and elevated levels of MMP2 and MMP9 gene polymorphism may experience a more pronounced progression of aortic aneurysms. While we cannot pinpoint an exact threshold for the relationship between MMP2 and MMP9 expression levels and aneurysm development, our findings imply that increased aneurysm diameters and MMP2 and 9 gene polymorphisms could serve as a dependable predictor for future aneurysm development in BAV patients.

Keywords: Aortic aneurysm, matrix metalloproteinases-2, matrix metalloproteinases-9, gene polymorphism, bicuspid aorta

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PP-104

Using machine learning to predict outcomes following infrainguinal bypass

Mohammed Al-Omran[1], Ben Li[2], Charles De Mestral[2], Muhammad Mamdani[3], Mohamad Hussain[4], Graham Roche Nagle[5]

[1]Department of Surgery, King Faisal Specialist Hospital and Research Center, Kingdom of Saudi Arabia; Department of Surgery, University of Toronto, Canada

[2]Division of Vascular Surgery, St. Michael's Hospital, Unity Health Toronto, University of Toronto, Canada; Department of Surgery, University of Toronto, Canada

[3]Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto, Canada; Temerty Centre for Artificial Intelligence Research and Education in Medicine (T-CAIREM), University of Toronto, Canada

[4]Division of Vascular and Endovascular Surgery and the Center for Surgery and Public Health, Brigham and Women's Hospital, Harvard Medical School, United States

[5]Division of Vascular Surgery, Peter Munk Cardiac Centre, University Health Network, Canada; Department of Surgery, University of Toronto, Canada

Abstract

Aim: Infrainguinal bypass for peripheral artery disease (PAD) carries significant surgical risks; however, outcome prediction tools remain limited. We developed machine learning (ML) algorithms that predict outcomes following infrainguinal bypass.

Material and Methods: The Vascular Quality Initiative (VQI) database was used to identify patients who underwent infrainguinal bypass for PAD between 2003-2023. We identified 97 potential predictor variables from the index hospitalization (68 pre-operative [demographic/clinical], 13 intra-operative [procedural], and 16 post-operative [in-hospital course/complications]). The primary outcome was major adverse limb event (MALE; composite of surgical revision, thrombectomy/thrombolysis, or major amputation) or death at 1-year following infrainguinal bypass. Our data were split into training (70%) and test (30%) sets. Using 10-fold cross-validation, we trained 6 ML models using pre-operative features (Extreme Gradient Boosting [XGBoost], random forest, Naïve Bayes classifier, support vector machine, artificial neural network, and logistic regression). The primary model evaluation metric was area under the receiver operating characteristic curve (AUROC). The top-performing algorithm was further trained using intra- and post-operative features. Model robustness was evaluated using calibration plots and Brier scores. Performance was assessed on subgroups based on age, sex, race, ethnicity, rurality, median Area Deprivation Index, symptom status, procedure type, prior infrainguinal bypass, concurrent interventions, and urgency.

Results: Overall, 59,784 patients underwent infrainguinal bypass and 15,942 (26.7%) developed 1-year MALE or death. The best pre-operative prediction model was XGBoost, achieving an AUROC (95% CI) of 0.94 (0.93-0.95). In comparison, logistic regression had an AUROC (95% CI) of 0.61 (0.59-0.63). Our XGBoost model maintained excellent performance at the intra- and post-operative stages, with AUROC's (95% CI's) of 0.94 (0.93-0.95) and 0.96 (0.95-0.97), respectively. Calibration plots showed good agreement between predicted and observed event probabilities with Brier scores of 0.08 (pre-operative), 0.07 (intra-operative), and 0.05 (post-operative). Of the top 10 predictors, 9 were pre-operative features including symptom status, comorbidities, prior procedures, and ambulatory status. Model performance remained robust on all subgroup analyses.

Conclusion: We developed ML models that accurately predict outcomes following infrainguinal bypass, performing better than logistic regression. These algorithms have potential for important utility in guiding peri-operative risk mitigation strategies to prevent adverse outcomes following infrainguinal bypass.

Keywords: Machine learning, prediction, outcome, infrainguinal bypass, peripheral artery disease

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PP-105

Surgical treatment of a giant hepatic artery aneurysm using the Da Vinci Robot

Gerei Khangereev[1], Aslan Zakeryaev[1], Tarlan Bakhishev[1], Amirlan Sozaev[1], Elvira Vinogradova[2], Sultan Butaev[1], Dmitrii Ignatenko[1], Aleksandr Baryshev[1], Roman Vinogradov[1], Vladimir Porkhanov[1]

[1]Scientific Research Institute - Regional Clinical Hospital No 1 named after Professor S.V. Ochapovsky, Krasnodar, Russia
[2]Kuban State Medical University, Krasnodar, Russia

Abstract

Hepatic artery aneurysm (HAN) is a rare but extremely dangerous pathology that affects one of the most inaccessible visceral arteries. HAN accounts for 20% of aneurysmal lesions of visceral vessels. Detecting the aneurysm is a challenge because many patients do not make any complaints before it ruptures. In case of rupture and bleeding, the patient needs urgent medical care, since the risk of death is 75%. Demonstration of successful usage of the da Vinci Xi robotic surgical complex (RSC) in the surgical treatment of hepatic artery aneurysm. Patient V., 51 y.o., was hospitalized in the Department of vascular surgery of the Regional Clinical Hospital No. 1 of Krasnodar with complaints of pain in the right hypochondrium. A further CT examination revealed a spindle-shaped hepatic artery aneurysm measuring 80x44 mm with no signs of rupture and dissection. Considering the pain syndrome, the gigantic size of the aneurysm, the patient underwent surgical treatment: cholecystectomy, common hepatic artery aneurysm resection. Autovenous prosthetics of the common hepatic artery with a reversed great saphenous vein (GSV) of the right lower limb using the RSC. The surgery lasted for 5 hours and 30 minutes. Total blood loss was 150 ml. The compression time of the common hepatic artery was 90 minutes. Postoperatively, there was a transient increase in transaminases on the 2nd day: Alanine aminotransferase-330 units/l, Aspartate amintransferase-207 units/l. On the 5th day, the transaminase returned to normal values. After surgery, the patient was in the intensive care unit for 1 day. On the control CT, the consistency and patency of the autovenous shunt is noted. Hospitalization - 7 days. 1.The traditional method of HAN treatment is endovascular and open surgery. In cases where it is impossible to perform this treatment, the use of the da Vinci robot is the best option 2. The use of RSC da Vinci Xi is a safe method of surgical treatment of APA. Thanks to the RSC, it is possible to reduce trauma and intraoperative blood loss, shorten the patient's stay in the hospital, as well as accelerate postoperative rehabilitation.

Keywords: Hepatic artery aneurysm, robotic surgery, da vinci robot

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PP-106

Intestinal rupture due to aortic graft infection

Abdullah Masta, Salih Ozcobanoglu, Ozan Erbasan, Ilhan Golbası, Cengiz Turkay, Omer Bayezid

Akdeniz University, Faculty of Medicine, Department of Cardiovascular Surgery, Antalya, Türkiye

Abstract

Aortic graft and endograft infections (AGI) are rare, but a dreaded complication after aortic surgery. The frequency is difficult to assess due to varying definitions but has been reported to range from 0.3-4%. Only recently a proposal for a unanimous definition of AGI (the MAGICcriteria) was published. As of now, three major surgical techniques are used to treat AGI; 1) a emiconservative (SC) approach with infection drainage and preservation of the vascular prosthesis, 2) resection of the infected vascular prosthesis with extra-anatomic bypass (EAB), or 3) in-situ repair (ISR) with a vein-, aortic allo-, or antibiotic soaked graft.the aim of this text is to show how we managed aortic graft infection which lead intestinal rupture. 61 years old female patient had aortabifemoral bypass operation because AAA 1 year ago. The patient applied to the emergency department with complaints of pain and bruising in the right lower extremity. In the CT angiography of the patient, it was observed that the right leg of the graft was occluded starting from its exit from the main body. The patient was initially planned to undergo an embolectomy from the femoral part of the graft. During the operation, the patient had massive purulent discharge from the graft, and the abdomen was opened and explored in the same session. It was observed that the infected graft segment had eroded the iliocecal region. General surgical iliocecal excision was performed on the patient in the same session. The body of the previous aortic graft was replaced with a new one. A dacron graft was anastomosed, a new anastomosis was made to the right femoral artery, and the old graft was excised.

Keywords: Graft infection, abdominal aort aneurysm, intestinal rupture

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PP-107

Surgical treatment of three patients with complex arteriovenous malformations, case reports

Dilsad Amanvermez Senarslan, Funda Yildirim, Yusuf Kuscu, Adnan Taner Kurdal

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Abnormal vessel angiogenesis allowing for arteriovenous shunting is referred to as an arteriovenous malformation (AVM). AVM affects less than 1% of the population and they can be congenital or acquired. AVM in peripheral vasculature are rarely encountered and equally distributed between upper and lower extremities. AVM can include a mixture of venous, arterial, lymphatic, or capillary vessels. We presented three patients with complex AVM in the lower extremity. All of the patients had swollen extremities and severe pain in the leg. Two of the patients had recurrent, high-flow lesions that predominantly involved arterial and venous vessels with multiple fistulous connections. The first patient was a 57-year-old man. He had multiple varicose enlargements in the right upper thigh and his leg was too swollen to wear pants, couldn't stay standing for long because of severe pain and he had shortness of breath. Although he underwent previous varicose vein surgery 5 years ago, he had progressive symptoms. This patient was treated by profunda artery ligation and ligation of the neighboring venous collaterals. He needed vacuum-assisted closure (VAC) for wound healing. A sudden decrease in leg diameter was observed and in the second month of therapy, the other symptoms were highly relieved. The second patient was a 24-year-old man. He had a swollen leg and murmurs were heard on multiple levels in the upper thigh and below the knee segments. He had coil embolization 8 years ago by the radiologists. He had also newly developed aneurysmal segments in the popliteal artery and tibio-peroneal trunk causing distal embolization. This patient was treated by a popliteal aneurysm excision, ligation of the distal superficial artery, and neighboring venous collaterals. He was treated with a femoropopliteal distal bypass with saphenous vein. The third patient had femoral lympho-venous malformation related to previous leg trauma with a malleolar venous ulcer. He was treated by glue ablation of the saphenous vein, ligation of enlarged veins, and excision of compressive lymph nodes. He needed VAC for wound healing.The appropriate treatment modality for AVM should be decided on an individual basis. Thus the symptoms and quality of life may be improved.

Keywords: Arteriovenous malformations, surgery, treatment

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PP-108

Taking qut the atherectomy device remaining inside the vein

Beytullah Kulac[1], Suleyman Sonmez[2], Mete Burak Ozdemir[3]

[1]İstanbul Suleiman the Magnificent Training and Research Hospital, Department of Cardiac Cath.Lab., İstanbul, Türkiye
[2]İstanbul Suleiman the Magnificent Training and Research Hospital, Department of Radiology, İstanbul, Türkiye
[3]İstanbul Suleiman the Magnificent Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

71-year-old Male H.A. The patient with known hypertension (+), a history of smoking for 30 years, applied to an external center due to complaints. Doopler USG performed at an external center diagnosed DVT and he was referred to our center for the procedure. The patient was placed in an inverted position with an Embolism Protective Temporary filter placed on the Right Femoral Vein. A 6F Intraducer sheat was placed in the Popletial Vein under ultrasound guidance. Venography was performed. Total occlusion was observed from Sheat's ostium. With the 6F 90 cm Total Occlusion catheter and 0.035*260 cm Hidroflic guide wire, the Total lesion lines were crossed and the Iliac Vein was passed to the Superior Vena Cava. The support catheter was taken out and Predilatation PTA was performed with a 7.0mm*150mm*150 cm PTA balloon. After PTA, Atherectomy was performed twice from the Iliac Vein to the Popletial Vein with the Atherectomy Catheter. While trying to perform atherectomy for the 3rd time, the device got stuck in the Superior Vein and could not be taken out. There was no progress during forward and backward rotational movement and the patient had pain. The device could not be removed by administering 100 mcg Morphine IV. Despite hot.application and massage to the area where the device remained, the device could not be removed. After the patient's blood pressure was appropriate, 400 glycerol trinitrate IV was administered to the patient from the intervention sheath. After 1 minute, the device was taken out with a small movement and the intima layer at the distal end. When venography was performed again, no problems were encountered. The patient said that he had no pain at his next morning check-up. As a result, if an Atherectomy device remains in the treatment of DVT, glycerol trinitrate, which has a vasodilator effect, helps remove the device with minimal damage.

Keywords: Deep vein thrombosis,atherectomy,embolectomy,treatment of DVT with catheter

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PP-109

Ruptured tibioperoneal artery aneurysm caused by hypermucoviscous invasive Klebsiellae pneumonia infection

Shintaro Ninomiya, Takanori Nishimura, Takafumi Akai, Takatoshi Furuya, Motoki Nagai

Asahi General Hospital, Department of Surgery, Chiba, Japan

Abstract

A 66-year-old man visited the emergency department with acute pain and swelling in the right lower leg and was admitted to the hospital with a diagnosis of multiple intramuscular abscesses associated with invasive Klebsiella bacteremia. He had been treated with antibiotics and drainage. On the 11th day of hospitalization, he experienced worsening pain in his right lower leg. Computed tomography revealed a right tibioperoneal aneurysm ruptured into the right leg abscess cavity, resulting in the proximal peroneal artery occlusion. Emergency angiography was performed, and pseudoaneurysm was found at the right tibioperoneal trunk. Coil embolization of the pseudoaneurysm and the right tibioperoneal trunk was performed. After the operation, blood flow in the right leg was well maintained by the collateral circulation, and subsequent abscess drainage could be performed safely. Invasive Klebsiella is known to be the causative bacteria of systemic metastatic infections characterized by liver abscess and endophthalmitis in East Asia. However, it is rarely reported as offending bacteria of infectious aneurysms. In general, bypass surgery is often selected for the treatment of ruptured aneurysms of lower limbs. In this case, coil embolization was chosen because abscess had spread around the aneurysm and also persistent bacteremia was present. There are few similar case reports, so we report the case and the course of treatment with a review of the literature.

Keywords: Tibioperoneal aneurysm, invasive Klebsiella pneumonia, coil embolization

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PP-110

Development of arteriovenous fistula after endovascular treatment of popliteal artery stenosis

Ozgur Altinbas, Mehmet Moda, Isik Betil Kutlu, Erhan Hafiz, Mehmet Adnan Celkan

Gaziantep University, Vocational School of Health Services, Department of Cardiovascular Surgery, Gaziantep, Türkiye

Abstract

Peripheral arterial disease (PAD) is a common disorder associated with high morbidity and mortality rates. Inflammation and atherosclerosis play a critical role in the pathogenesis. Increase in tobacco use, obese population and sedantary life styleresult in a spread of this clinical condition. It is estimated approximately 20% of the individuals over 65 years were affected from this disease. Different treatment modalities were introduce in the literature about PAD. Surgical and endovascular interventions are accepted as gold standard modalities. Although endovascular treatments are widely used some undesirable complications such as bleeding, hematoma, arterial spasm, thromboembolism, pseudoaneurysm can be happen. Here, we aimed to present a surgical treatment of arteriovenous fistula case that occured after endovascular intervention to popliteal artery. A 55-year-old male patient was admitted to our clinic with the complaints of right lower extremity pain with the distance of 100 m. His past history revealed hypertension and diabetes mellitus for ten years. Endovascular intervention (balloon angioplasty) was performed for the stenosis in right popliteal artrey 3 years ago. After detection of turbulent flow in peripheral arterial ultrasonography diagnostic peripheral angiography revealed a fistula formation between popliteal artery and popliteal vein just before trificatio. Otherwise it was normal except non critical calcifications. Open traditional surgery was decided and fistula was repaired. Patient was discharged on postoperative 2nd day without any complication. Arteriovenous fistula is an uncommon complitaion after endovascular intervention with the incidence upto 0.86%. Hypertension, female gender and high dose anticoagulant medication are found to be play a role in etiology. Although it is usually asymptommatic, patients can present pulsatile mass, pain, limb swelling, distal ischemia, skin ulcers or congestive heart failure. Ultrasound guided compression, embolization with coils, endovascular stent graft and traditional open surgery are the most common treatment modalities. Endovascular treatment of the fistula is not recommended if the lesion is near the bifurcatio/trificatio lesions because of the occlusion risk of the distal vascular structures.Therefore,it is important to choose the safe and effective method for each individual.

Keywords: Peripheral arterial disease, arteriovenous fistula, open surgery

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PP-111

Efficacy and outcomes of carotid endarterectomy: A single center experience

Tariq Alanezi[1], Abdulmajeed Altoijry[2], Mussaad Al Salman[2], Badr Aljabri[2], Mohammed Aldossary[2], Kaisor Iqbal[2], Sultan Alsheikh[2]

[1]King Saud University, College of Medicine, Riyadh, Saudi Arabia.
[2]King Saud University, College of Medicine, Department of Surgery, Division of Vascular Surgery, Riyadh, Saudi Arabia

Abstract

Aim: Carotid artery stenosis is one of the leading causes of ischemic stroke. The most effective form of treatment is carotid endarterectomy (CEA), which has demonstrated both safety and effectiveness. Herein, we present the experience of a single Saudi center in CEA.

Material and Methods: We conducted a retrospective study of 54 patients that underwent CEA. The primary outcome was to assess the postoperative stroke and mortality rates. The secondary outcome was to assess the morbidity associated with said procedure and its long-term outcome. Finally, a comparative analysis was performed between patients who were previously on single versus dual antiplatelet therapy.

Results: Of the 54 patients included, the mean age was 66.9±9.88. The majority of patients had a severe degree of stenosis (96.3%) with no stenosis on the contralateral side (40.7%). Majority of patients (59.3%) were on dual antiplatelet therapy, and 40.7% received a single antiplatelet prior to the procedure. The mean time from symptom onset to surgery was 15.4±11.2 days. Most patients presented with symptoms (75.9%), while 24.1% were asymptomatic but had high-grade stenosis. In our center, we predominantly used pericardium patches (94.4%) to close arteriotomy sites, with only 5.6% of cases utilizing Dacron patches. The mean carotid clamp time was 13.5±7.75 minutes. The 30-day stroke and mortality rates were 3.7% and 1.9%, respectively, as the primary outcomes. Surgical site hematoma (12.9%) was the most common postoperative complication. After a mean follow-up of 19.9±19.9 months, 68.5% of patients experienced full disease regression, while 18.5% had mild restenosis, and 1.9% had moderate or severe restenosis. Comparing individuals that received dual versus single antiplatelet therapy, the two groups did not differ significantly in terms of interval between symptoms and surgery, carotid clamp time, ICU, ward, or total hospital stay (P>0.05).

Conclusion: CEA remains the gold-standard treatment for carotid artery stenosis and can be performed safely. It is very important to complete the procedure with short clamp times and apply a carotid shunt. According to our data, we believe that carotid endarterectomy has maintained acceptable results with a low rate of complications and restenosis.

Keywords: Carotid artery stenosis, carotid endarterectomy, single versus dual antiplatelet therapy

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PP-112

Comparison of controlled hypotension Methods in proximal TEVAR applications

Eren Osman Karpuzoglu, Anil Karaagac, Ferhat Tumkaya

University of Health Sciences Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

When performing thoracic endovascular aortic repair (TEVAR), it is very important to establish placement in the optimal zone and to achieve maximum sealing distance for better long-term outcomes. The aortic impulse to which the stent-graft is exposed during placement increases as the placement site is more proximal, especially in Zone 0, 1 and 2 TEVAR applications, which may lead to graft mispositioning. The main method to minimize aortic impulse during stent-graft placement is to achieve a controlled state of hypotension. Different methods such as pharmacologic hypotension (PH), rapid ventricular pacing (RVP), and cardiac inflow occlusion can be used for this purpose. In this study, we aimed to compare the methods we used to create controlled hypotension in proximal TEVAR applications in our clinic. The study included 40 patients who underwent proximal TEVAR application (Zone 0-1-2) between January 2018 and June 2023 in our center. PH was applied in 30 patients, while RVP was applied in 10 patients. The aim was to achieve maximum sealing distance during stent-graft implantation in all patients. Deviation from the exact target landing site occurred in 11 patients (36.7%) in the PH group, while deviation from the target was observed in 3 patients (30%) in the RVP group (p=0.999). The mean target deviation distances were 1.98±3.39 mm in the PH group and 2.00±3.43 mm in the RVP group (p=0.890). Although PH is frequently used in the literature to create controlled hypotension in endovascular aortic repair applications, RVP can provide a similar effect in terms of inducing hypotension and normalization of hemodynamics more rapidly after application. We believe that RVP can be safely used to create controlled hypotension especially in proximal TEVAR applications.

Keywords: Thoracic endovascular aortic repair, aortic aneurysm, rapid ventricular pacing

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PP-113

Bail-out solutions for major endovascular interventions

Canan Karakaya[1], Anil Karaagac, Sahin Yilmaz[3], Eren Osman Karpuzoglu[2]

[1]University of Health Sciences Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]University of Health Sciences Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[3]University of Health Sciences Dr. Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Anesthesiology, İstanbul, Türkiye

Abstract

Pre-procedural planning is one of the most important steps in endovascular procedures for the thoracic and abdominal aortic aneurysms (TEVAR, EVAR). Despite good planning, measurements during angiography may be different than expected or there may not be enough time for detailed planning in emergency scenarios. We present our salvage solutions applied in two TEVAR and one EVAR cases treated in our clinic. In the first case, a 45-year-old man with multiple fractures, subarachnoid hemorrhage and concomitant thoracic aortic transection after a traffic accident underwent TEVAR under emergency conditions. Zone 2 TEVAR was planned because there was not enough landing zone distal to the left subclavian artery. Since the patient was young and not suitable for surgical left subclavian artery revascularization because of his traumas, revascularization of the left subclavian artery by in-situ fenestration was preferred. In the second case, a patient who underwent Zone 2 TEVAR for a descending thoracic aortic aneurysm showed early postoperative loss of strength in the left lower and upper extremities. Control CT angiography demonstrated occlusion of the left common carotid artery (CCA). The patient was operated urgently, embolectomy was performed to the CCA and then a chimney stent was placed in the proximal CCA to restore flow in the CCA. In the third case, in a 77-year-old man with abdominal aortic aneurysm and a history of abdominal surgery for malignancy, the distance between the left renal artery origin and iliac bifurcation was measured approximately 70 mm in the preoperative planning of EVAR. During the procedure, the distance between the renal artery origin and iliac bifurcation was measured angiographically as 70 mm after advancement of the super-stiff guidewire to proximal aorta. Since there was no marketly available stent-graft of suitable size for use, we modified the endovascular stent-graft during the procedure and fenestrated the graft at the site of left renal artery ostium accordingly. The capability of physicians performing endovascular treatments for salvage methods will increase the success of the procedure.

Keywords: Thoracic aortic aneurysms, abdominal aortic aneurysms, physician modified, chimney stenting

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PP-114

Spontaneous aortocaval fistula in an abdominal aortic aneurysm patient without free ruptureto retroperitoneum, admitted with cardiogenic shock

Burak Can Depboylu, Kadir Arslan, Serkan Yazman, Ramina Javed, Bugra Harmandar

Muğla Sıtkı Koçman University, Faculty of Medicine, Department of Cardiovascular Surgery, Muğla, Türkiye

Abstract

Spontaneous aortocaval fistula (ACF) is rare complication with the 0.04%-0.07% prevalence of all abdominal aortic aneurysms (AAA). Risk of this complication is higher in males over 65years with AAA history. While over 80% of ACF have been associated with ruptured AAA, rupture into the inferior vena cava (IVC) and spontaneous development of ACF is unusual and extremely rarer. Pain, bruit and pulsating mass in the abdomen are the prominent findings in these patients. Pelvic venous hypertension (scrotal edema, oliguria, hematuria), lower-extremity edema, venous thrombus, arterial insufficiency, shock, congestive heart failure, and cardiac arrest may also seen. Endovascular aneurysm repair (EVAR) is a developing treatment with its' lower mortality (3.8%) despite high endoleak complication (50%). However, open surgery still remains as the preferred treatment. Herein, a 67-year-old male patient admitted in cardiogenic shock due to ACF, and underwent open surgery has been reported. A 67-year-old overweight male patient was brought to the emergency department with two-day history of abdominal pain. He was agitated, cooperative, and oriented. Blood pressure was 80/50mmHg, heart rate was 123/min, respiration rate was 32/min and satO2 was 93%. No pulsatile abdominal mass and/or murmur could be felt. There was cyanosis in the waist, hips and abdominal side walls. In blood examinations, PH was 7.196. Lactate (7.3mmol/L), urea (57.9mg/dl), creatinine (2.20mg/dl), AST (69U/L), ALT (69U/L), amylase (169U/L), lipase (101U/L), troponin I (135.6ng/ml), miyoglobin (339.8ng/ml), CRP (64.71mg/L) and WBC (11.25 x 103/µL) were high. CT scan revealed an 8.2x7.5cm infrarenal AAA fistulized to the IVC, without free retroperitoneal rupture. The patient has directly taken to emergent surgery. But, cardiac arrest developed at prep and drape stage and the operation has begun just after a successful CPR of 20min. IVC primary repair and aortobifemoral bypass with 20/10 dacron graft were performed despite unstable hemodynamics. Patient suffered hypotension, bradycardia and then cardiac arrest at declamping stage after performing anastomoses, and the resuscitation was not successful. As a rare complication of AAA, ACF may also develop without retroperitoneal rupture and present with congestive heart failure or cardiogenic shock. Although EVAR seems as a good choice of treatment with lower mortality, emergent open surgery should be performed in cases with hemodynamic instability even it has higher mortality.

Keywords: Abdominal aortic aneurysm, inferior vena cava, aortocaval fistula, surgery

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PP-115

1064 nm Nd:YAG long-pulsed laser for treatment of superficial temporal veins: Case report

Aleksandr Aleksandrovich Sinitsyn

Mir Zdorovya, Department of Cardiovascular Surgery, Kursk, Russia

Abstract

The periocular and temporal regions are important aspects of beauty. 1064 nm Nd:YAG laser shows the high effectiveness and safety for treatment reticular veins and telangiectasias. But sometimes we have to deal with the big sized superficial temporal veins. Here, we report the case of a 49-year-old woman whose was treated with the 1064 nm Nd:YAG laser (Alma Lasers, Israel) with a 6 mm spot, pulse length of 15 ms and fluency 120 J/cm^2. The veins diameter was 5 mm. Air cooling of the skin was carried out during the procedure by a cooling device Cryo 6 (Zimmer, Germany). One laser session was conducted. The patient noted moderate pain. There were no visible temporal veins at control examinations after 1 month, 6 months and 1 year. No serious adverse events were observed following laser ablation. The case showed that the use of the long-pulsed 1064 nm Nd:YAG laser and air-cooling is effective and safe, with good long-term results.

Keywords: Superficial temporal veins, long-pulsed Nd:YAG laser, pain

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PP-116

Giant true aneurysm of the internal carotid artery with adhesion to the internal jugular vein and the vagus nerve: Case report of a patient with aphasia

Baris Akca, Nevzat Erdil

İnönü University, Department of Cardiovascular Surgery, Malatya, Türkiye

Abstract

Aneurysms of the carotid artery are rare and a risk factor for neurological events. This report describes the treatment of a giant true aneurysm of the left extracranial internal carotid artery (ICA) with adhesion to vagus nerve and internal jugular vein (IJV) which causes aphasia. A 45-year-old male presented with aphasia and had a history of asymptomatic enlarging pulsatile mass nearly 8 years on the left neck was referred to our clinic. Pulsatile mass has more rapidly expanded over last two years. He doesn't have any medical or genetic history, no history of trauma or smoking. He was in a stable cardiopulmonary condition and had no arrhythmia. Laboratory findings of peripheral blood revealed no sign of inflammation. Ultrasonography, CT angiography, and MR angiography revealed a giant true aneurysm (52x50 mm) of left ICA with massive tortuosity and thrombosed wall. Digital subtraction angiography (DSA) was performed to evaluate intracranial circulation and the presence of intracranial aneurysm, besides planning optimal treatment choice. DSA revealed giant aneurysm of ICA, no intracranial aneurysm, anterior and posterior communican arteries open. Consultations like rheumatology (vasculitis, Behçet disease), infectious disease (syphilis) were made and examinations performed for etiological research. Multidisciplinary assessment decided to treat with open surgery. Massive adhesion of IJV anteriorly and vagus nerve posteriorly to the aneurysm wall has been detected intraoperatively. IJV preserved by separating from aneurysm wall and vagus nerve preserved with posterior part of aneurysm wall. Aneurysm wall was resected partially, vagus nerve line preserved without separation and saphenous vein graft interposition performed following thrombectomy of distal and proksimal anastomosis sites. Postprocedural hypoglossal nerve injury symptoms exists. Treatment options of ICA aneurysms include open surgical and endovascular interventions. Endovascular treatment may be a good option for aneurysms with a particular morphology. However, open surgery is the favorable option for extensive ICA aneurysms with a tortuous anatomical path. Aneurysm resection with saphenous vein interposition and preservation of IJV and vagus nerve is a possible surgical option in case of tortuous extracranial ICA aneurysms. Leaving parts of the aneurysm wall will prevent persistent damage to the adhesive vagus nerve.

Keywords: Internal carotid artery aneurysm, aphasia, surgery

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PP-117

Challenging management of acute type B aortic dissection (TBAD) with thoracic aortic rupture and massive hemothorax

Imam Tongku Padesma Ritonga, Marco Virgilio Usai, Martin Austermann

St. Franziskus Hospital, Department of Vascular Surgery, Münster, Germany

Abstract

Acute type B aortic dissection is an exceedingly uncommon yet inherently life-threatening disorder, even in its uncomplicated form. However, when complicated by issues such as aortic rupture and exsanguinating hemothorax, the patient's prognosis worsens significantly. It is estimated that up to a third of patients deceased without hospitalization and overall in-hospital mortality of TBAD closes up to 15% of those surviving to receive definitive therapy. Consequently, it becomes apparent that immediate diagnostic and precise decision-making are required within the framework. In this report, we present a case of successful challenging management of TBAD complicated with thoracic aortic rupture and massive hemothorax in a 43-year-old male. Following initial successful emergency implantation of two thoracic stents-graft and a T-branch stent-graft, the patient experienced recurrent back pain upon extubation, leading to the need for immediate resuscitation. Given the raising suspicion of secondary aortic rupture, the patient was transferred subsequently on the operating table and rapidly prepared for a second emergency operation. Additionally, mechanical cardiopulmonary resuscitation (CPR) was utilized to ensure continued life support. In order to achieve firm stabilization, a complete elimination of the dissection using a biiliac prosthesis was necessary. Given the patient's precarious cardiorespiratory status, the decision to postpone hemothorax drainage was made following careful multidisciplinary deliberation. Afterwards, the patient underwent substantial intensive treatment under interdisciplinary collaboration, including repeated thoracotomy. Due to the high risk for Spinal Anterior Syndrome, intensive treatment was also carried out to meet our standard targets (MAP>80 mmHg and Hb>10 mg/dl). Unfortunately, despite efforts made, the patient still suffered from paraplegia. However, through demanding and challenging management, the patient can ultimately be stabilized and referred to a specialized neurological rehabilitation clinic in very good general condition. This case exemplifies the imperative need for swift and judicious decision-making not only within the purview of surgeons and anesthetists but also by all healthcare providers involved in the patient's care, particularly in critical situations like aortic dissection with rupture. Complicated TBAD shows a low survival rate, however through meticulous multidisciplinary intervention, it is possible to ensure the survival of patients.

Keywords: Type B aortic dissection, aortic rupture, hemothorax, thoracic endovascular aortic repair, T-Branch stent-graft

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PP-118

A rare concomitance: Acute type I aortic dissection and sliding hiatal hernia

Betul Nur Keser[1], Deniz Dogan[1], Fatih Avni Bayraktar[1], Ahmet Oztekin[1], Mehmet Senel Bademci[1], Cemal Kocaaslan[1], Medeni Sermet[2], Ebuzer Aydin[1]

[1]İstanbul Medeniyet University Göztepe Prof. Dr. Süleyman Yalçın City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]İstanbul Medeniyet University Göztepe Prof. Dr. Süleyman Yalçın City Hospital, Department of General Surgery, İstanbul, Türkiye

Abstract

Managing aortic dissections can be challenging, especially in the presence of concomitant anatomic variances, even increasing the mortality. This case report describes a patient with acute type I aortic dissection with pre-existing sliding hiatal hernia in the right side secondary to gunshot. A 64-year-old male was admitted to the emergency department with sudden onset of both numbness in both lower extremities and sharp tearing chest pain. He had a history of previously known hiatal hernia, for which operational therapy had been offered but he had declined. He had still described dyspnea that worsens after eating. A computed tomography (CT) angiography revealed dissection flap starting from ascending aorta reaching until superficial femoral artery, as in DeBakey type I dissection. In addition, the intestine was detected in the right mediastinum, located anterior to the heart, causing pressure on lung parenchyma in the right mediastinum, suggesting sliding hiatal hernia. He was brought to the operating room for emergent surgery. Since the intestines were seen to be covering the heart in the CT, a sternotomy was not preferred as initiation. The general surgeons explored the abdomen via a midline abdominal incision. The defect in the diaphragm was located and the herniation of the transverse colon and the small intestine through the right mediastinum was seen. The intestines and omentum were pulled through the defect into the abdomen. After the right axillary artery was prepared for axillary cannulation, a median sternotomy incision was made and graft replacement was carried out from the ascending to transverse arch aorta under cardiopulmonary bypass. Distal anastomosis was performed in total circulatory arrest and selective antegrade cerebral perfusion. After weaning and finishing the cardiovascular surgery, the general surgeons repaired the defect in the diaphragm with mesh. Although the operation was completed successfully, the patient died postoperatively in the intensive care unit on the 2nd day due to multiorgan dysfunction syndrome.

Keywords: Acute aortic dissection, hiatal hernia, type I dissection

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PP-119

Complete stripping of long saphenous vein: Should we totally abandon it?

Ilknur Gunaydin, Seyhan Babaroglu, Aysen Aksoyek

Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Turkiye

Abstract

Aim: T With the technological development, the classical surgical stripping has begun to be used less and less. In many centers, only endovenous ablative procedures are now performed as an interventional procedure for the treatment of varicose veins. In our study, we evaluated the cases in which we performed total stripping of long saphenouse vein (LSV) with venofemoral.

Material and Methods: We retrospectively evaluated the cases we opareted on in our clinic between 2008 and 2022, 798 complete stripping of long saphenous vein between 2008-2022, 461 are female, 337 are male patients, 22-61 years old (min-max) (mean age 42 years), CEAP clinical stage C2 45%, C4 35%, C5 15%, C6 5%, spinal anesthesia in 592, laryngeal mask anesthesia in 206 cases, routine 1 night hospitalization, back to normal life after an average of 5 days, preoperative ultrasonography guided marking of subfascial perforators, and varicose veins. 102 cases are recurrence cases (12.8% of total) after EVTA/EVNTA (70 recanalizations and AASV recurrence, 52 VFJ collateral variations), in the last 5 years, %70 of the recurrent cases are after endovenous procedures, all patients had diffuse varicose veins requiring multiple phlebectomies, 35 cases with bilateral stripping in one session, 97 cases in different sessions.

Results: Compliance for postoperative 1st week control is 100%, early and long-term follow-ups are incomplete, 1 month follow-up is 31%, 1-year follow-up is 12%. Patients who come to the control are those with complaints and complications. These are: femoral vein injury (48 pts, easily handled with suturing), deep vein thrombosis (4 pts, popliteal vein), incision site infection (23 pts, superficial infections at the femoral region), suture dehiscence (15 pts). There was no pulmonary embolism.

Conclusion: For the treatment of varicose veins, total stripping of LSV with VFJ collateral ligation is successfully applied in cases where these procedures can not be performed with endovenous methods despite major improvements in the last years. Surgical stripping of LSV should still retain its place in vascular surgery training.

Keywords: Varicose veins, stripping, venouse insufficiency

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PP-120

Perioperative nursing of vascular surgery interventional therapy

Mengqi Duo

Outpatient Service

Abstract

"Many studies have confirmed that the use of cervical protective devices can reduce the occurrence of stroke during surgery in CAS countries, and it is recommended that vascular conditions are routinely used." At present, the most commonly used remote protection device is the umbrella, which has the advantages of not interrupting the blood flow, etc. When used, it is required that the narrow distal end has good vascular conditions, and if the narrow distal blood vessels are impractical. 'When the curvature is angled, there is no release position or may be difficult to recover, the use of proximal protective devices may be considered, and the disadvantage of proximal protective devices is that they requi complete negative flow and cannot be used in all types of carotid stenosis

Keywords: Blood vessod, perioperative,nurse,interventional therapy

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PP-121

Surgical treatment of giant false aneurism of the axillary artery

Leonid Sergeevich Kokov, Igor Petrovich Mikhailov, Yulia Alexandrovna Vinogradova

Sklifosovsky Research Institute of Emergency Care, Moscow, Russia

Abstract

False aneurysms are a serious complication of traumatic vascular injuries. Despite the fact that there are few reports in the literature on the treatment of false aneurysms of the axillary arteries, their treatment is an urgent and complex task due to the peculiarities of their localization and complications that can develop if medical care is not sought in a timely manner. We report surgical treatment of a 2 patients with giant false aneurysm of the left axillary artery. Both patients did not appeal for qualified medical care and ensured haemostasis at home. The patients underwent surgery under endotracheal anaesthesia. In first case debridement of hematoma, closure of arterial wall defect and wound drainage were carried out through an approach in the upper and middle third of the left shoulder. In second case the surgery included the resection and removal of a false aneurysm of the left axillary artery, making an end-to-end anastomosis between the proximal and distal ends of the left axillary artery. In both cases blood circulation was restored. In the postoperative period, paresis of the left upper extremity was observed due to a long compression of the brachial plexus nerve bundles by the false aneurysm with the development of compressional-ischemic neuropathy of the left median, ulnar and radial nerves, for which the patient was examined by a neurologist; the physiotherapy and exercise therapy were performed with positive effect. Untimely medical care in patients with peripherial artery damage is often followed by development of false aneurysm. This event may be complicated by aneurysm rupture and bleeding, peripherial arterial thromboembolism, hematoma infection and neuropathy following adjacent nerved compression. The localization of the axillary artery and its bending in the axillary fossa can create technical difficulties for the installation of a stent graft; therefore, in this cases, an open surgical method was preferred. A successfully performed operation is the first step towards restoring the function of the upper limb. Further recovery requires the involvement of doctors of various specialties - neurologists, physiotherapists, traumatologists and long-term treatment.

Keywords: False aneurysm, arterial injury, axillary artery, vascular surgery

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PP-122

History of the term. Intermittent claudication syndrome

Yulia Alexandrovna Vinogradova

Sklifosovsky Research Institute of Emergency Care, Moscow, Russia

Abstract

Chronic obliterating diseases of the arteries of the lower extremities are a pressing problem in vascular surgery. It is generally accepted that the syndrome of intermittent arterial claudication (claudicatio intermittens) in humans was described in 1858 by the French neurologist Jean-Martin Charcot. However, intermittent lameness (or claudication, from the Latin claudicatio - "the effect of lameness", claudus - "lame") was known long before Charcot by veterinarians. According to an analysis of foreign literature, intermittent claudication syndrome was first described by French authors - veterinary student G. Bouley and, somewhat later, veterinarian Goubeaux as a disease of horses. In 1831, Bouley presented a case of lameness in a horse of no apparent cause, healthy at rest, and beginning to lame only when trotting. In 1838, the German veterinarian Rademacher described the same case as J. Bouli. In 1846, A. Goubault of the Veterinary School of Alfort published data on 10 other cases and confirmed Boulley's interpretation. Charcot in 1835 described a case of obliteration of the aorta in a 51-year-old woman long before Leriche. Despite the data presented by Bouley and Charcot's observations, the discussion of the pathogenesis of intermittent claudication has long been dominated by the theory that neurological lesions and vasospasm (Dutil, Lamy, 1893; Brissaud, 1899) play a more significant role in the occurrence of symptoms. The theory of the occurrence of intermittent claudication caused by occlusion of the arterial bed was developed much later in the works of Leriche in 1917. In 1952, the 1st Congress of the European Society of Cardiovascular Surgery was held in Strasbourg, where the problems of surgical treatment of lesions of the iliac artery of the lower extremities were discussed. It was determined that intermittent claudication is the second stage of the development of limb ischemia (there are only two stages - compensated and decompensated). Currently, Russia has adopted the classification of chronic ischemia of the lower extremities according to A.V. Pokrovsky.

Keywords: Vascular medicine, history of medicine, claudication syndrome, horse disease, intermittent claudication syndrome

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PP-123

EBV-positive diffuse large B-cell lymphoma associated acute limb ischemia, unusual suspect

Song Yi Kim

Chungnam National University Sejong Hospital, Department of Surgery, Korea

Abstract

Acute limb ischemia (ALI) is a critical vascular emergency resulting from various etiologies, including arterial thrombosis, embolism, arterial dissection, and, less commonly, tumor invasion. We present a rare case of ALI due to invasion of the popliteal artery by Epstein-Barr Virus (EBV)-positive diffuse large B-cell lymphoma (DLBCL), shedding light on the uncommon presentation and management challenges associated with this condition. A 67-year-old male with Marfan syndrome presented with sudden-onset severe right lower limb pain, pallor, pulselessness, and poikilothermia. Six months prior, he had undergone segmental resection of the small bowel due to extranodal EBV-positive DLBCL. Following surgery, he received adjuvant Rituximab- cyclophosphamide, doxorubicin, vincristine, and prednisolone(R-CHOP) chemotherapy. Initial physical examination revealed the absence of popliteal and pedal artery pulses, and computed tomography angiography (CTA) demonstrated complete occlusion of the right popliteal artery, surrounded by a large mass. Attempted tumor excision and interposition graft were unsuccessful due to the presence of an infiltrative mass. Consequently, a right femoro-popliteal bypass was performed using an 8mm expanded Polytetrafluoroethylene (ePTFE) graft. Concomitant biopsy and immunohistochemical analysis revealed the presence of EBV-associated lymphoma infiltrating the popliteal artery. Acute limb ischemia due to popliteal artery invasion by EBV lymphoma is an exceptionally rare clinical entity requiring a comprehensive diagnostic and therapeutic approach. Given the unusual nature of this case, there is limited guidance on optimal management. Despite the challenges posed by extensive arterial involvement, limb salvage was successfully achieved through arterial reconstruction. Further research and case reports are warranted to refine the management of similar cases and enhance our understanding of this rare clinical presentation.

Keywords: Epstein-barr virus, lymphoma, acute limb ischemia, invasion

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PP-124

The Importance of use of hybrid operating room for peripheral angiography procedures

Senel Altun[1], Mehmet Atay[1], Serhat Caliskan[2]

[1]Bahçelievler State Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]Bahçelievler State Hospital, Department of Cardiology, İstanbul, Türkiye

Abstract

Compared to open surgery, endovascular interventions are minimally invasive, more comfortable for the patient and physician.When performed by an experienced team, the complication rate is lower, but there may be serious complications that require urgent surgical intervention. We believe that performing endovascular interventions in hybrid operating room conditions, which are also suitable for surgical interventions, will reduce both mortality due to loss of time and the complication rate. A 66-year-old male patient was admitted to our clinic with the complaint of claudication while walking on his right leg, below 20 meters. When the CT angiography images taken at an external center were examined, the right common femoral artery (CFA) was observed to be completely occluded, followed by collateral filling, and the right popliteal artery was observed to be subtotally occluded. The intervention site was observed. A retrograde approach was chosen from the left femoral artery, and after placing the sheat, it was turned to the right common iliac artery and during the cross femoral procedure, the atherectomy catheter was advanced over the guidewire and it was observed that approximately 30 cm of the section broke off while working. The procedure was stopped and emergency open surgery was decided. The catheter part was removed. The procedure was terminated succesfully. Serious complications requiring urgent surgical intervention may occur, such as vascular rupture, bleeding, rupture of the materials used, and acute occlusion, depending on the materials used during endovascular interventions. In such cases, many negative factors such as transferring the patient to the operating room, transferring surgical equipment to the angiography unit, and not finding an empty operating room can cause complications. It can cause mortality and limb loss due to prolonged ischemia time due to loss of time. We believe that such situations can be seriously prevented by performing angiography procedures in full-fledged hybrid rooms and by making these rooms more widespread. For this reason, we found it worth presenting our case as an example.

Keywords: Common femoral artery, guidewire, hybrid

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PP-125

The endovenous treatment of great saphenous vein insufficiency using cyanoacrylate adhesive

Rayiha Gorkem Kanar

Ümraniye Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The aim of this study is to examine the impact of endovenous administration of n-butyl-2-cyanoacrylate (NBCA) in great saphenous vein (GSV) insufficiency and mid-term results.
Material and Methods: In total, 147 (78 females; mean age 49±10.5) patients with GSV prospectively enrolled in our study and followed 12±1.4 months. All patients treated endovenously using NBCA. Clinical examination and color Doppler ultrasonographic examination were performed at 48 h and at 1, 6, and 12 months after the procedure. The Comprehensive Classification System for Chronic Venous Disorders (CEAP) classification, Venous Clinical Severity Score (VCSS), and quality of life scores using the Aberdeen Varicose Vein Questionnaire (AVVQ) were performed before and after the procedure.
Results: Immediately after the procedure and at 48 h of follow-up, the GSV occlusion rate was 99.1%. The total occlusion rate was 96.2% at 12 months of follow-up. The mean VCSS improved from 5.7±1.9 at baseline to 0.9±0.5 at 12 months ($p<0.001$). The mean AVVQ scores improved from 14.7±3.2 at baseline to 4.0±0.9 at 12 months of follow-up ($p<0.001$).
Conclusion: Endovenous treatment of GSV insufficiency using cyanoacrylate adhesive may be an effective approach and may improves the quality of life of patients.

Keywords: Cyanoacrylate adhesive, endovenous treatment, great saphenous vein insufficiency

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PP-126

A rare port catheter complıcation: Port catheter pulmonary artery embolısm ın a 5 years old child

Recep Berat Cicek, Erdinc Eroglu, Mehmet Acipayam, Ahmet Kuyucu, Murat Ari

Kahramanmaraş Sütçü İmam University, Faculty of Medicine, Department of Cardiovasculer Surgery, Kahramanmaraş, Türkiye

Abstract

A 5-year-old child had a port catheter inserted about 6 months ago for long-term intravenous treatment for ALL. The patient was followed up in the ward after intravenous treatment and developed swelling in the neck and shortness of breath. A chest radiograph showed that the tip of the port catheter was in the intracardiac area. The patient was urgently taken to the Hybrid operating room. Images were obtained under C-armed scopy. It was seen that the catheter was detached from the port ring and the catheter tip extended from the right ventricle to the right pulmonary artery. Under local and sedation anesthesia, the right pulmonary artery was accessed through the right femoral vein with support catheters and wires. The catheter tip embolized to the pulmonary artery was successfully removed transvenously using a snare. We aimed to present our procedure which was successfully completed without any additional complications.

Keywords: Port catheter, implantation, complication, endovasculer

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PP-127

Three challenging diseases in one patient; Aortic regurgitation, ascending aorta aneurysm, aortic coarctation

Ozgur Altinbas, Tahir Olgac, Gungor Temizkan, Isik Betil Kutlu, Erhan Hafiz, Mehmet Adnan Celkan

[2]Gaziantep University, Vocational School of Health Services, Department of Cardiovascular Surgery, Gaziantep, Türkiye

Abstract

It is an extremely rare condition that aortic regurgitation, ascending aortic aneurysm and aortic coarctation were come across in same patient. Coarctation of aorta accounts up to 8% of congenital cardiac anomalies and may lead to aortic regurgitation by increasing the afterload. Etiology of the ascending aortic aneurysm generally differs due to the patient's age. In elderly population it is mainly caused by atherosclerosis, while more common reasons for the development of the disease are genetic disorders or aortic valve malformations. Aortic regurgitation may develop due to both aortic coarctation and bicuspid aorta which is one of the reasons of aortic aneurysm. Beside, various disorders such as infective endocarditis, autoimune diseases, hypertension, genetic conditions…etc are related to aortic rgurgitation. Here we aimed to present a one staged operation of a case who had three of the diseases explained above. A 21-year-old male admitted to the clinic with dyspnea, orthopnea and fatigue. His history revealed follow up in out center with diuretic but he didn't complied to follow up periods and medication. Hypertension and diastolic murmur were detected in physical examination. Echocardiography showed severe aortic insufficiency and aneurysmatic ascendan aorta (55 mm). EF was 45%. CT angiographic image revealed aortic coarctation beside aneurysm. Operation was decided. Aortic valve was repaired primarily. Aneurysmatic segment was existed and 28 mm Dacron graft was replaced. A bypass with 16 mm tube graft between recently replaced Dacron graft to descending aorta for coarctation was performed. Patient was discharged on postoperative 10th day without any complication. Although cardiovascular interventions include challenging modalities especially if more than one disorders are in the same individual, advanced technology and gradual expert experiences allow to overcome these clinical situations.

Keywords: Aortic regurgitation, ascending aorta aneurysm, aortic coarctation

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PP-128

Coexistence of nutcracker syndrome with pelvic congestion, and median arcuate ligament syndrome: Single-stage transposition with gonadal vein cuff and ligament excision

Osman Eren Karpuzoglu, Naci Cem Aydogdu

Dr Siyami Ersek Thoracic and Cardiovascular Surgery Education and Research Hospital, Department of Cardivascular Surgery, İstanbul, Türkiye

Abstract

Nutcracker syndrome is a rare vascular compression disorder that can cause flank pain, hematuria, varicocele, and pelvic congestion. Meanwhile, median arcuate ligament syndrome is another rare condition that can cause postprandial pain and anorexia due to the compression of the celiac artery. Depending on the disease's severity, there are several treatment options available, ranging from medical to interventional treatment. A 34-year-old woman presented at our out-patient clinic with abdominal pain radiating to the groin, weight-loss, genital and lower extremity varicose veins, which were later diagnosed as pelvic congestion. Further investigations revealed Nutcracker and median arcuate ligament syndrome when her symptoms did not improve with medical treatment. In order to simultaneously treat the two diseases, open surgery was planned. During the surgical operation, the excision of the median arcuate ligament and repositioning of the left renal vein were performed by interposing a gonadal vein cuff. The patient was discharged on postoperative day 5, and all her symptoms were relieved at the 1-month follow-up visit. Coexisting vascular compression syndromes are rare, and treating them simultaneously is crucial for symptom regression. Although different treatment modalities are available, open surgery was performed in this case for both long-term results and simultaneous treatment of two pathologies. Moreover, an alternative surgical technique was applied by interposing the gonadal vein cuff in the surgical treatment of Nutcracker syndrome, which differs from the methods described in the literature. Nutcracker and median arcuate ligament syndromes are vascular compression disorders that can coexist rarely. Treatment options include medical, open/laparoscopic surgery, and endovascular procedures. In this case, due to the coexistence of two syndromes, open surgery was performed to relieve the compression on the left renal vein and celiac artery, and the cause of pelvic congestion was eliminated. The use of gonadal vein cuff interposition in the surgical treatment of Nutcracker syndrome has shown to be a successful alternative, eliminating the need for additional surgical procedures, shortening the operation time, and providing regression of pelvic congestion.

Keywords: Nutcracker syndrome, median arcuate ligament syndrome, pelvic congestion, gonadal vein

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PP-129

A rare case of vascular surgery: Spontaneous pseudoaneurysm in deep femoral artery

Ecem Tugba Yamac[1], Arif Okay Karslioglu[1], Denizhan Akpinar[1], Elshad Mansimzada[1], Endri Balla[1], Zoukou Mariefrancedominique Seri[1], Hakki Tankut Akay[1], Ahmet Sukri Hatipoglu[1], Ozgur Ozen[2]

[1]Başkent University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara,Türkiye
[2]Başkent University, Faculty of Medicine, Department of Interventional Radiology, Ankara, Türkiye

Abstract

An aneurysm is roughly the ballooning of the artery wall.That may occur due to many reasons but its usually occur due to traumatic causes.True aneurysms contain all three layers of the arterial wall. A false aneurysm (pseudoaneurysm)is a formation that is connected with the arterial lumen, has blood flow in it and does not have an arterial element in its wall.It is more common in the puncture of distal segments of common femoral artery and superficial femoral artery.During the physical examination, murmur may be heard and a pulsatile mass may be handled.It should be evaluated by arterial duplex ultrasonography. Our patient, a 60-year-old man admitted to our center with leg pain, has positive lupus antibody tests, a history of double coronary bypass, AVR with Medtronic 18 No AP and MVR with Medtronic 24 No AP mechanical heart valves.A pseudoaneurysm measuring 53x32 mm was detected in the proximal segment of the left deep femoral artery on arterial color doppler.A pseudoaneurysm associated with a deep femoral artery 36x40x43 mm in length was seen in the medial of the left thigh on femur MRI.On the left lower extremity angiography, an appearance consistent with a pseudoaneurysm of approximately 40x35 mm size associated with the left deep femoral artery was found. Under the guidance of ultrasonography, tisseel thrombin was injected into the spontaneously developing pseudoaneurysm associated with the deep femoral artery in the superior medial part of the left thigh and it is completely thrombosed. Our patient was re-evaluated and reprocessed because his symptoms did not go away after discharge.The left main femoral artery was entered antegradely with a micropuncher set needle, accompanied by USG and fluoroscopy.The guide wire was advanced to the deep femoral artery with USG and scopy.The segment after the pseudoaneurysm was embolized with 2 peripheral hydrocoils with a diameter of 2x4 mm directed through the microcatheter. Considering the complications and limitations of the ultrasound-assisted compression method, ultrasound-guided thrombin injection therapy has come to the fore. Surgical option can still be used in special cases.Considering the postoperative surgical complications, thrombin injection is now the first choice in the treatment of pseudoaneurysms.

Keywords: Spontaneous, pseudoaneurysm, deep femoral artery, thrombin

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PP-130

Surgical treatment of coarctation of the aorta in patients with congenital aortic arch disorders

Valeriy Sergeevich Arakelyan, Rustam Zabyt Gerievich Kidakoev, Vasiliy Georgievich Papitashvili, Roman Gennadevich Bukatsello, Nazim Ragimovich Gamzaev

Bakoulev Scientific Center for Cardiovascular Surgery, Department of Arterial Pathology, Moscow, Russia

Abstract

Aim: An outcomes of surgical treatment patients with (re)coarctation of the aorta (CoA) in the presence of congenital pathology/ anomaly of the aortic arch and its branches.

Material and Methods: The study included 72 patients with coarctation of the aorta, aged from 5 to 46 years, operated in the department of arterial pathology of the A.N. Bakulev National Medical Center of Cardiovascular Surgery over the last 10 years (2010-2021). The criterion for inclusion of patients in the study was the presence of hypoplasia (n=51, 70.8%), aortic kinking (n=10, 13.9%) or anomaly of the aortic arch and its branches (n=11, 15.3%: aberrant origin of the right subclavian artery - 9, persistent fifth arch - 2). The mean systolic pressure gradient at the aortic isthmus was 55.3 (m=2.17) mmHg. The mean arterial pressure gradient between the upper and lower extremities was 53.2 (m=5.97) mm Hg, between the right and left arm it was 30.7 (m=2.36, in 83% of the group it was above 20 mm Hg).

Results: In 37.5% (n=27) CoA resection with graft replacement (16.7%) or end-to-end anastomosis (20.8%) was performed, preventive subclavian artery reconstruction was performed in 8 patients with its aberrant outflow. Ascending to descending aorto-aortic bypass was performed in 65.2% (n=45) of patients. In 15% of cases the surgery was performed using cardio-pulmonary bypass, in 5% of cases selective cerebral perfusion was additionally applied. Stabilization of pressure gradient and arterial pressure was achieved in all patients. The main postoperative complications were hemothorax (n=1), chylothorax (n=1). No operative mortality was noted.

Conclusion: 1) Despite the attractiveness of endovascular techniques, open surgery is method of choice for surgical correction of aortic arch pathology. 2) Indications for open surgery are the existing anomaly of the aortic arch and its branches. 3) Measures to prevent perioperative complications are: surgery without simultaneous clamping both subclavian arteries or preventive carotid-subclavian transposition; extraanatomic ascending to descending aortic bypass for organ protection. 4) Surgeon and institutional experience in open thoracic aortic surgery.

Keywords: Congenital heart defect, coarctation of the aorta, surgery, anomaly of the aortic arch

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PP-131

Risk factors of persistent immediate type Ia endoleak at completion angiography after endovascular abdominal aorta aneurysm repair

Youngjin Jang[1], Youngjin Han[2], Jun Gyo Gwon[2], Yong Pil Cho[2]

[1]Ilsan Paik Hospital, University of Inje College of Medicine, Department of Surgery, Goyang, Republic of Korea
[2]University of Ulsan College of Medicine And Asan Medical Center, Department of Surgery, Division of Vascular Surgery, Seoul, Republic of Korea

Abstract

Aim: While most cases of immediate type Ia endoleak (T1aEL) at completion angiography following endovascular abdominal aortic aneurysm repair (EVAR) resolve spontaneously, persistent T1aEL requires secondary intervention, leading to aneurysmal sac expansion. This study aimed to identify the risk factors associated with early T1aEL persistence or the need for additional interventions.

Material and Methods: A retrospective analysis was done on patients who underwent EVAR for infrarenal abdominal aortic aneurysms (AAA) between 2010 and 2021 and had immediate T1aEL on their post-EVAR completion angiography. Clinical and anatomical data for each patient, and radiological follow-up data were collected. Univariable and multivariable logistic regression analyses were performed to identify risk factors for early T1aEL persisting beyond 6 months postoperatively or requiring additional interventions.

Results: Out of 554 cases, 74 (13.4%) had immediate post-EVAR T1aEL on their completion angiography. Among these, 60 of 74 (81.1%) cases were spontaneously resolved at the first follow-up computed tomography angiography (CTA). Over a median follow-up period of 29.2 months (0.033–129.9, SD 32.9), 6 out of 14 patients with persistent T1aEL (8.1%) required proximal cuff extensions. Additionally, 3 out of 42 cases (7.1%) showed persistent T1aEL beyond 6 months postoperatively. A total of 7 cases (9.5%) had persistent T1aEL beyond 6 months or required additional intervention. Uni- and multivariable analyses demonstrated that a suprarenal neck angle (angle alpha) was a significant risk factor for persistent early T1aEL beyond 6 months or additional intervention (OR 1.05, 95% CI 1.01–1.09, p=0.026).

Conclusion: The suprarenal neck angle (angle alpha) is a significant risk factor for persistent immediate T1aEL at final angiography or the need for additional interventions following EVAR in our study. This implies more attention and consideration of additional intervention can be needed in EVAR treatment of AAA with larger suprarenal neck angles.

Keywords: Abdominal aorta aneurysm, early type Ia endoleak, endovascular abdominal aortic aneurysm repair

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PP-132

Anatomical and physiological features of patients with Nutcracker syndrome in the aspect of instrumental diagnosis

Marta Nikogosyan[1], Valeriy Arakelyan[2], Nazim Gamzaev[3], Papitashvili Vasily[4]

Bakoulev Center, Department Cardiovascular Surgery, Moscow, RU

Abstract

Aim: Nutcracker Syndrome (NCS) is the compression of the left renal vein between the aorta and the superior mesenteric artery, leading to hemodynamically significant disruptions in blood outflow and an increase in venous pressure in the left renal vein above that in the inferior vena cava. The severity of clinical manifestations is associated with the extent of anatomical and hemodynamic disturbances. To assess the criteria for instrumental diagnosis of patients with Nutcracker Syndrome in terms of indications for surgical correction.

Material and Methods: A retrospective analysis of instrumental diagnostic methods was conducted on 61patients with Nutcracker Syndrome from September 2016 to September 2023, of whom 41patients had indications for surgical intervention. There were 39 male and 22 female patients (average age 21.2 years; range 12 to 42 years). In 36 (59%) cases, there was resistant arterial hypertension(AH)of nephrogenic origin, confirmed after excluding other possible causes, and indications for surgery were established in 28 (45.9%)of these patients.Varicoceles were the clinical manifestation of phlebogypertension in 16 (26.2%) patients, with 13 (21.3%) of them requiring surgical treatment. Belt-like pains were present in 15 patients (24.6%), and 11 (18%) had indications for surgical treatment. Persistent idiopathic hematuria was observed in 26 (42.6%) cases, with 16 (26.2%) patients having indications for surgical intervention.

Results: Ultrasonography (US):- The ratio of the left renal vein (LRV) diameters at the hilum and at the aortomesenteric "pincers" exceeded 4.9.-The ratio of peak velocities exceeded 4.7 (analyzed in all 45 patients, with indications for surgery identified in 41 patients). The mean ratio of peak systolic velocity at the compression site and at the renal hilum was 6.6 (range 5–16), with a mean peak pressure gradient of 5.1 mm Hg (range 3-16). CT scan was used for anatomical evaluation, such as anterior (in 58 patients) and posterior (in3patients)Nutcracker Syndrome subtypes. CT criteria included:- An angle of departure of the superior mesenteric artery (SMA) from the aorta less than 30° (in 46 patients). - Beak angle less than 32 degrees (in 38 patients). Phlebography with pressure measurements in the LRV (distal to the stenosis) and in the inferior vena cava (IVC) exceeding 3 mm Hg, with venous blood sampling for renin concentration determination (in 30patients, with indications for surgical treatment identified in 17patients).

Conclusion: Instrumental diagnosis of patients with Nutcracker Syndrome is an important aspect in determining indications for surgical treatment.

Keywords: Anatomy, pathphysiology, diagnosis of Nutcracker syndrome

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PP-133

Early and long-term results of remote endarterectomy of the superficial femoral artery in patients with diabetes mellitus

Kristina Zhdanovich[1], P. Puzdriak[2], V. Shlomin[2], A. Gusinsky[1], M. Ivanov[3]

[1]Almazov National Medical Research Centre, Department of Cardiovascular Surgery, Saint Petersburg, Russia
[2]City Multidisciplinary Hospital № 2, Department of Vascular Surgery, Saint Petersburg, Russia
[3]North-Western State Medical University named after I.I. Mechnikov, Department of General Surgery, Saint Petersburg, Russia

Abstract

Aim: To compare the results of remote endarterectomy of the superficial femoral artery (SFA) in patients with and without diabetes mellitus (DM).

Material and Methods: A retrospective study included 62 patients with type C and D SFA lesions by TASC II and the presence of stage IIb, III or IV lower limb ischemia according to Fontaine-Pokrovsky. Patients underwent remote endarterectomy (REAE) SFA with Volmar loop, Aesculap. Two clinical groups were formed: control(CG) - 40 patients (DM+) and main (MG) - 22 patients (DM-). The average age was 64.0±6.2 and 65.0±6.4 years in CG and MG. According to Rutherford classification, satisfactory outflow paths were recorded in 11 (50%) in MG and 24 (60%) in CG.

Results: Early postoperative period: technical success of procedure was 100%, the average time in CG was 142.6±59.5 min, in MG 181.8±71.7 min. The average blood loss in CG was 259.5±143.3 ml, in MG - 281.8±170.1 ml. Four (10%) patients in CG required re-interventions: 3 of them associated with post-op thrombosis and lead to foot amputation in one case, calf in second and hip in third case, 1 wound revision because of bleeding. In the CG no such complications were recorded. Infectious complications in CG developed in 4 (10%) patients, including 2 (5%) cases of lymphorrhea. In MG - 1(4.5%) case of lymphorrhea. The duration hospitalization in MG was 17.0±21.6 days and 17.0±17.7 days in CG. Long-term period: limb salvage after 36 months of follow-up registered in 95.5% vs 94.5% in MG and CG, respectively. Hip amputation in MG performed in 1 (4.5%) and in CG in 2 (5.4%) cases.

Conclusion: Despite the more severe comorbidity of DM+ patients and severe lesion of the arteries its effect on the risk of adverse outcomes was not revealed both in early and long-term (36 months) follow-up period after REAE of the SFA in comparison with patients without DM. REAE is a reliable alternative femoral-popliteal revascularization for those who suffering from diabetes mellitus, especially in cases of absence of a suitable autogenus vein, infected trophic ulcers, which is important in severe critical lower limb ischemia.

Keywords: Remote endarterectomy, superficial femoral artery, diabetes mellitus

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Endovascular repair of the thyrocervical trunk pseudoaneursym due to central venous catheter placement

Ali Fuat Karacuha[1], Ahmet Kayan[2]

[1]Trabzon Kanuni Training and Research Hospital, Department of Cardiovascular Surgery, Trabzon, Türkiye
[2]Kırıkkale High Specialization Hospital, Department of Cardiovascular Surgery, Kırıkkale, Türkiye

Abstract

Central venous catheters (CVC) are devices for daily clinical practice for treatment of several diseases. The internal jugular vein (IJV) is the preferred site for CVC placement and appropriate venous puncture under real-time ultrasound guidance usually provides an easy access to venous system even in an emergency condition. However, CVC placement may be associated with severe and potentially life-threatening complications. Cervicothoracic arterial trauma may have serious consequences, such as compression of the airways, pseudoaneurysm, hemothorax, arteriovenous fistula, stroke, massive bleeding, and death. We present a unique case of endovascular repair of a right thyro-cervical trunk pseudoaneurysm, developed after one month a placement of a CVC in the right IJV. 72 years old woman was admitted to the our clinic after a month of TAVI procedure with dysphonia, dispnea and swallow disorder. A CVC was placed in the right IJV for intravenous infusions under real time ultrasound guidance. During the procedure, there was no sign of accidental arterial puncture and no swelling was observed at the end of CVC placement. A cervico-thoraco-abdominal Computed Tomography (CT) angiography was performed, showing 8*5cm pseudoaneurysm behind the right subclavian artery with comprasion of trakea and eusofageal truct. The patient complained dysphonia, swallowing disorder with progressive breathing insufficiency. The patient entubated electively. The patient was considered at risk for open repair due to high risk of intraoperative bleeding and for concomitant comorbidities, and a 2 steps procedure was planned. The first procedure was performed through a retrograde right common femoral artery access under sonography guidance. Selective angiography of the right subclavian artery confirmed the pseudoaneurysm and showed of its origin from the thyrocervical trunk. The vascular injury was embolized using micro-coils. Post procedure angiogram demonstrated complate occlusion of the vessel and pseudoaneurysm. Two days after the endovascular repair, a color-doppler ultrasound of the right upper chest and neck confirmed the absence of flow and the complete thrombosis of the pseudoaneurysm, which was finally surgically drained in light sedation anesthesia to resolve the compressive symptoms. The patient was discharged home and had a full recovery. The patient was significantly improved on follow-up visit 2 weeks later.

Keywords: Endovascular repair, pseudoaneursym, central venous catheter placement

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PP-135

Bilateral caroticosubclavian bypass surgery concurrent with zone 2 thoracic endovascular repair graft implantation due to in a patient with abnormal right subclavian artery and descending aortic aneurysm

Emre Kubat, Yigit Tokgoz, Tuna Demirkiran, Gokhan Erol, Cengiz Bolcal

Health and Science University, Gülhane Training and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Thoracic aortic aneurysms are seen in 6-10 out of 100 thousand patients annually. It is often detected in the ascending aorta or descending aorta. Aberrant right subclavian artery is seen between 0.5% and 1% in the population, and the rate of coexistence of aberrant subclavian artery and aortic pathologies is 9.9%. Conventional surgery or endovascular interventions and a combination of both can be used in the treatment. A 69-year-old male patient had an ascending aorta replacement operation (with 34 mm Dacron Graft) performed 3 months ago. A Thoracic endovascular aortic repair (TEVAR) was scheduled for the next surgical session due to the descending aortic aneurysm with aberrant right subclavian artery. Bilateral caroticosubclavian bypass surgery concurrent with zone 2 thoracic endovascular repair graft implantation were performed. Postoperative period was uneventful. The patient was discharged postoperative 4th day. CT angiography one year after surgery showed patent bilateral caroticosubclavian bypasses and TEVAR graft without endoleak. Bilateral caroticosubclavian bypass surgery concurrent with zone 2 thoracic endovascular repair graft implantation may be a good option for abnormal right subclavian artery and descending aortic aneurysm abnormal right subclavian artery and descending aortic aneurysm coexistence

Keywords: Thoracic aortic aneurysms, endovascular aortic repair, aberrant right subclavian artery, caroticosubclavian bypass

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PP-136

Endovascular treatments in TASC C or D aortoiliac occlusive disease involving the aortic bifurcation

Dilsad Amanvermez Senarslan, Funda Yildirim, Aylin Yildiz, Ihsan Iskesen, Tulun Ozturk, Omer Tetik

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Aim: This retrospective study aims to report the results of endovascular therapy for Transatlantic Inter-Society Consensus (TASC) C or D aortoiliac occlusive disease (AIOD) involving aortic bifurcation.

Material and Methods: The local ethical committee approved the study and 26 patients with TASC C or D AIOD involving the aortic bifurcation were enrolled in the study. Data were collected from archive reports and outpatient clinic notes between 2018-2023.

Results: The study involved 5 female and 21 male patients at a mean age of 62.4±11 years old. Twenty-one patients were treated with Kissing stents, Advanta V12 (Atrium, Getinge Group), and four patients were treated with covered endovascular reconstruction of the aortic bifurcation (CERAB) technique. Technical success was achieved in 96,1%, one patient had to convert open surgery (aorto-bifemoral bypass). Survival and patency rates were calculated with Kaplan-Meier Statistical Analysis. The primary patency rate at 70 months was 87%. Two patients had successful reintervention for in-stent restenosis. Two patients had a myocardial infarction (8%) and one patient died (4%) of cerebrovascular events in the follow-up. One patient required major and two patients required minor amputation.

Conclusion: Even complex (TASC C or D) AIOD involving the bifurcation may be treated successfully by experienced interventionists in suitable patients with good technical success and good mortality and morbidity rates. The CERAB technique seems to have similar patency rates compared to open surgery in the early and mid-term. Covered kissing stents may be preferred for short bifurcation lesions. Further randomized controlled studies comparing the long-term results of these techniques are needed.

Keywords: Aortoiliac occlusive disease, covered endovascular reconstruction of the aortic bifurcation, endovascular treatment, kissing stent, peripheral artery disease

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PP-137

A single center exprience of Endovenous Laser Ablation (EVLA) versus Endovenous Radiofrequency Ablation (EVRF)

Abdullah Guner[1], Volkan Burak Taban[2], Yuksel Dereli[3]

[1]Beyhekim Training and Research Hospital, Department of Cardiovascular Surgery, Konya, Türkiye
[2]Şırnak State Hospital, Department of Cardiovascular Surgery, Şırnak, Türkiye
[3]Necmettin Erbakan University, Meram Medical Faculty, Department of Cardiovascular Surgery, Konya, Türkiye

Abstract

Aim: Chronic venous insufficiency is a common medical problem with a prevalence of 15% in men and 35% in women; however, minimally invasive techniques have come to the forefront in the treatment of insufficient VSM, moreover endovenous laser ablation (EVLA) and radiofrequency ablation (EVRF) have become alternatives to conventional surgery. In this study,we present our early and mid-term EVLA and EVRF results from our center.

Results: The study included 243 patients who underwent surgery at Necmettin Erbakan University (NEU) Meram Medical Faculty Hospital between 2021 and 2023. Of the patients, 179 were female and 64 were male. A total of 147 patients underwent EVRF and 96 patients underwent EVLA, with a mean age of 46.23 years. A total of 88 patients and 331 extremities were treated. Postoperative complications were pulmonary embolism after EVLA in 1 patient and thrombophlebitis in 2 patients. No significant complications were observed in other patients.In the first 3 months follow-up,recanalization was seen in 10 (6.8%) patients who underwent EVRF compared to 9.3% (n=9) in the EVLA group. The mean great saphenous vein (VSM) diameter at the saphenofemoral junction was 6.3 mm,whereas the mean VSM diameter was over 8 mm in cases with recanalization.

Conclusion: Studies on endovenous varicose vein treatments have a high degree of heterogeneity depending on the treatment procedures of the practicing clinics. In our study, the distribution of demographic data such as mean age and gender was similar to other studies. On the other hand, the complication rates are similar. In our study,we think that the high recanalization rates are partially related to the higher mean VSM diameters compared to similar studies. Varicose veins, which affect a large number of people in the society, should be treated in the most effective way with the least possible intervention. EVLA and EVRF are still the most reliable techniques to avoid DVT and other minor complications, which are the most feared complications of varicose vein operations. Patient groups with a high risk of recanalization should be identified with multicenter studies of these methods. In addition,combined varicose vein treatment methods should be used if necessary for effective treatments for these groups.

Keywords: Radiofrequency, endovenous treatment, laser therapy, ablation

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PP-138

Temporal arteriovenous fistula following hair transplantation

Aylin Yildiz, Funda Yildirim, Dilsad Amanvermez Senarslan, Omer Tetik

Manisa Celal Bayar University, Faculty of Medicine, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Hair transplant surgeries is the common solution for male and female hair loss. Arteriovenous fistula of scalp is a rare complication of hair transplantation. There are a few cases have been reported. Open surgical and endovascular treatments have been described in these cases with acceptable results. Hair transplant surgery has become very popular in last 10-12 years. And the number of hair transplants are still increasing. So too, complications of this procedure will be. In this report, we present a case of an arteriovenous fistula of the superficial temporal artery following hair transplantation, which was successfully treated using an open surgical technique. A 36-year-old man was referred to our department with headache, swelling on the right temporal region, throbbing mass and he complained about a continuous pulsatile murmur. He had undergone a hair transplantation surgery 8 months prior to his hospital admission. Following the procedure, he had noticed a small swelling in the right temporal region, but this swelling had progressively enlarged over the months, and he had complained of a headache. His medical history has no significant features. On physical examination, a strong thrill was palpable, and the murmur disappeared with compression. A CT Angiography scan revealed dilated vessels and temporal scalp arteriovenous fistula that was fed by the superficial temporal artery. Surgical closure of the fistula was recommended to the patient. The patient underwent surgery under local anesthesia. Two 1 cm incisions were made in the preauricular and temporal regions, where the dilated vein and thrill was located. The fistula was ligated, and the dilated vein was removed. The patient was scheduled for two follow-up appointments, one on the 10th day and another at the 1-month mark post-surgery. During these check-ups, the patient's complaints had resolved. The thrill had disappeared, and there was no evidence of the dilated vein. Special attention to the anatomy of the fistula should be given when deciding on the effective treatment strategy. Post-intervention appearance is also important, as surgical intervention will leave a scar and glue embolization leaves a subcutaneous mass.

Keywords: Arteriovenous fistula, hair transplantation, complication, superficial temporal artery

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PP-139

Conventional surgery is the best treatment modality for the complicated lower extremity arterial aneurysms

Funda Yildirim, Dilsad Amanvermez Senarslan, Halil Demren, Adnan Taner Kurdal, Omer Tetik

Manisa Celal Bayar University, Department of Cardiovascular Surgery, Manisa, Türkiye

Abstract

Aim: Peripheral arterial aneurysms are abnormal dilations of the peripheral arteries caused by weakening of the arterial wall, usually caused by atherosclerosis, trauma, infection, or poststenotic abnormalities. Aneurysm is defined as a dilatation of greater than 50% that of the native vessel and involving all three layers of the arterial wall. The exact pathogenic mechanism of aneurysm formation is unknown. Despite etiological and anatomical differences, peripheral aneurysms are frequently associated with complications that lead to acute or chronic arterial insufficiency, embolization with infarction or gangrene of the involved extremity, rupture and perhaps even death.

Material and Methods: We presented the lower extremity arterial aneurysm operations of our clinic for the last ten years. The data were analysed retrospectively. Most of the patients have complicated aneurysmal disease. The complications were distal emboli, venous compresion and in three cases rupture.

Results: 20 patients were operated. The mean age is 55,45 years. The two patients were female, the others were male. The etiologies were three patients due to trauma, two patient vasculitis, one patient mycotic aneurysm due to infection and the other 14 patients had atherosclerosis. The anatomic locations were as follows; the two iliac, the two femoral, the two femoral and popliteal, the 14 popliteal artery. We performed bypass surgery in all patients. Safenous vein graft was used in nine patients for infragenicular bypass. For supragenicular bypass the PTFE graft was used. Only one patient required minor amputation because of late referral due to distal emboli.

Conclusion: Peripheral arterial aneurysms are uncommon pathologies. Peripheral artery aneurysms should be identified early and managed by a vascular specialist to prevent unwanted results. Conventional surgery is the best treatment option for the complicated lower extremity arterial aneurysms.

Keywords: Peripheral artery aneurysm, surgery, popliteal artery, complication

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PP-140

Long-term results of minimally invasive treatment of varicose veins of the lower extremities: The experience of the Almazov Centre

Mikhail Aleksandrovich Chernyavskiy, Yuliya Konstantinovna Belova, Kyaram Arutyunovich Azatyan, Алмаз Gafurovich Vanyurkin, Darya Viktorovna Chernova

Almazov National Medical Research Centre, Department of Vascular and Endovascular Surgery, Saint-Petersburg, Russia

Abstract

Aim: The aim of our retrospective cohort single-center study was to assess the long-term results and causes of disease recurrence in patients with varicose veins of lower extremities (VVLE) after radiofrequency ablation (RFA).

Material and Methods: We included 406 patients with identified hemodynamically significant reflux in the great saphenous vein (GSV) who underwent isolated RFA (n=81; 19.9%) or RFA with miniphlebectomy (n=284; 70%) or with sclerotherapy of tributaries (n=41; 10.1%). during the observation period from 2013 to 2022.

Results: Primary vein occlusion was achieved in 406 (100%) patients. 26 (6.4%) patients were diagnosed recurrence of varicose veins after surgery (REVAS). Among 18 (4.4%) patients with "early" recurrence there were 6 (1.5%) patients with recurrence in the period from 3 to 6 months with the incompetence of the anterior accessory saphenous vein and 12 (3%) patients with incompetence of GSV tributaries. Among 8 patients (2%) with a "late" recurrence in the period from 24 to 36 months 6 (1.5%) of them were diagnosed recanalization of the veins who had previously undergone sclerotherapy and 2 (0.5%) had neovasculogenesis. In all cases, patients with REVAS were carried out additional treatment at the second stage with a 100% technical result.

Conclusion: The most important factors of REVAS are tactical and technical errors associated with the first underestimation of the state of the venous system. Also one of the reason of REVAS is the absence or insufficient attendance of postoperative follow-up that can give the opportunity of the additional manipulations aimed to eliminate recurrence. To the least extent, according to our opinion the development of REVAS is affected by neovasculogenesis. Considering the main role of the first two causes, their minimization can significantly reduce the risk of disease recurrence.

Keywords: Varicose veins of lower extremities, disease recurrence, minimally invasive treatment

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PP-141

Nationwide interhospital variation in perioperative protocols to improve spinal cord perfusion for thoracoabdominal aortic surgery

Alison Zhu[1], Linna Huang[2], Charis Tan[1], Richard Chard[2]

[1]Concord Repatriation General Hospital, Department of Vascular Surgery, New South Wales, Australia
[2]Westmead Hospital, Department of Cardiothoracic Surgery, New South Wales, Australia

Abstract

Aim: Patients undergoing thoracoabdominal aortic surgery are at risk of developing paraplegia from damage or covering of spinal arteries, particularly the artery of Adamkiewicz. Perioperative lumbar cerebrospinal fluid (CSF) drainage can be used as a precautionary measure to reduce the potential for spinal cord ischaemia (SCI). Despite guideline recommendations for the insertion of a lumbar drain, there remains a lack of consensus for the timing of its placement and its management. While the implementation of standardised treatment guidelines has the potential to enhance patient outcomes, the variability in lumbar CSF drainage protocols has not been assessed across major aortic centres in Australasia.

Material and Methods: Tertiary centres involved in major thoracoabdominal aortic surgery across Australia and New Zealand were contacted for their published protocols on lumbar CSF drainage for aortic surgery. Data was collected on indications for insertion, duration of drainage, drainage volume, targets for mean arterial pressure (MAP), CSF pressure and spinal cord perfusion pressure (SCPP), and measures to be taken in setting of new onset paraplegia.

Results: A total of 59 centres were contacted, with responses from 28 centres. Fifty percent (n=14) centres had published lumbar CSF drain protocols and the remainder had no protocol use. Similarities in protocols included permitted hourly drainage volume, frequency of neurological assessment, MAP target and SCPP target. Variability was noted in timing of drain insertion, duration of drainage, and mobility restrictions. There was inconsistency in suggested actions in the setting of new onset paraplegia. Notably, 14% (n=2) of protocols did not specify any immediate measures that can be taken while awaiting specialist review.

Conclusion: Our study is the first comparison of lumbar CSF drain protocols in Australasia. Concerningly, half the centres contacted did not have a standardised treatment protocol to guide lumbar drain management. Across the protocols that did exist, there was variability in timing of drain placement, duration of drainage, mobility restrictions and immediate measures to mitigate the risk of SCI. This underscores the urgency for additional research and translational programs to ensure protocols and patient care reflect current evidence-based best practice.

Keywords: Thoracoabdominal, lumbar cerebrospinal fluid drain, protocols

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PP-142

Skin ulcerating arteriovenous fistula aneurysm and rupture, case report

Mustafa Can Kaplan[1], Kubra Gozacik[2], Nagy Kurvanliyev[2]

[1]Artvin State Hospital, Department of Cardiovascular Surgery, Artvin, Türkiye
[2]Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Arteriovenous fistulas are a common form of autogenous access in patients requiring renal replacement therapy. Although rare, arteriovenous fistula bleeding can be a devastating and fatal dialysis access complication. Here we report a case of fistula rupture. A 65-year-old female patient was receiving treatment via radiocephalic arteriovenous fistula for chronic renal failure. One day after her last dialysis session, she developed acute bleeding at the distal 1/3 level of the left forearm and was admitted to my center with bleeding control. The patient underwent emergency operation under bleeding control. On exploration, it was seen that the cephalic vein aneurysm ulcerated the skin and fistulized on the skin. Under emergency conditions, the aneurysmatic vein segment was closed with repair sutures and bleeding control was achieved. The patient was discharged with a permanent dialysis catheter during postoperative hospitalization. AVF bleeding is associated with central venous stenosis, large aneurysms/pseudoaneurysms, infection and skin ulceration. Fatal vascular access bleeding contributes to 0.4% to 1.6% of deaths in hemodialysis patients, with up to 40% of fatal vascular access bleeding events preceded by a precursor bleeding event or infection. Treatment is usually endoaneurysmorrhaphy and reconstruction, and often patients require additional treatment for central venous stenosis. Our case appears to be a rupture of an untreated arteriovenous fistula. In our country, our patients continue to be treated in dialysis centers in remote settlements. In these centers, clinicians and patients and their relatives should be informed that a functional arteriovenous fistula is the first priority. We believe that sensitivity should be increased to recognize the aneurysm for appropriate management, to follow its course and to ensure referral to advanced centers if necessary.

Keywords: Arteriovenous fistulas, aneuyrsm, rupture

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Femoral arteriovenous fistula formation after cardiac catheterizatıon: Case series

Mustafa Can Kaplan[1], Zinar Apaydin[2], Anil Akbas[2], Tuba Mutu[2], Mervan Akyol[2]

[1]Artvin State Hospital, Department of Cardiovascular Surgery, Artvin, Türkiye
[2]Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Arteriovenous fistulas (AVFs) develop in 2% of patients after femoral arterial interventions. In our series of two cases, we present a fistula that developed from the femoral artery to the femoral vein after cardiac catheterization. A 56-year-old male patient was diagnosed with acute MI and underwent cardiac catheterization via the left femoral artery. After successful coronary stenting, the patient developed pain with walking in the left leg during follow-up in the ward and AVF invasion was evaluated by Doppler ultrasonography and contrast-enhanced CT angiography. The fistulization from the left common femoral artery to the left femoral vein was repaired. A 55-year-old male patient underwent coronary stenting after inferior MI. During follow-up, right femoral arteriovenous fistula was observed on USG due to right leg pain with walking. Contrast-enhanced CT angiography showed fistulization through the deep femoral artery (DFA). The fistula was repaired from the DFA to the femoral vein in the operated patient. Both patients were discharged with recovery after follow-up in the ward. AVF development after cardiac catheterization was found to be approximately 1% in a study published by Perings et al. In studies, AVF development due to distal puncture of the main femoral artery is seen in 84%, while AVFs due to puncture of the main femoral artery are seen in 16%. Risk factors for AVF are female gender, arterial hypertension, left-sided punctures, heparin dose and coumadin treatment. Endovascular techniques are included in the literature as an alternative to surgical treatment. Endovascular treatment was not possible in our center due to the new establishment of the angiography unit, lack of experience and limited facilities. Rarely occurring AVFs should prompt more careful handling working in peripheral centers.

Keywords: Cardiac catheterization, arteriovenous fistula, surgery

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PP-144

1 year experience in state service obligation and results

Mustafa Can Kaplan[1], Batuhan Yazici[2], Hasan Coskun[2]

[1]Artvin State Hospital, Department of Cardiovascular Surgery, Artvin, Türkiye
[2]Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital, İstanbul, Türkiye

Abstract

Aim: We aim to share one-year results of surgical procedures performed in our center, which is a secondary healthcare institution.
Material and Methods: Patients admitted to our center between August 2022 and August 2023 were retrospectively screened and the results were shared.
Results: 76 patients underwent venous intervention and 31 patients underwent arterial and cardiac intervention. The mean age of patients undergoing venous intervention was 50.5 ± 9.9 years and 51 (67.1%) were female. 65 (85.5%) patients underwent the procedure via the vena saphana magna and 11 (14.5%) via the vena saphana parva. The operations were performed under ultrasonography and with tumescent anesthetic. Radiofrequency ablation method was used in 66 patients (86.8%), and non-thermal anti-inflammatory sealing system was used in 10 patients (13.2%). The mean age of patients undergoing arterial intervention was 61.8 ± 18.7 years and 17 (54.8%) were male. 11 (35.5%) patients underwent embolectomy procedure. The mean age of the patients who underwent embolectomy was 73.4 ± 13.8 years and 8 (72.7%) of them were female. 7 (63.6%) patients had a history of atrial fibrillation. 2 (18.2%) patients had postoperative mortality. 7 (22.6%) patients underwent surgery for peripheral arterial disease and also underwent emergency surgery for penetrating sharps injuries. 3 patients underwent below-knee bypass procedure using saphenous vein. In 1 patient, a full-thickness incision in the posterior tibial artery was repaired with saphenous interposition.
Conclusion: With increasing technology and developing time, patients can reach city centers more easily. However, the socioeconomic level of the patients who will receive treatment sometimes prevents them from reaching cardiovascular surgery centers. During the 1-year compulsory service period, we share the results of the treatments performed on patients who applied to our center, which is a secondary health institution.

Keywords: Chronic venous insufficiency, peripheral artery disease, results

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PP-145

Minithoracophrenolumbotomy in Dunbar syndrome: Early results and prospects of use

Valeriy Sergeevich Arakelyan, Roman Gennadevich Bukatsello,
Nikolay Aleksandrovich Chernykh, Rustam Zabyt Gerievich Kidakoev

Bakoulev Scientific Center for Cardiovascular Surgery, Moscow, RU

Abstract

Aim: As practice shows, the introduction of laparoscopic approach with stenting does not solve the problem of residual stenosis and recurrent symptoms, technical features, preserve the risks of conversion. We developed a method of mini-thoracophrenolumbotomy (miniTPLT), which is used as an alternative solution.

Material and Methods: From 2010 to 2023 operated on 35 patients with celiac artery compression syndrome (CACS), of which 9 (29%) patients were operated through miniTPLT. The criteria for using the new approach were a number of ultrasound criteria: the functional stenosis of artery, sufficient caliber and expansion of the celiac trunk (CT) at the height of inspiration. A retrospective assessment of immediate results was carried out in patients who used traditional TPLT (group A - 26 patients) and mini-TPLT (group B - 9 patients). The comparison groups were comparable in age, gender, clinical characteristics of the CACS, the time from the moment of complaints to treatment, concomitant pathology. For the groups, the time of the operation, the average time of drainage removal, the beginning of feeding, the length of hospital stay, the symptoms relief rate were calculated.

Results: There were no major complications, reoperations, and mortality in both groups. In group B, one (11%) conversion was performed to replace the celiac trunk. Using miniTPLT approach allowed to reduce the average time of operations from 2.8 hours (130-185min-group A) to 2.1 hours (95-145min-group B) hours. The average drainage removal time was 2.4 and 1.8 days, respectively. The average time to feeding was 2.8 versus 1.1 days ($P \leq 0.05$) in groups A and B, respectively. A comparatively smoother postoperative period in the miniTPLT group significantly reduced the use of parenteral analgesics (57.7% vs.78% without parenteral anesthesia; $P<0.05$). The duration of hospitalization was also significantly lower in group B (4.2 vs. 6.8 days; $P<0.05$).

Conclusion: MiniTPLT can be a good alternative to other approach to the celiac trunk. The primary analysis showed the possibility of reducing the time needed to activate patients, significantly reducing the time of hospitalization after miniTPLT in compliance with the principles of minimally invasive surgery and a good cosmetic effect.

Keywords: Dunbar's syndrome, celiac trunk compression syndrome, celiac trunk stenosis, laparoscopic decompression, surgical treatment

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PP-146

The expression profiles of IL8 and IL18 genes in veins

Melvin Alfred Tokpah[1], Ozlem Balcioglu[3], Aya Badeea Ismail[2],
Ulvan Ozad[2], Barcin Ozcem[3], Tamer Yimaz[1], Mahmut Cerkez Ergoren[2]

[1]Near East University, Faculty of Pharmacy, Department of Biochemistry, Nicosia, TRNC
[2]Near East University, Faculty of Medicine, Department of Medical Genetics, Nicosia, TRNC
[3]Near East University, Faculty of Medicine, Department of Cardiovascular Surgery, Nicosia, TRNC

Abstract

This study involved the analysis of tissue samples from 103 individuals with cardiovascular conditions. The researchers used a first-strand cDNA synthesis kit for sample preparation, followed by gradient polymerase chain reaction (PCR) using a 96-well thermal cycler. Real-time RT-qPCR was conducted using a Rotar Gene-Real Time PCR machine to detect and quantify PCR products. The samples were divided into a patient group and a control group, with different numbers of vein and aorta samples in each. The results showed that IL-18 expression was significantly higher in control veins compared to control aorta samples and also higher in patient group veins compared to patient group aorta samples. Conversely, IL-8 expression was significantly lower in patient group veins compared to control group veins, and IL-8 expression in control group aorta tissues was higher than in control group vein tissues. The study highlighted the importance of IL-18 as a primary biomarker for cardiovascular health concerns and emphasized the need for further research into its synthesis, regulation, and release. The aorta tissues were found to be a valuable source for studying IL-18 expression. The findings underscored the significance of interleukin screening in the healthcare system, as it affects various population groups and is associated with several health conditions. Therefore, interleukin screening should play a pivotal role in healthcare.

Keywords: Gene expression, interleukin-8, interleukin-18, veins, aorta, cardiavascular disease

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PP-147

A rare case; Cardiovocal syndrome due to aortic arch aneurysm (Ortner syndrome)

Askin Pekbay[1], Ugurcan Balyemez[2], Ozlem Balcioglu[1], Barcin Ozcem[1], Mustafa Parildar[2], Askin Ali Korkmaz[1]

[1]Near East University, Faculty of Medicine, Department of Cardiovascular Surgery, Nicosia, TRNC
[2]Near East University, Faculty of Medicine, Department of Interventional Radiology, Nicosia, TRNC

Abstract

Ortner syndrome (cardiovocal syndrome) is caracterized by progressive hoarseness caused by compression of the left recurrent laryngeal nerve (LRLN) by abnormal cardiovascular and mediastinal structures. Especially hoarseness associated with aortic aneurysms may be a harbinger of an impending aortic rupture. In this case report, aortic arch saccular aneurysm, a rare condition accompanied by progressive hoarseness, is discussed. An 82-year-old morbidly obese (BMI:40.79) woman with congestive heart failure, chronic abstructive pulmonary disease and diabetes mellitus was admitted to our clinic with compliants of respiratory distress and progressive hoarseness that started two months ago. Throcic tomography revealed a succular aneurysm in the arch aorta zone 2 localization. Endovascular intervention was planned due to advanced age and comorbidities. Thoracic endovascular aortic repair (TEVAR) with right femoral artery Access + left subclavian artery chimney was performed under general anesthesia. The patient had no additional problems in postoperative follow-up and was discharged uneventfully on the 4th day after the procedure.

Keywords: Ortner syndrome, aortic aneurysms, cardiovocal syndrome, recurrent laryngeal nerve palsy

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PP-148

A rare case: Giant hemi-arch aneurysm with a bovian arch

Ozlem Balcioglu[1], Barcin Ozcem[1], Askin Pekbay[1], Askin Ali Korkmaz[1], Anil Ziya Apaydin[2]

[1]Near East University, Faculty of Medicine, Department of Cardiovascular Surgery, Nicosia, TRNC
[2]Ege University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

A 76-year-old male patient with knownhistory of coronary artery disease was admitted to the Near East University Cardiovascular Surgery Department, with a complaint of shortness of breath and exertional chest pain. Patient had a history of ventrcular ablasion procedure. Upon echocardiographic investigation, a giant aneurysm measured 51 millimetres at the proximal ascending aorta and 80 millimetres at the distal ascending aorta. Valve pathology was not detected. Coronary angiography revealed 90% stenosis in the left anterior descending coronary artery. Coronary CT angiography with contrast illustrated the presence of a bovian arch variation. This variation was used as an opportunity in advantage, for the antegrade selective cerebral perfusion. The patient underwent ascending aorta and hemi-arcus replacement under selective antegrade cerebral perfusion and total circulatory arrest. Coronary bypass surgery was performed with a saphenous vein graft to the left anterior descending coronary artery. No cardiac complications were observed in the postoperative intensive care period. However, the patient was operated for an incarcerated inguinal hernia on the 5th postoperative day. The patient was discharged on the 10th postoperative day.

Keywords: Bovian arch, hemi-arch aneurysm, antegrade cerebral perfusion, total circulatory arrest

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PP-149

Rare but fatal, SMA aneurysm

Irem Yesiloren[1], Tahsin Murat Tellioglu[1], Ismail Yurekli[1], Yuksel Besir[1], Levent Yilik[1], Osman Nuri Dilek[2], Ali Gurbuz[1]

[1]İzmir Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye
[2]İzmir Atatürk Training and Research Hospital, Department of General Surgery, İzmir, Türkiye

Abstract

The prevalence of mesenteric artery aneurysm is %0.1-2. These are generally silent but due to rupture risk, they are generally fatal. We reported our case that underwent operation due to SMA aneurysm. A 47-year-old male patient was admitted to the emergency department with abdominal pain. SMA aneurysm was detected in the examinations. He was taken into operation with the General Surgery team. Since the aorta could not be released proximal to the aneurysm, the descending aorta was explored with a left anterolateral thoracotomy. An 8mm ringed PTFE graft was anastomosed in end-to-side fashion on right CIA. The graft was passed through the mesentery root and anastomosed to the SMA. The SMA was tied with nylon tape proximal to the anastomosis. Then the aneurysm sac was entered. Capitonnage was performed with 3.0 prolene from the aneurysm neck to the superior. It was confirmed that the graft was intact and the intestines were not ischemic. On the 2nd postoperative day due to deterioration in the patient's general condition, increase in lactate levels in arterial blood gas and abdominal distension, the patient underwent emergency abdominal CT angiography. Graft occlusion was detected and the patient was taken into emergency surgery. When severe ischemia was detected in the small bowel segments, the general surgery team was called to the case. They stated that revascularization of the SMA was meaningless since all intestinal segments perfused by the SMA needed to be resected. Ischemia was detected at the 30th cm from Treitz distally and continued until the middle of the transverse colon. Thereupon, small bowel resection and extended right hemicolectomy + end ileostomy were performed. The patient died the day after this second operation. Although SMA aneurysms are rare, they are a group of diseases with a high mortality. As seen in this patient, a multidisciplinary approach is required in the operation plan and postoperative follow-up. The patient should be followed closely after the operation, and graft occlusion should be considered when signs of acidosis and physical examination findings begin. The planned treatment should also be multidisciplinary.

Keywords: Superior mesenteric artery, aneurysm, mesenteric ischemia

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PP-150

Iatrogenic aortic dissection following TAVR: A case report

Melih Alma, Mustafa Yilmaz, Ahmet Aydin

Hacettepe University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Transcatheter aortic valve replacement (TAVR) has become a standard treatment for severe aortic stenosis in high-risk patients. While generally considered safe, it is not without potential complications. Here, we report a case of iatrogenic acute type A aortic dissection following a TAVR procedure in an elderly patient with severe aortic stenosis. İntroduction:An 84-year-old patient with a known history of hypertension and atrial fibrillation was admitted to the emergency department with complaints of chest pain and dyspnea. Echocardiography revealed severe aortic stenosis with a peak gradient of 90. Coronary angiography showed several coronary lesions that did not require intervention. Transcatheter aortic valve implantation (TAVI) was planned for the aortic stenosis.. Tavi done standard manner,after tavi procedure acute backpain devepoled,emergency computeted tomography shown Acute Stanford type A dissection originated from Right coronary cusp to iliac arteries.Emergency salvage surgery planned,femoral artery and vein canulated,brachiocephalic artery selective canulated for antegrade cerebral perfusion,aortotomy done rcc orginated dissection seen,no dissection seen in coronary arteries,Aortic root and hemi archus replacement done with medtronic hancock biologic aortic valve and 30mm dacron greft,post operative icu followup left hemiplegia noticed,during followup patient presented a remarkable improvement neurologicly and discharged post operative 10th day. ConclusionTranscatheter aortic valve replacement (TAVR) can cause potential complications, including vascular injury, paravalvular leakage, valve migration, conduction disturbances, embolic stroke, coronary obstruction, and aortic dissection. Iatrogenic aortic dissection is a rare but highly serious complication. However, it can be detected and treated early. Due to the risk of aortic rupture, acute ascending aortic dissection is usually treated by emergency surgical repair, while descending aortic dissection is likely to be treated conservatively, except for complicated cases with impending rupture, uncontrolled pain, malperfusion, and uncontrolled blood pressure, which must be treated by endovascular therapy.

Keywords: Transcatheter aortic valve implantation, acute aortic dissection, transcatheter aortic valve replacement

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PP-151

A new improvable surgical limb salvage technique on below the knee vascular trauma

Mehmet Cakici[1], Ahmet Samil Demirok[2]

[1]Ankara Memorial Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

The treatment of acute lower extremity arterial injuries, which cause severe problems in modern society, is limited. With the case report we have written, we aim to shed light on science for the innovation of a new technique and new methods in surgical treatment in case of compartment syndrome developments in these injuries. We report a 16-year-old male patient admitted to our hospital who developed acute lower extremity arterial injury accompanied by trauma-related bone fractures after a motor vehicle accident. The patient was stabilized and scanned with CT Angio. The patient was operated on as a joint case of cardiovascular surgery and orthopedics. Right extremity femoropopliteal bypass was performed above the knee with a PTFE graft in the patient with a right SFA lesion following external fixation. The patient's below-knee run-off was evaluated as unsuitable. In the same session, an additional bypass was performed from the distal of PTFE graft to the posterior tibialis artery with an autologous saphenous vein graft. The patient, who was found to have distal perfusion disorder on the first postoperative day, was taken to reoperation. We wrapped saphen graft with PTFE graft below the knee level to prevent saphen pressure acording to compartment sendrom and share the current results. Vascular injuries of the lower extremities are a severe condition that requires immediate intervention. Therefore, it is aimed to review current articles and to provide more benefits with this new technique. It was emphasized that with this new technique, it would be possible to salvage from amputation in high-risk patients.

Keywords: Compartment syndrome, lower extremity salvage, below the knee bypass

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PP-152

Possibilities of intraoperative angiography with intravascular ultrasound to improve the results of treatment of celiac artery compression syndrome

Valeriy Sergeevich Arakelyan, Roman Gennadevich Bukatsello, Arslan Alisoltanovich Magammatov, Rustam Zabyt Gerievich Kidakoev, Magomedrasul Kurbanmagomedovich Musaev, Abdulgamid Yusupalievich Musalov

Bakoulev Scientific Center for Cardiovascular Surgery, Moscow, RU

Abstract

Aim: Improving the patency of reconstructions is a key strategy in the treatment of celiac artery compression syndrome (CACS). One of these tools is the use of intraoperative instrumental patency control. Intraoperative angiography with intravascular ultrasound (IVUS) was studied as such a method.

Material and Methods: From 2020 to 2023, in 11 patients with CACS, intraoperative angiography with IVUS was used to assess the patency of celiac trunk (CT) decompressions. Angiography with IVUS was performed before and after the main stage of decompression with splanchnic ganglionectomy, bilateral dissection of the medial crura of the diaphragm and periaortic (periarterial) desympatization. Femoral access was used as vascular access in 81.6% of cases, transradial in other cases. To prevent intraoperative vasospasm after decompression, the application of papaverine solution and selective injection of nitroglycerin solution into CT situations were used. The main instrumental criteria for residual stenosis were considered: detection of organic stenosis after drug vasoplegia, stenosis more than 50-60%, pronounced poststenotic expansion.

Results: Residual stenosis was detected in 4 (36.4%) patients: in 2 (18.2%) cases the stenosis was extensive with pronounced poststenotic expansion, in 1 (9.1%) case there was local stenosis without poststenotic expansion, in 1 (9.1%) case, the narrowing segment of CT was caused by prolonged vasospasm, which was not relieved with medication during surgery. In 3 (27.3%) cases, surgical correction was performed: resection and implantation of the celiac trunk (n=1), interposition graft (n=1), stenting (n=1). Residual stenosis caused by vasospasm was relieved and a week later, ultrasound monitoring revealed no hemodynamically significant stenosis.

Conclusion: Intraoperative angiography with IVUS is a good and effective method for determining indications for reconstruction of the celiac trunk, as well as a method for monitoring the patency and quality of the reconstruction performed. However, interpretation may be difficult due to surgery-associated vasospasm. A positive aspect of angiography with IVUS is the possibility of converting the operation to a hybrid mode and performing stenting. Considering the early detection of residual stenoses, intraoperative angiography and IVUS can be used as a tool to improve long-term results of treatment of CACS.

Keywords: Dunbar's syndrome, celiac trunk compression syndrome, celiac trunk stenosis, surgical treatment, iintravascular ultrasound, Intraoperative angiography

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PP-153

A different carotid endarterectomy technique with specially shaped PTFE graft

Kemal Uzun

University of Health Sciences, Ahi Evren Thoracic and Cardiovascular Surgery Training and Research Hospital, Department of Cardiovascular Surgery, Kırşehir, Türkiye

Abstract

Carotid endarterectomy surgeries are performed with two different techniques: classical or eversion endarterectomy. Although surgeries are performed successfully with these techniques, risk of perioperative stroke remains. We used a different technique that we thought would reduce this problem. We applied this technique to 14 patients, 12 males and 2 females, with an average age of 68.26±12.1 (56-83) and all symptomatic. As a surgical technique, the diseased segment in the proximal internal carotid was resected tubularly. From here, an incision was made towards the proximal part of the main carotid artery and the inside and external carotid artery were cleaned. While the part of the PTFE tube graft corresponding to the resected part of the internal carotid was left in the form of a tube, the part corresponding to the main carotid was cut in the form of a patch and given a special shape. While the tubular part of this one-piece graft was replaced with the diseased proximal part of the internal carotid, the arteriotomy in the common carotid was closed with the patch-shaped part. Temporary difficulty in swallowing developed in 1 patient during the perioperative period. No thromboembolic neurological complications occurred in any patient, and no bleeding revision was performed. Patients are asymptomatic during 3-52 months of follow-up. As control imaging, Doppler ultrasonography was performed in all patients and tomographic angiography was performed in 5 patients with 50-70 % stenosis on the contralateral side. No stenosis requiring reoperation was detected in any patient.

Keywords: Carotid disease, endarterectomy, a new technique

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PP-154

Endovascular techniques for wide and conic shaped neck: Two different scenarios

Naim Boran Tumer, Servet Turgut, Sinan Ozcelik, Murat Gevrek, Baran Karadeniz, Mehmet Ali Unal, Hakki Zafer Iscan

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Hostile neck anatomy is the most important issue in patient selection and prediction of outcomes for endovascular procedures. We would like to share different endovascular treatment techniques in two symptomatic frail patients with infrarenal abdominal aortic aneurysm (iAAA) and how we selected the techniques on patient basis anatomic specifications. Both patients were operated on by the same cardio-endovascular surgeon team. Case 1: 74 years old Caucasian male with a symptomatic 70 mm of infrarenal abdominal aortic aneurysm (iAAA). A reverse tapered 35.5mm infrarenal aortic neck, 6mm of neck length and 10 degrees angulated hostile neck. Because of ASA IV comorbidities open surgery was ruled out and a back table triple fenestrated stent graft (SMFSG) was deployed using the abdominal visceral aorta just below the coliac truncus. No selective vessel stenting was performed. Patient is at his first year CTA control with no complication and sac shrinkage. Case 2: 72 years old ASA IV Caucasian male with a symptomatic 80 mm of iAAA. A reverse tapered 37mm infrarenal aortic neck, 15 mm neck length and 70 degrees angulated hostile neck. We performed hybrid assembly of a thoracic and abdominal endograft, so called "funnel technique" as orientation of fenestrations may fail due to angulation and there was not enough safety distance between the abdominal branch ostiums. Wide infrarenal aortic necks remain a challenge for every type of treatment modality. The hybrid assembly of available aortic endografts or creating a proper endograft back table for a high-risk patient and by this way ensuring the benefits of endovascular approach is attractive. SMFSG and Funnel technique should be present in the armamentarium of a cardiovascular surgeon.

Keywords: Surgeon modified fenestrated stent graft, hostile neck, wide neck, conic shape, aortic aneurysm

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PP-155

Patient awareness, disease-specific knowledge, and patient adherence to endovascular treated elective infrarenal abdominal aortic aneurysm

Bahadir Aytekin, Gokay Deniz, Servet Turgut, Sinan Ozcelik, Murat Gevrek, Baran Karadeniz, Naim Boran Tumer , Mehmet Ali Unal, Anil Ozen, Hakki Zafer Iscan

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Patient awareness and disease-specific knowledge are essential for shared decision-making of patients with abdominal aortic aneurysms. With this pilot survey, we aimed to figure out the obstacles to the patient's awareness about the aortic aneurysm before and after the procedure.

Material and Methods: Between 2019 to 2023, patients who experienced elective endovascular aortic aneurysm repair (EVAR) in our Cardiovascular Surgery Clinic were the selected patient cohort. The first 50 patients who visited our outpatient clinic had a questionnaire about their awareness of the aneurysm disease, disease-specific knowledge, and the comprehensibility of the patient information given before and after the procedure.

Results: The mean age of our patient was 66±6.9. Younger patients were more aware of the situation before the information (p=0.013). Patients anxious about the disease were also more conscious about the aortic aneurysm (p=0.02). Although all patients had preoperative information and disease-specific information was given by the same team, 13 patients (26%) could not recall anything about the disease and did not recall what operation was performed and why. Thirty-seven patients (74%) gained any awareness about the disease. The patients with at least an educational level above high school gained more awareness than others (p=0.04).

Conclusion: The Classical informatory model seems insufficient for gaining awareness and consciousness with aging, and in low-educated patients. Strengthened patient-practitioner interaction with supplemental technologies (leaflets, interactive media, audio tapes, etc.) may improve these patients' collaborative decision-making. More prospective research is required in this regard.

Keywords: Infrarenal abdominal aortic aneurysm, patient awareness, endovascular

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PP-156

The management of venous leg ulcers: Effects of four layer bandage system

Serap Ulusoy[1], Gokay Deniz[2], Naim Boran Tumer[2], Hakki Zafer Iscan[2]

[1]Ankara City Hospital, Department of General Surgery, Ankara, Türkiye
[2]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Chronic Venous Ulceration (CVU) accounts for nearly 70% of all chronic leg ulcers (CLU) and seriously impacts the quality of life and creates a heavy economic burden. Here we present CVU therapy with a four-layer bandage system in 113 patients retrospectively treated by the General Surgery Chronic Wound Unit and Cardiovascular Surgery Department.

Material and Methods: From January 2022 to January 2023, 113 patients had CLU of venous etiology were retrospectively evaluated. All patients were documented by colour doppler ultrasonography (CDUS), ulcer size >1 cm^2, and if there were multiple ulcers then the larger ulcer was the target. Immobile patients, and patients with Ankle Brachial Index (ABI) of <0.7 was excluded. Mechanical cleansing and debridement, exercise and four-layer compression therapy were performed on all patients. The primary outcome was to resent our treatment results for patients with chronic venous ulcers with four-layer bandage threatment. The secondary outcome was to assess the diminishing factors on ulcer healing speed.

Results: The mean age of the patients was 60.73±11.3 (28-91) years and 77.9% male. The Body Mass Index (BMI) was 30.4±7.7 kg/m^2 (18-51). Mean follow-up period was 18.82±13.4 weeks. Pseudomonas aeruginosa 38 % and Staphylococcus aureus 31.8% were the most identified microorganisms. Four patients experienced recurrence of the CVU (3.5%). Female patients had larger sized CVUs (all >10cm) (p=0.001). 100% healed CVUs were 26.5%. Mean four-layer compression bandage performed was 12 times per patient. The mean healing period was 23.2±13.8 weeks. The mean healing rate was 4.17±3.78% for a week.

Conclusion: Four-layer compression bandage system is very effective in CVU treatment and recurrence. The management of CVU is a therapeutic challenge and should be multidisiplinary. Compression is the main goal of the treatment. In case of failure surgical or endovenous procedures can be considered. In our experience ulcer healing rate is important and if it is slow newer treatment modalities with proper patient education regarding smoking cessation, diet and lifestyle modification with exercise should be referred. Longer follow up periods are necessary for recurrence issues, however for large and trouble CVU high compression with four-layer bandage systems should be in charge.

Keywords: Venous ulcer, venous insufficiency, four layer bandage system

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PP-157

Comparison of 3-year results of radiofrequency ablation and endovascular laser ablation in the treatment of small saphenous veins

Baris Uymaz, Oguz Arslanturk

Bülent Ecevit University, Faculty of Medicine, Department of Cardiovascular Surgery, Zonguldak, Türkiye

Abstract

Aim: The surgical management of small saphenous vein insufficiency differs significantly from the treatment of great saphenous vein insufficiency, primarily due to a 25% failure rate (attributed to incorrect ligation), recurrence rates of up to 52% within 1-3 years, and the prevalence of anatomical variations, particularly in the popliteal fossa. This study aims to compare the early and mid-term outcomes of radiofrequency ablation and endovascular laser ablation in addressing small saphenous insufficiency.

Material and Methods: We retrospectively analyzed a cohort of 91 patients who presented with isolated small saphenous vein insufficiency and underwent either endovascular laser ablation (EVLA) (Group 1, n=43) or radiofrequency ablation (RFA) (Group 2, n=48) between December 2018 and June 2023. Scheduled follow-up assessments were conducted at 1 week, 3 months, 1 year, and 3 years post-procedure.

Results: At the 3-year follow-up, the occlusion rates for the target vessel were 85% for patients in Group 1 and 91% for those in Group 2. Notably, sural nerve injuries were observed in 3 (6.8%) patients in Group 1 and 2 (4.1%) patients in Group 2, attributed to thermal damage from the RFA device.

Conclusion: Both techniques yield satisfactory and safe results during the 3-year follow-up period. However, it is worth noting that RFA may present a better safety profile compared to EVLA, as evidenced by lower complication rates related to paresthesia and sural nerve damage, despite achieving similar occlusion rates.

Keywords: Radiofrequency ablation, endovascular laser ablation, small saphenous veins

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PP-158

Sarcopenia is a possible risk factor for amputation after peripheral arterial interventions

Mustafa Dagli[1], Enis Burak Gul[2], Gorkem Yigit[3], Murat Gevrek[2], Metin Yilmaz[4], Selin Ozen[5], Hakki Zafer Iscan[2], Anil Ozen[2]

[1]Ankara Bilkent City Hospital, Department of Radiology, Ankara, Türkiye
[2]Ankara Bilkent City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Hitit University Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye
[4]VM Medical Park Hastanesi, Department of Cardiovascular Surgery, Ankara, Türkiye
[5]Başkent University, Department of Physical Medicine and Rehabilitation, Ankara, Türkiye

Abstract

Aim: Sarcopenia has been demonstrated to be related to unfavorable clinical outcomes in patients with vascular diseases. The purpose of this study is to evaluate the relationship between sarcopenia and clinical results in patients with peripheral arterial disease who underwent endovascular therapy.

Material and Methods: This single-center retrospective study involved patients with PAD who underwent peripheral EVT at Ankara City Hospital, between January 2018 and December 2021. Two groups of patients were created; sarcopenic and non-sarcopenic patients according to computed tomography angiography muscle measurements. Primary outcome measures were major and minor amputation and survival. Mortality, amputation and clinical characteristics were compared between the two patient groups. Hazard ratios (HRs) for amputation were calculated for each risk factor via univariate and multivariate analyses. Secondary outcomes included length of hospital stay and post-procedural complications.

Results: The mean follow-up period was 29.9±9 months for all patients. A significant association was identified between mortality and sarcopenia ($p<0.001$). The mortality rate in the group with sarcopenia was significantly higher than the other group; 65.7% (23 patients) vs (20%, 13 patients) ($p<0.001$). The amputation rate in the group with sarcopenia was 57.1%, the amputation rate in the group without sarcopenia was calculated as 15.4%, revealing that the amputation rate was detected to be significantly higher in the sarcopenia group ($p<0.001$). Multivariate regression analyses showed that only sarcopenia (HR, 0.52; 95% CI, 0.21-1.27; P=0.015) was independently associated with amputation in patients with PAD after EVT. Kaplan-Meier analysis revealed that a statistically significant difference between the survival curves of sarcopenia and non-sarcopenia patients ($p<0.001$).

Conclusion: Sarcopenia seems to be a possible risk factor associated with amputation in patients with PAD who undergo EVT. The results of this study imply that sarcopenia is a possible risk factor for overall survival in patients with PAD.

Keywords: Amputation, endovascular revascularization, mortality, sarcopenia

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PP-159

Treatment of distal aortic stenosis with bare metal stenting

Yusuf Erkal, Levent Altinay

Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Treatment of distal aortic stenosis with bare metal stenting. During the last decade, percutaneous angioplasty (PTA) with primary aortic stenting became an alternative to traditional open surgery for the isolated infrarenal aortic stenosis which avoids the need for general anesthesia and does not carry the risk of open abdominal surgery.Advantages of endovascular therapy compared with surgery is that its mortality rate is no more than 1% whereas surgical treatment has a mortality up to 4% and morbidity up to 21%. Many subsequent studies have demonstrated the initial advantages of PTA over surgery, including shorter hospital stay, lower complication rate, and less invasive technique. A 46-year-old female patient attended to outpatient clinic with the complaints of claudication after walking 100 meters. Her ankle-brachial index was 0.6, and she had a history of hypertension and tobacco product consumption. An approximately 80% stenosis in the distal aorta just before the iliac bifurcation was detected in the preoperative computerized tomography angiography of the patient. The lesion was very close to the inferior mesenteric artery (IMA) ostium.A balloon expandable 10x47 mm bare metal stent was implanted in the lesion site. Total cure was achieved and it was demonstrated in the control angiography. We decided to implant a bare metal stent to the distal aorta in this patient. Because the lesion was too close to the inferior mesenteric artery ostium and we aimed to protect the blood flow to the IMA. In endovascular treatment of abdominal aorta aneurysms (EVAR), the outflow to the IMA was closed routinely and the perfusion of the colon was continued through the collaterals from the internal iliac arteries (IIA) and superior mesenteric artery. In the recommendations of the Society for Vascular Surgery, the preservation of at least one IIA was recommended. The estimated post interventional colonic ischemia was at 0.5% but it could increase morbidity, hospital stay and mortality >50% in the patients undergoing EVAR procedures. Endovascular treatment of distal abdominal aortic stenosis with bare metal stent implantation while preserving the visceral arterial blood flow is a recommended method in selected patients.

Keywords: Endovascular treatment,distal abdominal aortic stenosis,bare metal stent

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PP-160

Meningoencephalitis and early restenosis after bilateral carotid endarterectomy result of leech therapy: A case report

Birol Akdogan, Ilke Keles, Onur Selcuk Goksel

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

The usage of leeches is associated with traditional medicine in many countries, and its application has different aims for use in different areas of the body. Leech therapy can have complications. Infection is the most reported and recognized complication of leech therapy. We present a patient with bacterial meningoencephalitis following leech therapy over incision wounds after bilateral carotid endarterectomy. A 65-year-old lady presenting initially with 3-month-old right hemiparesis and aphasia due to bilateral severe carotid stenosis underwent consecutive staged bilateral carotid endarterectomy and patch-plasty with dacron patch and was discharged uneventfully with full neurological recovery. Two months after the latest operation, she was brought to ER with a loss of orientation, fever, and ondulating consciousness. She had a WBC count was 18.000/dl and history of leech application all over her neck within the week. Upon lumbar puncture, CSF findings revealed abundant leukocytes and Gr(-) bacteria. CSF culture and the leeches she used as brought over from her house revealed P. Aeroginosa. After a 3-week-long antibiotic therapy, her infection markers returned to normal, and her clinical status dramatically recovered. However, her postoperative 3rd-month control revealed an asymptomatic right carotid restenosis of 50%. Neurology and infectious disease consult suggested close follow-up without intervention. In conclusion, leech therapy has been a popular practice for years for a wide range of diseases, and it may cause unexpected complications. Patients who use leech therapy must be aware that leeches can harbour species resistant to accepted prophylactic antibiotics and that sepsis or mortal complications may occur.

Keywords: Leech therapy, meningoencephalitis, carotid endarterectomy

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PP-161

True aneurysm of the digital artery: A rare condition

Ugur Cetingok[1], Ugur Kesimal[2]

[1]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Ankara Education and Research Hospital, Department of Radiology, Ankara, Türkiye

Abstract

True aneurysms of the digital artery remain a rare presentation. A patient presenting with a hand mass should be investigated for a digital aneurysm and treated. This report presents the case of a 43-year-old woman with a true aneurysm of the digital artery who underwent successful treatment, following excision and ligation.

Keywords: Digital artery, aneurysm, true

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PP-162

Stent navigation coil embolization of splenic artery aneurysm

You Seok Jeong, Sang Su Lee, Jin Ho Moon, Byung Jun Yoon

Pusan National University Yang-san Hospital, Department of Vascular Surgery, Yang-san, South Korea

Abstract

Splenic artery aneurysms are the most common visceral arterial aneurysm formation as well as the 3rd most common abdominal aneurysm. This case report presents our experience of endovascular treatment of short proximal neck splenic artery aneurysm with stent navigation coil embolization using Solitaire FR stents. A 44 year old woman presented with history of intermittent abdominal pain since about a year ago. An enhanced computed tomography angiography (CTA) scan of the thoracic and abdominal aorta indicated the presence of splenic artery aneurysm (SAA). A largest diameter of SAA was 2.2cm and distance between the hepatic artery bifurcation and SAA was 6mm. Because of too short proximal neck of SAA, conventional endovascular treatment was not possible. We conduct stent navigation coil embolization using Solitaire FR stent. We deployed Solitaire FR stent 6.0mm x 30mm and inserted fibred coil through jailed catheter. After coiling, hepatic artery and splenic artery flow was intact. After the coiling, the blood flow in the spleen artery was well maintained in angiography. A follow-up enhanced CTA scan of the aorta showed good stent graft location and shape and no evident infarctions in the spleen after three days. Stent-assisted coil embolization using the Solitaire FR stent for treating complex aneurysms was found to be safe and effective. Although it is commonly used in intracranial aneurysm procedures, it is also likely to be applicable to visceral artery aneurysms. Long-term follow-up will be required to identify the effect of the Solitaire FR stent on recanalization rates.

Keywords: Splenic artery aneurysm, coil embolization, stent navigation coil embolization

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PP-163

Postoperative 30-day outcomes after carotid endarterectomy: 20-year experience of a single centre

Adem Reyhancan, Salih Tuysuz, Fadil Shehu, Fatih Mehmet Isik, Orkut Guclu, Serhat Huseyin, Suat Canbaz

Trakya University, School of Medicine, Department of Cardiovascular Surgery, Edirne, Türkiye

Abstract

Aim: Carotid artery stenosis is one of the most important predisposing factors to stroke, which can lead to permanent disability or death. Carotid endarterectomy is a conventional surgical procedure that vascular surgeons have long performed using a variety of methods. In this study, we aimed to present our 20-year experience with 30-day outcomes of carotid endarterectomy using different techniques.

Material and Methods: Patients who underwent carotid endarterectomy at our centre between January 2001 and June 2022 were retrospectively evaluated. Patient demographics - such as age, sex and additional medical conditions - were analysed. Surgical protocols were retrospectively reviewed and surgical method, patch material, use of intraoperative carotid shunt and presence of concomitant coronary bypass surgery were recorded. Haematomas, occlusions and the need for re-exploration within 30 days after surgery and their causes were investigated.

Results: Surgery was performed in a total of 278 patients and 290 carotid arteries. Primary closure was performed after endarterectomy in 35 (11.7%) and patch-plasty in 251 (87.8%) patients. A PTFE patch was used in 175 (70%), bovine pericardium in 16 (6.4%), and great saphenous vein or external jugular vein in 59 (23.6%) cases. An intraoperative shunt was used in 89 (31%) cases and coronary bypass surgery was performed simultaneously in 39 (13%) cases. Haematoma occurred in 28 (9.6%) cases and re-exploration was performed in 19 (6.6%) cases. In one of the cases where patch-plasty with PTFE was performed, a transient ischaemic attack occurred three days after surgery and early occlusion of the operated carotid artery was noted. Mortality occurred in one patient who suffered malignant hyperthermia during surgery. There was no significant difference between primary closure vs. patch-plasty and between patch materials in terms of haematoma, re-exploration, and early occlusion.

Conclusion: Carotid endarterectomy is still considered the gold standard for carotid stenosis. We believe that there are no significant differences in surgical complications in the early postoperative period between the different surgical methods described and the materials used as patches. Many studies on this topic also support the results of our clinical experience.

Keywords: Carotid, endarterectomy, patch, bovine

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PP-164

Pseudoaneurysm can occur no matter how much time passes: A case report of femoral pseudoaneurysm 12 years after coronary angiography

Muharrem Emre Ozdas, Isil Tasoz Ozdas, Tayfun Ozdem

University of Health Sciences Gülhane Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Pseudoaneurysm is a pulsatile mass secondary to damage in the vessel wall. Pseudoaneurysms have emerged as an early complication of invasive arterial interventions in diagnostic and therapeutic modalities. Pseudoaneurysms can be very large and life threatening. Therefore, they require early surgical or endovascular treatment. An elderly man, 89 years of age, presented to the emergency department with complaints of pain and discoloration in his right foot that had been present for the past five days. Upon further examination, it was discovered that he had undergone mitral valve repair 19 years ago, ICD implantation 13 years ago, and coronary angiography 12 years ago. The patient, who had a history of regularly using apixaban for atrial fibrillation, was being followed by cardiology for hypertension, atrial fibrillation, and congestive heart failure. During the initial examination, the right foot was slightly cold and cyanotic, and peripheral pulses could not be felt. Doppler ultrasonography showed an indistinguishable lesion of approximately 7 cm in size in the right femoral region, which was either a pseudoaneurysm or a hematoma. After the doppler ultrasonography, CT angiography showed a 7x5 cm pseudoaneurysm sac in the common femoral artery. Surgery was performed, and the common femoral artery was repaired primarily. It is important to note that iatrogenic pseudoaneurysms are typically asymptomatic, despite early signs. This patient had suffered from intermittent right leg pain for 10 years and had been admitted to various specialties, but no significant results were obtained from treatments. Therefore, it is crucial to consider the possibility of a pseudoaneurysm in patients with a history of invasive femoral artery intervention, regardless of how much time has passed, as demonstrated by this case.

Keywords: Femoral artery, pseudoaneurysm, late complication

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PP-165

A case report: Recurrent femoral aneurysm in different extremities in a short period of time

Isil Tasoz Ozdas, Muharrem Emre Ozdas, Tayfun Ozdem

University of Health Sciences Gülhane Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Peripheral arterial aneurysms are becoming more common due to an increase in life expectancy and the prevalence of atherosclerosis. This is due to increased incidents of atherosclerosis, which is a major cause of aneurysms, and better diagnostic methods. A 63-year-old man visited the emergency department complaining of left leg pain and discolored fingers. He had a history of hypertension and chronic obstructive pulmonary disease and had previously been hospitalized for similar symptoms in his right leg one year prior. At that time, he underwent a right iliofemoral bypass operation with an 8 mm PTFE graft and interposition surgery with a saphenous vein graft for an aneurysm in his right femoral artery. Upon examination in the emergency department, distal pulses of the left lower extremity were nonpalpable, and CT angiography revealed a 5 cm aneurysm extending from the left main femoral artery to the superficial femoral artery, with no flow beyond the aneurysm. The patient underwent emergency surgery, during which an embolectomy was performed, the aneurysm was excised, and the femoral artery was interposed with an 8 mm PTFE graft. A 6 mm PTFE graft bypassed the deep femoral artery. We were unable to find any previous case reports of spontaneous femoral artery aneurysm development requiring surgical intervention in different extremities at one-year intervals in a patient with no known rheumatologic disease, connective tissue disease, or infectious process. Therefore, we recommend close monitoring of patients for recurrence after aneurysm operations.

Keywords: Femoral aneurysm, recurrent, atherosclerosis

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PP-166

What is the best treatment for infrarenal aortic stenosis - stent graft or retroperitoneal surgery?

Muharrem Emre Ozdas, Isil Tasoz Ozdas, Hakan Kartal, Ertan Demirdas

University of Health Sciences Gülhane Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Stenosis of the abdominal aorta at the infrarenal level is not common but can be a challenging disease to treat. Although endovascular intervention has recently been preferred because of its lower post-procedural complications compared to surgery, it has not been shown to be as effective as surgical treatment in terms of graft patency rates. A 43-year-old diabetic patient presented to us with complaints of claudication and erection at 100 meters for the last 1 month. In his anamnesis, it was learned that he had applied to an external center 6 months ago with the complaint of claudication for a year. It was learned that a TASC A type lesion was detected at the infrarenal level on ct angiography performed at the external center and infrarenal stenting was performed and the patient was discharged with dual antiplatelet therapy. The patient who had no active complaints for 5 months after discharge applied to us because of an increase in his complaints in the last month. Current ct angiography performed by us revealed occluded stent material and TASC D type lesion in the infrarenal aorta. Surgical treatment was decided for the patient. Instead of the transperitoneal approach, which is usually preferred, a left retroperitoneal surgical approach was preferred, which has a lower mortality and morbidity rate. A 16/8 mm dacron Y graft was anostomosed. The patient was mobilized 12 hours after the operation, and liquid diet intake was opened after 24 hours. The patient had no active complaints at the 6th month post-discharge follow-up and the graft was observed to be open on the control ct angiogram. In conclusion, patency rates are higher in patients who underwent surgical intervention than in patients who underwent endovascular intervention. In surgical methods, we think that retroperitoneal approach is a preferable method because it reduces the possibility of complications compared to direct abdominal surgeries.

Keywords: Retroperitoneal, aortic stenosis, endovascular

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PP-167

Our carotid endartecetomy experience at Kahramanmaraş Sütçü İmam University

Ahmet Kuyucu, Erdinc Eroglu, Mehmet Acipayam, Recep Berat Cicek, Murat Ari

Kahramanmaraş Sütçü İmam University Faculty of Medicine, Department of Cardiovasculer Surgery, Kahramanmaraş, Türkiye

Abstract

Aim: In this study, we analyzed patients who underwent primary closure in patients undergoing carotid endatherectomy and compared our experience with the literature.

Material and Methods: Between June 2018 and June 2023, 50 patients (34 males, 16 females; mean age 67.1 years; range 42 to 83 years) who underwent carotid endarterectomy in our clinic were included in the study. Primary repair was performed in all patients. Patch plasty was not performed.

Results: Transient neurologic symptoms were observed in two patients in the early postoperative period. Transient visual loss was observed in one patient and dysphagia due to N. hypoglossus palsy in another patient. These findings resolved with medical treatment and the patients were discharged without sequelae. There was no mortality in patients who underwent carotid artery surgery. The rates of transient minor neurologic findings, cranial nerve damage, stroke and mortality (n=1 each, respectively) were 2.08%. None of the surviving patients had permanent sequelae.

Conclusion: Our clinical experience and surgical results are consistent with the literature and support that carotid artery surgery is a safe procedure with low mortality and morbidity rates. We conclude that primary closure without patch plasty provides adequate survival and treatment.

Keywords: Carotid endarterectomy, patch plasty, primer closure

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PP-168

Kommerell diverticulum: A rare case and successful repair

Charis Tan[1], Paul Ghaly[2], Irwin Mohan[2], Himanshu Desai[1]

[1]Westmead Hospital, Department of Cardiothoracic Surgery, Sydney, Australia
[2]Westmead Hospital, Department of Vascular Surgery, Sydney, Australia

Abstract

Kommerell diverticulum (KD) is an aberrant right subclavian artery (ARSA) that originates from the thoracic aortic artery. It is rare, where the occurrence rate is 0.5 to 2.5 % and the repair strategy varies significantly. We report a case of a Kommerell diverticulum and the repair strategy. A 42-year-old lady presented with symptomatic CT aortogram (CTA) proven Kommerell diverticulum. She had left-sided chest pain for a month where her only medical history was having a bariatric sleeve gastrectomy 7 years ago. She was referred to a cardiothoracic and vascular surgeon for a repair of the KD. Pre-operative CT brain and circle of Willis showed collateral flows to the vertebral arteries deeming it safe to mobilise the KD without compromise to the cerebral perfusion. She underwent an elective surgical repair of the KD via a left thoracotomy to identify and ligate the origin of the KD from the distal aortic arch, the incision was closed in layers with a single apical chest drain and the patient was repositioned in supine where a 'trap-door' and hemi-sternotomy incision was performed. The origin of the KD was mobilised from posterior to the oesophagus to the infra-clavicular region and systemic heparin was administered. Two clamps were applied on the right brachiocephalic artery (RBCA) and the KD was measured and anastomosed end-to-side on the RBCA. The clamps were removed, the anastomosis de-aired and protamine was reversed. Thorough haemostasis was performed, and the hemi-sternotomy closed with wires and soft tissues closed in routine fashion. A 14Fr Blake drain was inserted in the mediastinum. The patient was admitted to the intensive care unit post-operatively for 3 days and she was discharged home on day 8. There were no injuries sustained to the recurrent laryngeal nerve. A post-op CTA showed a successful repair. She was discharged home with follow-up arranged with the cardiothoracic surgeon, vascular surgeon and her general practitioner. This case describes a successful combined cardiothoracic and vascular surgery technique in the repair of a Kommerell diverticulum.

Keywords: Kommerell Diverticulum, aortic aneurysm, aberrant artery

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PP-169

A 2-stage vascular surgery repair of an aberrant right subclavian artery

Charis Tan[1], Alison Zhu, Saissan Rajendran

Concord Hospital, Department of Vascular Surgery, Sydney, New South Wales, Australia

Abstract

Kommerell diverticulum (KD) is an aberrant right subclavian artery (ARSA) that originates from the thoracic aortic artery. It is rare, where the occurrence rate is 0.5 to 2.5 % and the repair strategy varies significantly. We report a case of a Kommerell diverticulum and the 2-stage repair strategy. A 75 year-old male presented with a month's history of intermittent cough and found an incidental KD on a CT aortogram and a chronic dissection in the KD, compressing on his oesophagus. His medical history was significant for an AAA for which he had a previous stent procedure 8 years ago. Pre-operatively, he was functionally independent and plays golf twice weekly. He was referred to both a cardiothoracic and a vascular surgeon. An elective 2-stage surgical repair of the KD was planned. The 1st stage involved a left-sided subclavian-carotid bypass and the 2nd stage involved a TEVAR with right-sided subclavian-carotid bypass. The first stage was performed through a transverse incision in the posterior triangle. The external jugular vein was then mobilised and divided, and phrenic nerve and brachial plexus were protected. The left subclavian artery (LSCA) and left common carotid artery (LCCA) were mobilised, therapeutic heparin was administered and a clamp was placed on the LSCA. Arteriotomy on the LSCA was performed and an 8mm PTFE graft was anastomosed to the LSCA, and the clamp was released and subsequently placed on the LCCA where the other end of the PTFE graft was anastomosed. The 2nd stage RSCA to common carotid artery bypass was performed similarly to the 1st stage and TEVAR was then performed in the hybrid theatre. Percutaneous access via bilateral common femoral arteries to the descending thoracic aorta was achieved. A 37x15mm cTAG distal graft and a 45x10mm cTAG proximal graft was deployed and an amplatzer AVP II 16x18mm was then deployed to exclude the KD. The patient was discharged home 13 days post-operatively. He sustained a right cerebellar haemorrhaegic stroke but regained full function and was discharged home. This case describes a successful 2-stage vascular surgery technique in the repair of a Kommerell diverticulum.

Keywords: Kommerell diverticulum, aberrant artery, subclavian artery

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PP-170

Mid-term outcomes of endovascular interventions of critical limb-threatening ischemia in uremic patients

Chai Hock Chua

Shin Kong Memorial Hospital, Department of Cardiovascular Surgery, Taipei, Taiwan

Abstract

Aim: Peripheral arterial occlusive disease is common in patients with chronic renal failure requiring dialysis. Despite the increasing use of endovascular revascularization for lower extremity ischemia, the success rates of treating lower extremity ischemia in this challenging population remain obscure.

Material and Methods: We conducted a retrospective review of all dialysis patients who underwent endovascular treatment for critical limb-threatening ischemia in our institution between 2020 and 2022. Data collected included comorbidities, clinical presentation, anatomic distribution of vascular lesions, amputation and survival rates.

Results: We identified 88 limbs (85 patients). Indications included gangrene in 54%, non-healing wounds in 30%, rest pain in 4%. Mean follow-up was 12 months (1~36 months). 13 patients required amputations. Major amputation rate at 3 years was 13.6%. Factor associated with amputation was atrial fibrillation (HR 5.15, P<0.003). Intervention to amputation interval was 216 days.

Conclusion: With the improvement in endovascular techniques and clinical care for lower extremity revascularization in these dialysis patients, the incidence of limb salvage was greatly improved, especially among these high risk patient group.

Keywords: Critical limb-threatening, limb dialysis patient, amputation free survival

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PP-171

Port catheter application evaluation in pediatric patients: Our experience at Kahramanmaraş Sütçü İmam University

Mehmet Acipayam, Recep Berat Cicek, Erdinc Eroglu, Ahmet Kuyucu, Murat Ari

Kahramanmaraş Sütçü İmam University, Faculty of Medicine, Department of Cardiovasculer Surgery, Kahramanmaraş, Türkiye

Abstract

Aim: The aim of this study was to retrospectively analyze the patients who needed intravenous drug infusion for a long time due to malignancy, hematologic and congenital diseases and to share our experiences.

Material and Methods: Patients who underwent port catheter implantation in the Cardiovascular Surgery Clinic of Kahramanmaraş Sütçü İmam University Faculty of Medicine between June 2015 and June 2023 were included in the study. A total of 50 patients (15 females and 35 males) were retrospectively analyzed and data (demographic data, venous access route, technique and complications) were collected from the hospital data recording system.

Results: In the file review, it was determined that the patients received chemotherapy through the catheter at the latest 2 days later. Dopler USG was used in all patients. Right jugular vein was primarily preferred in patients. In 10 patients, since port revision was required, the port was reinserted from the same access site using wire. In 5 patients left jugular vein, in 3 patients right femoral vein and in 2 patients left femoral vein were used. Because of this anatomical access difficulty and lack of venous access due to repeated CVC attempts, alternative access sites were tried in these patients. In 30 patients, the right jugular vein was used. Intraoperative hemothorax, pneumothorax, vein thrombosis, bleeding and additional complications did not develop in any patient. In postoperative follow-up, catheter site infection occurred in 3 patients and hematoma in 1 patient. These complications resolved with medical treatment without the need for reoperation.

Conclusion: Subcutaneous venous port catheter is an effective and safe venous access route in patients who require prolonged intravenous drug infusion due to malignancy, hematologic and congenital diseases. It provides a long-lasting venous access route with minimal complications when performed with proper technique and experienced hands under doppler USG guidance.

Keywords: Port cathater, endovasculer, pediatric vasculer accesss

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PP-172

Revealing what's inside the sheath: Assessment of perioperative pathology samples from patients that preliminary diagnosed with glomus caroticum tumor

Burak Tavsanoglu, Birol Akdogan, Turkan Tansel, Ibrahim Ufuk Alpagut

İstanbul University, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: *Glomus Caroticum* is a chemoreceptor organ located in the adventitia of the vessel, usually at the bifurcation of the arteria carotid communis. Normally about 2 mm in diameter, it consists of spindle-like supporting cells, clusters of cells surrounding round or polygonal mother cells. Glomus Caroticum Tumors are rare, with an incidence of 1 per 100,000 population, accounting for approximately 50-60% of head and neck paragangliomas. Assessing the preliminary diagnostic accuracy of Glomus Caroticum Tumors using perioperative pathology samples.

Material and Methods: Over the last eight years, seven patients with preliminary diagnoses of Glomus Caroticum Tumors were operated. Surgical procedures were planned based on physical examinations and patient complaints. Five of the patients were female and two of the patients were male aged 25, 33, 34, 53, 57and 71 respectively. They presented with common symptoms including dyspagia, hoarseness and unilateral neck mass. Excisional biopsy materails were examined by expert pathologists.

Results: Pathology results confirmed the preliminary diagnosis of Glomus Caroticum Tumor in 5 out of 7 cases. One case was report as vascular malformation, while the other was reported as lymph nodes showing reactive changes.

Conclusion: Taking all factors into account, the accuracy of the preliminary diagnoses based on clinical evaluations stands at %71.44. When preoperative CT scans examined, five of them was correctly diagnosed and consistent with Shamblin classification. The discrepancy arises because the masses in the other two patients were predominantly located on the common carotid artery.

Keywords: Glomus caroticum, carotid body tumor, paraganglioma, neuroendocrine tumors

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PP-173

Symptomatic carotid artery dissection due to eagle syndrome

Birol Akdogan, Ilke Keles, Onur Selcuk Goksel

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Eagle syndrome (ES) is a clinical syndrome caused by the abnormal elongation of the styloid process (SP) with calcification/ossification of the stylohyoid ligament. It is a rare condition that can cause complications ranging from simple ailments, such as dysphagia, toothache, earache, migraine and cervicofacial pain, to life-threatening injuries. About 4% of the general population present an elongated SP, with 4%–10% of these individuals experiencing symptoms. We present a case of ES resulting in the dissection of the internal carotid artery (ICA). Dissection caused by stylo-carotid compression results in transient ischemic attack (TIA). A 60-year-old man, with no significant past medical history except hypertension, was admitted to our outpatient clinic with a history of short-term dizziness and disturbance of consciousness. The patient denied recent head trauma but told us he suddenly rotated his head. After the movement, he had short-term symptoms. A surgical treatment was planned to free the right ICA. Styloidectomy was performed by the external cervical approach together with the otolaryngology team. It was determined there was a flow at the proper flow rate on the true lumen of the carotid artery, and ipsilateral vascular examination was normal with Doppler USG. The false lumen was thrombosed at 12 and 24 months of follow-up, and the patient didn't suffer from a recurrence of TIA. ES is a condition that can cause many complications, from simple ailments to life-threatening injuries. Diagnosis is difficult due to nonspecific symptoms. Identifying patients at risk of vascular impingement is important, considering the potential high-risk complications. Surgical resection is an effective treatment method for patients with ES. Given the considerable cerebrovascular results and recurrence of this condition's events, physicians should be aware of ES, especially when diagnosing ICA dissection.

Keywords: Eagle syndrome, carotid artery stenosis, carotis artery dissection

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PP-174

Manifestation of clear cell renal carcinoma skin metastasis as thrombosed varicose vein

Fatih Ada, Vural Polat

Sivas Cumhuriyet University, School of Medicine, Department of Cardiovascular Surgery, Sivas, Türkiye

Abstract

Thrombosed varicose veins are common in the community. In the treatment, there are life changes, medication and surgical options. We present the renal cell carcinoma relapse manifested as thrombosed varicose vein in a patient who had nephrectomy for renal cell carcinoma 10 years ago and varicose vein surgery 1 year ago. A 58-year-old male patient was admitted to our clinic with the complaint of a painful swelling of approximately 4x5 cm on the left lateral tibia. Color Doppler ultrasonography performed on the patient showed thrombosed varicose vein. On examination, there was a painful, solid and immobile mass on the left lateral tibia. The patient had undergone left leg RF ablation and varicose vein excision 1 year ago. Findings and ultrasonographic appearance of the mass lesion were consistent with thrombosed varicose vein. The patient underwent varicose vein excision operation under local anesthesia. However, intraoperative evaluation revealed an extremely vascular mass at the base of the varicose vein. Thereupon, local anesthesia was expanded and a wide excision was performed until the surrounding tissues and a clean area on the base were reached. The excised part was sent to pathology. Since the opened wound did not close completely, a small part of it was left to secondary healing and the surgery was terminated. The patient's pathology result was consistent with clear cell renal carcinoma distant metastasis. Thereupon, the patient was referred to the urology department for follow-up and treatment. Skin metastases of clear cell renal carcinoma are rarely seen. However, no metastasis in the form of thrombosed varicose veins has been found in the literature. Pathological sampling is rarely needed in cardiovascular surgery. However, it should be kept in mind to take a pathological sample in unusual intraoperative situations.

Keywords: Clear cell renal carcinoma, skin, metastasis, varicose vein

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PP-175

Internal carotid artery entrapment syndrome caused by the hyoid bone

Fatih Ada, Vural Polat

Sivas Cumhuriyet University, School of Medicine, Department of Cardiovascular Surgery, Sivas, Türkiye

Abstract

Internal carotid artery (ICA) entrapment syndrome caused by the hyoid bone is very rare in the literature. Eagle's syndrome, which is caused by the styloid process compressing on the external carotid artery, is more frequently encountered in the literature. We present a patient who applied to our clinic with atypical complaints and was diagnosed with internal carotid artery entrapment syndrome. A 64-year-old female patient was admitted to our clinic with complaints of pain on the right side of the neck and limitation of neck movements. It was learned from the patient's history that she had previously undergone a thyroidectomy operation. On physical examination, the pulsatile carotid artery was prominent on the anterior aspect of the neck. There was a murmur on auscultating in the same region. Contrast-enhanced CT angiography was performed in the patient and external compression of the hyoid bone was observed, which caused 60-70% stenosis in the ICA. The patient was then prepared for the operation. The preoperative preparations of the patient are still continuing. Partial resection of the hyoid bone is planned for the patient surgically. Rare diseases should be kept in mind in atypical complaints and symptoms. Even simple physical examination findings can lead to the diagnosis of very rare syndromes.

Keywords: Carotid artery, entrapment syndrome, hyoid bone

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PP-176

Late stage aneurysm formation in a biological vascular graft

Fatih Ada, Vural Polat

Sivas Cumhuriyet University, School of Medicine, Department of Cardiovascular Surgery, Sivas, Türkiye

Abstract

Peripheral arterial diseases can be treated with many different materials such as allografts, polytetrafluoroethylene (ePTFE) grafts, and biological heterografts. We present a patient who was treated 15 years ago with a biological vascular graft for superficial femoral artery (SFA) occlusion. The patient developed a graft aneurysm and we replaced it with a ringed ePTFE graft. A 60-year-old male patient presented with a pulsatile mass along the medial side of the right femur. It was learned that the patient had undergone fempop bypass with a biological vascular graft 15 years ago. On physical examination of the patient, it was observed that the distal pulses were clear. Contrast-enhanced CT angiography showed an aneurysm with a width of 44 mm in the graft bypassed to the right SFA. Thereupon, the patient was operated and the aneurysmatic graft was removed and replaced with an ePTFE graft. The patient was discharged uneventfully 3 days after the operation. Any problem was found in the 1-year follow-up. Although rare, biological graft aneurysms have been reported in the literature. Treatment of aneurysm-developed biological vascular grafts is replacement with an ePTFE graft.

Keywords: Biological, vascular, graft, aneurysm

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PP-177

Early results of wide neck endovascular aneurysm repair: Single center study

Ayla Ece Celikten[1], Sabir Hasanzade[2], Enis Burak Gul[3], Murat Gevrek[3], Gorkem Yigit[1], Hakki Zafer Iscan[3]

[1]Çorum Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye
[2]Memorial Ankara Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[3]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Endovascular Aneurysm Repair (EVAR) has become the preferred method for anatomically suitable abdominal aortic aneurysms in recent years. Advances in techniques and materials have led to the management of more challenging cases. Anatomical difficulties in the structure of the aneurysm neck can adversely affect the success of the procedure. In this study, we aimed to present our early results in patients with wide-neck abdominal aortic aneurysms treated with 34-mm EVAR grafts in follow-up.

Material and Methods: We evaluated infrarenal abdominal aortic aneurysms treated with EVAR between 2019 and 2022 at the Ankara City Hospital Cardiovascular Surgery Clinic. Cases with a neck diameter of 28-mm and above were included and assessed with follow-up computed tomography angiography (CTA). The diameter of the aneurysm sac and neck in the follow-up imaging was compared with using preoperative CTA. The presence of endoleak and the need for additional procedures were also evaluated.

Results: A total of 45 patients with wide-neck infrarenal abdominal aortic aneurysms underwent 34-mm EVAR graft placement, of whom 18 returned for postoperative follow-up evaluations. There were no in-hospital or follow-up mortalities. The mean follow-up period for patients was calculated as 12 months. Eight patients were found to have endoleaks, with no Type 1a endoleaks detected. None of the patients required reintervention. When evaluating the diameters of aneurysm sacs in patients' CTA, changes indicating a decrease in sac diameters were observed, but there was no statistically significant difference. There was no significant difference observed for other parameters.

Conclusion: Our study demonstrates the successful application of 34-mm grafts to patients with abdominal aortic aneurysms having a neck diameter of 28-mm. However, more extensive, and longer-term evaluations with a larger number of patients are needed for assessing the results of EVAR in wide-neck aneurysms.

Keywords: Wide-neck, endovascular aneurysm repair, aortic aneurysm

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PP-178

Giant isolated internal iliac artery aneurysm re-rupture following coil embolisation

Omer Arda Uslu, Betül Nur Keser, Hüseyin Bilal Aydın, Ahmet Oztekin, Mehmet Senel Bademci, Ebuzer Aydin

İstanbul Medeniyet University Goztepe Prof. Dr. Suleyman Yalcin City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Isolated internal iliac artery aneurysms can be challenging to be managed with endovascular intervention, especially in redo cases. This report describes a giant isolated internal iliac artery aneurysm re-rupture, which had been coil embolized five years ago due to rupture. The patient with histories of systemic hypertension and smoking was admitted to the emergency department with syncope during the Valsalva maneuver. He had had abdominal pain for 4 days. No peritoneal irritation and peripheral ischemic findings were present. The computed tomography angiography demonstrated a giant right internal iliac artery aneurysm rupture with a diameter of 125 mm. The deterioration in his consciousness prompted immediate surgery. Due to lack of neck in the aneurysm, the proximal segment of the right internal iliac artery (RIIA) could not be ligated. The right common iliac artery (CIA) and right external iliac artery were ligated with dacron tape for bleeding control. The RIIA aneurysm sac was opened and abundant thrombi and coil material from the previous endovascular intervention were removed. The distal segment of RIIA was ligated. Since the bleeding did not cease due to retrograde flow, the left internal iliac artery (LIIA) was also ligated. Both femoral arteries were explored and the proximal portion of the right common femoral artery (RCFA) was ligated. A suprapubic tunnel was created and a femorofemoral crossover bypass was performed with a polytetrafluoroethylene (PTFE) graft. The patient was discharged in the postoperative 7th day. No ischemic findings were observed nor in the pelvic structures either in lower extremities in the follow-up.

Keywords: Aneurysm rupture, coil embolisation, isolated internal iliac artery aneurysm

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PP-179

Giant popliteal artery aneurysm mistaken for a tumor

Yasin Guzel[1], Mustafa Kemal Avsar[1], Akif Mirioglu[2],
Ferhat Can Piskin[3], Hakan Poyrazoglu[1], Hafize Yaliniz[1], Mehmet Sah Topcuoglu[1]

[1]Çukurova University, Department of Cardiovascular Surgery, Adana, Türkiye
[2]Çukurova University, Department of Orthopedics and Traumatology, Adana, Türkiye
[3]Çukurova University, Department of Radiology, Adana, Türkiye

Abstract

Popliteal artery aneurysms constitute 70% of all peripheral artery aneurysms. Although most of them are asymptomatic, they can lead to lower extremity ischemia when they become symptomatic. Giant popliteal artery aneurysms have been rarely reported in the literature. In this case, we aimed to present a patient we operated due to the intraoperative detection of a giant popliteal artery aneurysm, who was taken into surgery by the orthopedics department due to a mass in the right femur. A 74-year-old female patient applied to the orthopedics department due to a swelling in the posterior right thigh. In the patient's bilateral thigh MRI, lesions compatible with intra-muscular hematoma with heterogeneous signal intensities, 16 cm in size in the right medial muscle groups and reaching 12 cm on the left, were detected. Tru-cut biopsies taken from the patient's bilateral thigh revealed fibrin masses and fibroadipose tissue and were reported as compatible with a hematoma. The patient was taken into surgery by the orthopedics department and a 13*8 cm aneurysm was seen in the right thigh. The aneurysm sac was removed from the distal of the right femoral artery and popliteal artery. A 7 mm ringed PTFE tube graft bypass was applied. The patient, who was followed in the reanimation unit after the operation, was transferred to the ward on the 4th postoperative day. The patient, who did not develop any complications, was discharged on the 7th postoperative day. An infrarenal abdominal aorta aneurysm was detected in the patient who had a patent popliteal graft in the first postoperative year, and was treated with EVAR. Popliteal artery aneurysms are bilateral in 50% of cases and accompany abdominal aortic aneurysm in 50% of cases. Complications occur more frequently in large aneurysms. In our case, the evacuation of the hematoma and repair of the aneurysm was an appropriate approach considering the size of the aneurysm. Intervention indications for popliteal artery aneurysms should be well selected, and the intervention to be performed should vary according to the case. In this case, the aneurysm was confused with a tumor, causing a diagnostic difficulty.

Keywords: Popliteal artery aneurysm, hematoma, surgical intervention

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PP-180

Injury to the left common iliac artery after disc herniation

Yasin Guzel[1], Mustafa Kemal Avsar[1], Kadir Oktay[2], Mutlu Deger[3],
Ferhat Can Piskin[4], Hakan Poyrazoglu[1], Hafize Yaliniz[1], Mehmet Sah Topcuoglu[1]

[1]Çukurova University, Department of Cardiovascular Surgery, Adana, Türkiye
[2]Çukurova University, Department of Neurosurgery, Adana, Türkiye
[3]Çukurova University, Department of Urology, Adana, Türkiye
[4]Çukurova University, Department of Radiology, Adana, Türkiye

Abstract

Iatrogenic vascular injuries during lumbar discectomy are rare, life-threatening complications. In this case, we aimed to present a patient whom we diagnosed and operated early due to a left common iliac artery injury that developed after an L4-L5 microdiscectomy surgery. A 36-year-old female patient was operated on by the neurosurgery department due to L5 lumbar disc herniation. After applying a partial hemilaminectomy and flavectomy of L4 from the right side to the patient, microdiscectomy was performed by entering the L4-5 disc space. Right L4-5 foraminotomy was applied, and it was observed that the right L5 root was fully decompressed. Hemostasis was achieved. The patient was referred to Cardiovascular Surgery due to pain, weakness, pulselessness, and numbness in her left leg during her follow-ups in the Neurosurgery ward. In the physical examination, the pulse could not be taken from the left femoral artery onwards. After detecting coldness, pallor, and decrease in movements in the left lower extremity, an urgent Computed Tomography was performed on the patient. In CT Angiography, a 8.5x5.5 cm hematoma was observed in the retroperitoneal area in the left perirenal area. Thrombus causing total occlusion in the distal lateral of the left main iliac artery was detected. The patient was taken into emergency surgery. Laparotomy was performed on the patient. There was a retroperitoneal hematoma on the left common iliac trace. Retroperitoneal hematoma was drained. No ureter injury was observed. The left common iliac artery was clamped proximally and distally. An injury was seen on its posterior. After arteriotomy, approximately 3 cm dissection and thrombus were seen in the left common iliac artery. Partial resection was performed on the left common iliac artery, and an 8 mm Dacron tube graft interposition was performed. The patient, who did not develop any further complications, was discharged on the 7th postoperative day. Although iatrogenic vascular injuries during lumbar discectomy are rare, vascular evaluation after the operation is crucial. Early diagnosis and a multidisciplinary approach can help prevent morbidity and mortality in cases of vascular injury.

Keywords: Lumbar disc herniation, iliac artery injury, artery dissection, dacron graft

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PP-181

Abdominal aortic aneurysm in children: First case - report in Vietnam

Duong Ngoc Thang[1], Nguyen Huu Uoc[2]

[1]Viet Duc University Hospital, Cardiovascular and Thoracic Center, Ha Noi, Viet Nam
[2]Ha Noi medical university, Ha Noi, Viet Nam

Abstract

Abdominal aortic aneurysm (AAA) is a common disease in the elderly. However, this condition is very rare in children. There are only about fifty cases of AAA in children who were reported from 1975 and most of them were single cases. The main causes of AAA in children may be congenital connective tissues disorders, vasculitis, infection. Clinical symptoms were abdominal pusatile mass or abdominal pain if the aneurysm was large. Open surgery is the ‘’gold standard’’ treatment for this disease but timing of surgery and seletion of graft in there special objects are still controversial. Our study reported the first case of AAA in children in our country who were sucessfully treated by abdominal aortic replacement. Our aims were to clarify the etiology, indication and results of treatment of this disease. In September 2022, a 9 years old girl was admitted to the hospital by discovery of an abdominal pusatile mass for 1 month. She has a surgical history of tetralogy of Fallot repair at 3 months old with postoperative peritoneal dialysis, she has no familly history of AAA. At time of hospitalization, she was in good condition with hemodynamics stability and had no abdominal pain. The multi-detector computed tomography (CT) showed an aneurysm at level of aortic bifurcation with maximum diameter of 48x70mm, calcified wall and mural thrombus of 30mm. Laboratory test showed no abnormality. Three days after her hospitalization, we repaired the AAA by a selective open surgery. The abdominal aorta was exposed through a midline incision. After opening the posterior peritoneum, the infrarenal proximal aorta and bilateral common iliac arteries were controlled. We replaced the AAA using a bifurcation type of Dacron (diameter of 14x8mm) at distal anastomosis with the common iliac artery. The aortic wall was wrapped around the artificial graft for separation with the intestine. The patient recovered well she was discharged from hospital 5 days after surgery. She used atiplatelet of aspirin 40mg daily within 1 month outside hospital. The follow up CT at third-month after surgery showed good patency of graft.

Keywords: Abdominal aortic aneurysm, children, traumatic abdominal aorta

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PP-182

Two-step surgical treatment for aortoenteric fistula

Hidayet Onur Selcuk, Erturk Karaagac, Hasan Iner, Ismail Yurekli, Tahsin Murat Tellioglu, Irem Yesiloren, Muhammed Cagri Yalcin, Busra Zehra Karaayak, Osman Nuri Dilek, Levent Yilik, Ali Gurbuz

İzmir Katip Çelebi University Atatürk Training and Research Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aortoenteric fistula is a clinical condition that is difficult to diagnose and treat and is associated with high mortality. Although it is not the first diagnosis that comes to mind in patients with gastrointestinal bleeding, history is an important step in diagnosis. In this case report, we presented the successful multidisciplinary surgical treatment of an aortoenteric fistula case detected in a patient with severe melena. 72-year-old male patient had no significant results in the endoscopic examinations performed due to severe melena. Abdominal aortic CT angiography was performed on the patient. Aortoenteric fistula was considered in the patient upon detection of an abdominal aortic aneurysm reaching 80 mm in diameter and air densities on the aneurysm wall. The patient was taken to emergency EVAR operation. The aneurysm sac in the abdominal aorta was successfully closed with EVAR operation. The patient was followed up with broad spectrum antibiotic therapy. After discussions with the general surgery team, a joint surgical plan was made and open surgery was performed. During the exploration, an aortoenteric fistula was observed between the third segment of the duodenum and the aneurysmatic segment of the abdominal aorta. The 1 cm diameter defect in the duodenum was repaired with 3/0 PDS suture by the general surgery team. Then, the aneurysmatic segment was secured with nylon tapes from its proximal and distal ends, and the aneurysm sac was opened. EVAR graft was seen, there was no endoleak or infective appearance. The aneurysm sac was closed by performing omentopexy with omental pedicles prepared by the general surgery team. No evidence of aortoenteric fistula was detected in the patient's post-operative CT-angiography. He was discharged with full recovery on the 37th post-operative day.The follow-up of the patient in the 10th month of post-op continues without any problems. Patients who are suitable for endovascular treatment, the aneurysm sac will continue to erode the lumen if the gastrointestinal side of the fistula is not repaired. As a result, bleeding will continue to progress and will infect the EVAR graft, leading to a septic condition. Therefore, in these patients, a multidisciplinary approach and a correct and rapid surgical plan will be the most effective and only chance for survival.

Keywords: Aortoenteric fistula,abdominal aortic aneurysm,endovascular aneurysm repair

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PP-183

The relationship between the ABO blood group and chronic venous disease in deep vein thrombosis

Osman Fehmi Beyazal

Başakşehir Çam and Sakura City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: This study aims to investigate the relationship between the ABO blood group and chronic venous disease in terms of deep vein thrombosis (DVT).

Material and Methods: This study was planned as a retrospective case-control study in which 1031 patients were included between February 1, 2022, and July 1, 2022. After systematic sampling, the case group (88) and control group (113) were analyzed, and then the patients were divided into 3 groups. Group 1: non-O blood group and chronic venous disease (CVD) (n=75), group 2: non-O blood group and non-CVD (n=73), and group 3: O blood group and CVD (n=28). It was analyzed whether there was a difference between these 3 groups and from which group and in what form.

Results: The non-O blood group was significantly higher in the DVT group than the control group. When group 1, group 2, and group 3 were compared, a significant difference was found. In the posthoc analysis, no difference was found between group 1 and group 2, a difference was found between group 3 and group 1 - group 2, and it was found to be lower.

Conclusion: We found the non-O blood group was higher in the DVT group compared to the control group. We found that the non-O blood group alone was higher in patients with DVT than CVD alone. While non-O blood type and CVD are important risk factors for DVT, non-O blood type can increase the risk of DVT more than CVD. However, this finding needs to be discussed in future studies.

Keywords: Deep vein thrombosis, ABO blood group, chronic venous disease

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PP-184

Customary paradigm in anesthetic management of carotid endarterectomy patients shifts in COVID 19 outbreak: Experiences of an advanced practice centre

Okay Karslioglu[1], Esra Sari[1], Denizhan Akpinar[1], Elshad Mansimzada[1], Ecem Tugba Yamac[1], Deniz Sarp Beyazpinar[3], Nargiz Fatullayeva[2], Bahadir Gultekin[3], Elvin Kesimci[2], Hakki Tankut Akay[1]

[1]Başkent University, Department of Cardiovascular Surgery, Ankara,Türkiye
[2]Başkent University, Department of Anesthesiology and Reanimation, Ankara, Türkiye
[3]Etlik City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: The limited capacities of healthcare providers and facilities in hospitals during the global threat Coronavirus disease-2019 (COVID-19) have resulted in postponing of surgeries in the order of priority. However, carotid endarterectomy (CEA), is a vascular surgical urgency. In this study, we discussed the modifications we had experienced in anesthetic management in our centre due to COVID-19 pandemic with advantages and disadvantages of the anesthesia techniques.
Material and Methods: The patients who underwent CEA procedure between May 2019- Jan 2020 by cervical plexus block and May 2020-Jan 2021 by general anesthesia were retrospectively evaluated according to the procedure dates. The demographic, intraoperative and postoperative data with regard to anesthetic management were recorded.
Results: This retrospective analysis included 69 patients undergoing CAE between May 2019- Jan 2021, at the same center. The first 37 patients had regional anesthesia (RA) and the last 32 had general anesthesia (GA).
Conclusion: Başkent University Cardiovascular Surgery and Anesthesiology Departments had achieved 483 CEA operations under cervical (deep and superficial) plexus block from 2003 to January 2020 (Beyazpınar D. Turkish J Vasc Surg 2018; 27:71-77). Except for possible complications like; paroxysmal coughing, anxiety, shortness of breath, airway obstruction, dysphagia and need for emergent oratracheal intubation, cervical plexus block is a good and safe anesthetic practice for neurologic and motor function assessment, in these patients. However; we had to change our accustomed practice to general anesthesia after COVID-19 outbreak with regard to the generation of aerosols, droplets, and environmental contamination from exhalation, coughing, and sneezing to lower the risks to team members. We not only had to manage airway patency with lower spread of aerosols and droplets, but also provide a complete emergence with adequate masking to prevent spreading contamination to other patients and the environment. The safety and success of intubated CEA patients in GA depends on adequate preparation, monitorization of cerebral oxygenation by near infrared spectroscopy, skill, and experience of the team.

Keywords: Cervical plexus block, carotis endarterectomy

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PP-185

Aortic aneurysms from medicinal cupping

Charis Tan[1], Alison Zhu[1], Martin Misfeld[2], Timothy Shiraev[3], Saissan Rajendran[1]

[1]Concord Hospital, Department of Vascular Surgery Cardiothoracic Surgery, Sydney, Australia
[2]Royal Prince Alfred Hospital, Department of Cardiothoracic Surgery, Sydney, Australia
[3]Royal Prince Alfred Hospital, Department of Vascular Surgery, Sydney, Australia

Abstract

Aortic aneurysms occur in 5 to 10 per 100,000 person-years. Of those 60% commonly affects the aortic root and ascending aorta, 30% affects the descending aorta and 10% affects the arch. Rapid aortic growth is at a high risk of aortic dissection and prophylactic elective surgical repair has been recommended. We present an interesting case of multiple rapidly growing aortic aneurysms in both the ascending and descending aorta. A 31-year-old non-english speaking Mongolian male presented to a peripheral hospital after noticing a large rapidly growing mass under his left clavicle after medicinal cupping 2 weeks prior. The mass had caused paresthesia, numbness and weakness in his left upper limb. He had no other past medical history. An ultrasound revealed a large aneurysm of his left axillary artery and it was initially thought that the suction pressure from the cupping treatment had caused this isolated arterial aneurysm. However, a subsequent CT aortogram (CTA) showed multiple aortic aneurysms at his left axillary artery (37x45mm), brachiocephalic artery (39x46mm), left supra-renal artery (17x13mm), right infra-renal aorta (40x41mm) and the left common iliac artery. He was transferred to a tertiary hospital and had staged repairs by the vascular and cardiothoracic surgery team. A left subclavian artery (LSCA) stent was inserted to decompress the aneurysm followed by an open repair of his abdominal aortic aneurysm with a 16x8mm graft from the infrarenal aorta to bilateral CIAs by the vascular surgeon. Afterwhich he had a repair of the brachiocephalic artery aneurysm with a hemiarch repair with 28mm gelweave graft by the cardiothoracic surgeon. The patient was admitted to the intensive care unit and was discharged home on day 34. A post-op CTA showed a successful repair with exclusions of previous aneurysms, but showed an occlusive brachiocephalic venous thrombus with non-occlusive extension into the proximal left IJV with suggestive thrombi in the SVC and right IJV. He was discharged home with anticoagulation and follow-ups with the cardiothoracic surgeon, vascular surgeon, and haematologist. This case describes a successful combined cardiothoracic and vascular surgery technique in the repair of an idiopathic aortopathy initially thought to have been caused by cupping.

Keywords: Aortic aneurysm, combined specialty, aortopathy, aortitis

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PP-186

Surgical treatment of deep vein trombosis due to inverted saphene vein stump after stripping

Suleyman Aycan, Mehmet Aydin Kahraman, Mehmet Kizilay, Selen Ozturk, Gozde Tekin, Huseyin Uzandi, Ismail Basyigit

Dr. Siyami Ersek Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Stripping and stump ligation of the Great Saphenous Vein are still among the frequently used methods in varicose vein operations. After the surgical procedure, we may encounter deep vein thrombosis at the saphenous stump site, and it is a condition that requires urgent treatment. 65 years old female patient had venous insufficiency in her leg and had no additional pathology. The patient had a left great saphenous vein diameter of 10 mm on Doppler USG and grade 4 reflux. Surgical Technique: Striping section was applied to the left saphenous magna. Upon observing swelling and bruising in the leg during postoperative follow-up, DVT was diagnosed with Doppler USG and venography.The catheter did not advance in the common femoral vein region during venography. Upon detection of occlusion, emergency surgery was performed. The old femoral incision line was opened, and it was observed that the saphenous vein stump was thrombosed and inverted. After the femoral vein incision, proximal and distal thrombectomy was performed and plenty of fresh thrombus was removed. The left popliteal vein catheter site was washed with heparinized saline and plenty of fresh thrombus was aspirated. After the procedure, venous flow was supplied from the femoral region. The femoral vein incision was closed with 6/0 prolene. In studies, the incidence of deep vein thrombosis due to saphenous vein stump in endovenous ablation or open surgery varies between 0% and 15%. In this patient, the DVT due to the saphenous stump was extending to the femoral vein. There was complete occlusion on the scopy. During exploration, the saphenous vein stump was in an inverted position to the femoral vein. One of the complications that may occur after endovenous or open surgical procedures on the saphenous vein is saphenous vein stump thrombosis. The risk of trombosis at the proximal of the saphenous vein after traditional surgery is relatively higher compared to endovenous ablation techniques. We thought that the saphenous vein stump might be inverted, as in this patient, and we planned our treatment strategy accordingly. We observed that the patient's clinical condition improved rapidly after the treatment.

Keywords: Stripping, inverted saphene, dvt, venous trombose, venography, venous insufficiency

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PP-187

Aorto-bicarotid and aorto-right subclavian bypass in a 16-year-old female with Takayasu's arteritis-related brain and right upper extremity ischemia

Yolchu İsmayilov, Safak Alpat, Riza Dogan

Hacettepe University, Faculty of Medicine, Department of Cardiovascular Surgery.

Abstract

Takayasu's arteritis is a chronic inflammatory condition that mostly affects the supra-aortic arteries and the major branches of the aorta. Takayasu's arteritis, which affects the supra-aortic arteries, can cause a variety of clinical symptoms, including carotid stenosis, cerebral ischemia, visual abnormalities, and pulseless syndrome. We present a 16-year-old girl patient in this article who has recourse to the emergency department with amorosis fugax, weight loss, and weakness. CTA indicated localized stenotic segments in the left common carotid artery (CCA) and also near blockage of the proximal left CCA and long segment stenosis of the proximal right subclavian artery. Her physical assessment revealed bilateral carotid bruits and visual symptoms, with the left side being more pronounced.. Her erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels were above normal (CRP- 7,58 mg/dl, ESR-25 mm/h). Therefore, the patient has taken two doses of cyclosporin, three days of methylprednisolone, and adalimumab. Following the treatment, we have seen CRP and ESR value regressions. We operated on both the right and left CCA and the right subclavian artery with open revascularization, and an aorta-bilateral carotid bypass was carried out utilizing a Dacron 14x7 mm Y graft. An aorta-right subclavian bypass was performed with a 7mm Dacron graft. Her neurological evaluation was normal, and she was released home in stable condition on postoperative day five. The vast range of symptoms associated with TA are mostly influenced by the size of the blood vessels damaged, the organs implicated, and collateral circulation. The main factors influencing prognosis include early disease aggressiveness and sequelae (hypertension, aneurysm, aortic insufficiency). We report a 16-year-old girl with aggressive TA in this study, which showed up as a quick onset of ischemic vascular disease with occlusive lesions in several peripheral blood arteries. This case shows that bypass surgery was extremely safe and successful in treating symptomatic progressive TA that was resistant to traditional immunosuppressive therapy. This patient's circulation was effectively restored via arterial reconstruction, such as the interposition of grafts, which produced a long-lasting clinical remission.

Keywords: Takayasu arteritis, arteritis, bypass surgery

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PP-188

Post-EVAR surveillance questionaire: Compliance problems and possible solutions

Sinan Ozcelik, Gokay Deniz, Mehmet Ali Turkcu, Murat Gevrek, Hande Cuhadar, Mehmet Ali Unal, Baran Karadeniz, Naim Boran Tumer, Hakki Zafer Iscan

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Post-Endovascular Aortic Repair (EVAR) rupture risk sometimes exists therefore current guidelines mandate lifelong follow-up in different algorithms. Patient compliance with post-EVAR surveillance is poor nearly 50% of patients have been lost to follow-up at 5 years. We build up a group of questions in understandable public language, examining the noncompliance of the patients to the follow-up from the patient's perspective.

Material and Methods: We called all the patients who had elective EVAR in our clinic in 2019 to our Cardiovascular Surgery outpatient clinic. There were 62 patients operated in which 5 of them was dead in the follow-up period due to cardiac complications. All patients except 5 turned back who had no complaints, living at distant cities from our medical center and told that visit was not possible due to the economical issues. The questions were created according to literature and our countries' perspective. As the study was performed in 2023, all patients who experienced EVAR electively in our clinic was noted in terms of how many outpatient clinic visit was done, how many The reasons why the patients came to have a control or not, was evaluated on patients basis by the same team.

Results: The mean age of our patient was 68.8±8.4 years, only three were female. The predominant motivation for these people to obey at least one of the annual follow-ups was having a health problem (n=13). A total of 22 patients claimed the pandemic as the major reason for their nonattendance at their scheduled follow-up. There were 9 patients with younger mean age in the loss follow-up group, however, with no significant difference (p=0.433). Living elsewhere than Ankara significantly enhances the likelihood of non-adherence to follow-up by 23 times (p=0.014).

Conclusion: Residential location may affect patient compliance. Pandemic travel restrictions may affect EVAR follow-ups. Almost all compliant patients to Post-EVAR surveillance were patients with a complain or a question about the drugs. 9 patients (18%) had follow-up controls in their own city in another medical center. The surveillance programs should be programmed individually. One day protocols must be built in medical centers who experienced EVAR.

Keywords: Endovascular aortic repair, aneurysm

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PP-189

Predictive factors and morpho volumetric alterations in type II Endoleak after EVAR

Mehmet Ali Turkcu, Gokay Deniz, Hakki Zafer Iscan

Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Type II endoleak seems to be strongly linked with changes in aneurysm morphology after endovascular aortic repair (EVAR). Expansion in both aneurysm diameter and volume can provide some important signs in terms of postoperative surveillance. We aimed to compare the morphological differences in type 2 endoleak patients and no endoleak.

Material and Methods: All patients who underwent elective abdominal aortic aneurysm repair from 2019 to 2023 were investigated retrospectively. The patients with type II endoleak and no endoleak were enrolled. At follow-up, the maximal aneurysm diameter and volume were evaluated for differences over time. Possible predictors for the development of type 2 endoleaks were investigated.

Results: A total of 112 patients were included, 14 of which had type II endoleak. For 98 endoleak-free individuals, aneurysm volume decreased by -20.8±107.93 cm^3 and diameter by -6.21±7.6mm (Pre-EVAR mean volume: 213.16±136 cm^3; Post-EVAR mean Volume: 192.28±149.3 cm^3, p=0.05; Pre-EVAR mean diameter: 64.94±13.4 mm; Post-EVAR mean diameter: 58.72±15.8mm, p<0.001). In the patients with type II, the differences between Pre-EVAR and Post-EVAR were -24.28±125 cm^3, 0.21±8.7mm, respectively (From 193.4±120.9 cm^3 to 169.1±69.3 cm^3, p=0.481; From 62.2±7.4mm to 62.5±9.7mm, p=0.928). The most common origin of Type II endoleak was lumbar arteries. Female gender, having 4 or more lumbar arteries, and absence of coronary artery disease predisposed to the incidence of type 2 endoleak.

Conclusion: EVAR decreases the aneurysm's volume and diameter during follow-up, but Type 2 endoleak can diminish effectiveness. The most common origin of Type II endoleak was lumbar arteries. Female gender, having 4 or more lumbar arteries, and absence of coronary artery disease predisposed to the incidence of type 2 endoleak. Volumetric analysis of aneurysm sac is more predictive than maximum diameter measurement earlier and effective datas.

Keywords: Endovascular aortic repair, aneurysm, endoleak

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PP-190

Axillary artery aneurysm: Case report

Mert Celik, Mucteba Saricaoglu, Cengiz Ovali

Osmangazi University, Department of Cardiovascular Surgery, Eskişehir, Türkiye

Abstract

A thirty-three-year-old male patient complained of occasional numbness, decreased strength, and widespread pain in the left arm after a traffic accident three years prior to his admission. He had been admitted to an external orthopedic service for the past year due to increased complaints of pulsatile swelling and pain localized proximal to the left shoulder region, which was palpable and growing. He was referred to us with a preliminary diagnosis of axillary aneurysm based on his examinations. During the physical examination upon admission to our clinic, there was severe loss of strength in the left arm secondary to pain. Manual pulse examination revealed strong positive pulses in the left arm's axillary, brachial, radial, and ulnar arteries. There were no signs of ischemia or cyanosis in the patient's arm. After the patient's admission to our clinic, contrast-enhanced computed tomography was performed. The computed tomography showed an aneurysm sac measuring 32x30 mm in the axillary artery. Subsequently, the patient's preoperative preparations were completed, and he underwent elective surgery. Before the operation, the aneurysm was visualized with the help of Doppler ultrasonography. Under intratracheal general anesthesia (ITGAA), an incision was made in the left infraclavicular region and left axillary region. The subclavian artery was suspended proximally by turning it. The distal axillary artery was turned from the incision in the axillary region and suspended. The aneurysm sac was found to be highly adherent to the brachial plexus. The aneurysm sac was opened, and three lateral branches emerging from it were ligated. The aneurysm sac was excised, and bleeding control was achieved. A 6 mm collagen-coated graft was anastomosed from the subclavian artery to the axillary artery. Following the surgery, our patient's postoperative peripheral pulses were manually positive, and his complaints of numbness, pain, and weakness in the left upper extremity showed regression. The patient was discharged on the seventh postoperative day with full recovery and without any complications.

Keywords: Axillar artery, aneurysm, brachial plexus, pain, surgical treatments

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PP-191

A new method for predicting endograft limb occlusion after EVAR using HFU values

Jinho Mun, Sangsu Lee

Pusan National University Yangsan Hospital, Department of Surgery, Division of Vascular and Endovascular Surgery, Yangsan, South Korea

Abstract

Endograft limb occlusion of endovascular aneurysm repair (EVAR) was one of the main causes of secondary intervention and re-admission.Kinkingof endoendograft due to the angle of the artery is known as cause. Precise preoperative planning is also required before surgery, but we would like to find predictable factors in computered tomography angiography (CTA) after surgery. We retrospectively reviewed data of patients who underwent EVAR at a single center between April 2011 and December 2021 in Pusan National University Yangsan Hospital. A total of 233patients underwent EVAR for infrarenal AAA. We excluded 24patients who had ruptured AAA, Finally, 209 patients were enrolled in the study. Limb occlusion occurred in a total of 14patients. Among them, four cases were confirmed on the day of surgery or the day after surgery before CT. Excluding 4cases, HFU values of both limbs were compared in 10cases on CT. The difference between the HFU values of both limbs was compared in the group where occlusion did not occur and the group where occlusion occurred. In addition, a comparison of risk factors that can cause occlusions was conducted. The duration of occlusion after operation was 6.4±7.38 months up to 19months from the same day. 13patients performed femoral to femoral bypass surgery and one performed only diagnostic angiography, due to good blood flow through collateral artery. We compared the differences in hounsfield units (HFU) in CTA between aorta of diaphragm level, renal artery level, bifurcation of endograft limb, end of the endograft limb and common femoral artery. An analysis of the CTA HFU values in 10 patients showed that renal artery level, bifurcation of endograft limb, right and left end of the endograft limb were 366.10±105.00, 381.46±92.17, 376.84±91.61 and 380.04±94.90 respectively. The mean difference was 14.63±8.95 compared to the HFU of end of endograft limb. Comparing the location of HFU and occulusion in the end of endograft limb, all patients had the same orientation. Although it did not have statistical significance and there was a problem of an error when measuring the HFU value, it is thought that it can be used as a factor capable of predicting limb occlusion.

Keywords: Abdominal aortic aneurysm, hounsfield units, limb occlusion, computered tomography angiography

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PP-192

The impact of metformin use on aneurysm size changes after endovascular aneurysm repair in diabetic patients

Hayan Han, Youngjin Han

Asan Medical Center, Department of Vascular Surgery, Seoul, Korea

Abstract

Aim: The change in the remaining sac size after Endovascular Aneurysm Repair (EVAR) has become an important issue. Recent studies suggest that the use of metformin can inhibit the growth of aneurysm sac size in Abdominal Aortic Aneurysm (AAA) patients. Therefore, we aimed to examine whether metformin usage among EVAR patients influences sac size changes.

Material and Methods: This retrospective study analyzed data from 69 diabetic patients who underwent Endovascular Aneurysm Repair (EVAR) between 2007 and 2020 in single center. Our primary endpoint was to assess the relationship between metformin use and sac size changes, using criteria set at 5mm. While second endpoint examined the association between metformin usage and the need for a second intervention, as well as its impact on survival rates.

Results: In the group that took Metformin, sac size stabilization was observed more frequently (non-metformin 5 (21.7%), metformin 25 (56.5%), p=0.006). Furthermore, the group that did not take Metformin showed significant sac expansion (non-metformin 10 (43.5%), metformin 5 (10.9%), p=0.002). While there was no significant difference in sac shrinkage between the two groups (non-metformin 8 (34.8%), metformin 15 (32.6%), p=0.857). The baseline characteristics were not different between the two groups. The rate of second interventions was similar (p=0.276), and there were no significant differences in survival rates (p=0.138).

Conclusion: We found that patients taking metformin had more stable sac sizes, with a significant reduction in expansion compared to those not taking metformin. These findings suggest that metformin may play a positive role in stabilizing sac size in diabetic patients after EVAR, warranting further investigation into its role in AAA biology in EVAR patients.

Keywords: Abdominal aortic aneurysm, endovascular aneurysm repair, DM, metformin

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PP-193

Arteriovenous fistula after venous intervention

Baris Akca, Mehmet Cengiz Colak, Mehmet Emin Murat, Nevzat Erdil

İnönü University, Faculty of Medicine, Department of Cardiovascular Surgery, Malatya, Türkiye

Abstract

Acquired arteriovenous fistulas (AVF) frequently develop after penetrating trauma. They usually occur as a result of penetrating trauma such as gunshot, stabbing, glass cut or iatrogenic as a result of a surgical intervention. A trill and continuous murmur may be detected above the traumatized area. In this case report, we present a case of AVF thought to have developed as a result of venous intervention. A 10-year-old child was admitted to our hospital with a cat purring sound on touching the arm. It was learned that 6 months ago venous intervention was performed at antecubital fossa for collecting blood sample. Physical examination revealed no signs of heart failure. There was a trill and continuous murmur on palpation in the antecubital region. Doppler USG and angiography revealed diffuse diameter increase of the brachial artery along the axillary and subclavian arteries and similarly ectasic appearance of the brachial vein. The brachial artery was 6.5 mm in diameter at its widest point and the axillary artery was 8.5 mm in diameter. At the level of the cubital fossa, the distal branch of the brachial artery, ulnar vein and radial artery calibrations were normal and their lumens were patent. At the level of the cubital fossa, the brachial vein was focally dilated with a diameter of approximately 8 mm. There was enlargement and fistulous relationship between the brachial artery and vein at the level of the middle 1/3 of the humeral diaphysis. GAA incision was made above the right brachial artery towards the unlar artery. The brachial artery was rotated. Adjacent veins next to the brachial artery were ligated. There was aneurysmatic dilatation and thrill in the vein at the level of the unlar artery. The aneurysmatic area was clamped after heparin by turning the arteries. was implanted. The aneurysmatic sac was removed. Primary repaired. Although rare, clinicians should keep in mind that AVF may develop during venous interventions in children.

Keywords: Fistula, arteriovenous, iatrogenic, venous access

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PP-194

Carotid endarterectomy in the octogenarian with contralateral disease: A single center experience

Ilke Keles, Cagla Canbay Sarilar, Onur Selcuk Goksel, Ibrahim Ufuk Alpagut

İstanbul University, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: As the growing proportion of octogenarians in the ageing population may lead to a dramatic increase in cerebrovascular disease, preventing and treating stroke will be a serious challenge in the octogenarian. We reviewed the outcome of carotid endarterectomy in the octogenarians with or without contralateral carotid stenosis or occlusion and compared the results with a similar cohort of younger age.

Material and Methods: From 2005 to 2015, 240 CEAs were performed by a single surgical team on 160 patients were reviewed for early outcome with regards to hospital mortality and stroke.

Results: 160 patients (121 males; mean 82.5±9.3 years-old) underwent bilateral CEAs. Active smoking was significantly higher in the male octogenarians (6.2% vs. 21.8%, P<0.05). Preoperative history of non-debilitating stroke was the most common scenario in all patients. 12 patients were presented with ipsilateral retinal artery occlusion. Contralateral carotid artery occlusion was seen in a total of 40 patients. Only one patient in the octogenarian group experienced a lateralizing stroke due to ipsilateral CEA in the contralateral occlusion group in contrast to 3 patients (lateralizing stroke in 3 patients, lacunar state in one patient) in the contralateral stenosis group.

Conclusion: Carotid endarterectomy, despite the general perception, is a viable option for patients with CCO or bilateral disease even in the octogenarian group.

Keywords: Carotid endarterectomy, octogenarian, bilateral disease

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PP-195

Patients with glomus tumors: A single-center retrospective study

Ilke Keles, Onur Selcuk Goksel, Birol Akdogan, Omer Ali Sayin, Shabnam Huseynzade, Cagla Canbay Sarilar, Ibrahim Ufuk Alpagut

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Vascular lesions in the head and neck are complex. The most common lesions are slow and painless growing glomus tumors originating from neural crest cells. The preferred treatment for these lesions is surgery, and surgical methods are quite challenging due to cranial nerve proximity and dense vascular structure. In this article, we aim to review and present our 13-year clinical experience on vascular tumors of the neck.

Material and Methods: Twenty-one patients who presented with a mass closely related to the carotid artery over 13 years between 2007-20 were analyzed retrospectively. Diagnostic angiography was performed for each patient for preoperative planning, and microcoilembolization was applied to the artery feeding the mass. Control computed tomography was performed on all patients in the 3rd postoperative month.

Results: 17 of the patients had glomus caroticum tumor, 3 had glomus vagale, and 1 had bilateral glomus caroticum tumor. In patients with type I and type II Shamblin tumors, the tumor was completely resected. In patients with Shamblin type III tumor, total resection was impossible without sacrificing the carotid artery. In these patients, the resected segment was interposed using a saphenous vein graft. In the patient with a sheath tumor, 8 mm PTFE graft interposition was applied between the ascending aorta and common carotid artery after complete resection.

Conclusion: The size of the tumor and its relationship with adjacent vessels and nerves should be carefully evaluated preoperatively. Diagnosis should be made with a multidisciplinary approach. Early diagnosis; It allows early treatment of patients by minimizing cranial neurovascular damage.

Keywords: Glomus tumors, carotid cuff tumors, surgical treatment

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PP-196

Coil embolization of the aneurysm sac in patients with type 1 and/or type 3 endoleak

Onur Selcuk Goksel, Ilke Keles, Cagla Canbay Sarilar, Ibrahim Ufuk Alpagut, Omer Ali Sayin

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The clinical efficacy of endovascular therapy is well defined. However, in controlled trials and in patients exceeding anatomical limits, long-term efficacy is still a concern. Fibrin adhesives (92.3%), balloon dilatation (80%) and coil embolization (75%) are important treatment modalities in patients with endoleakage. In this study, we present 5 patients who had endoleakage after endovascular treatment and underwent coil embolization therapy.

Results: Between 2010 and 2020, a total of five patients were treated with coil embolization for Type I endoleak. The mean age was 80±1 years. All patients were male and the mean ejection fraction was 30±2. One of the patients also had type III endoleak. One patient presented with acute abdominal complaints with closed rupture. The mean aortic diameter of the other 4 patients was 76±4 mm. All of the patients were discharged healtyly. The average hospitalization was 4 days except for one patient who was on dialysis. That patient discharged on the sixth day.

Conclusion: In conclusion, advances in technology, experience gained in endovascular practice, and the development of hybrid procedures play a significant role in reducing mortality and morbidity in patients undergoing Endovascular Aort Replacement (EVAR). As an alternative to surgical treatment, fibrin adhesives, balloon dilatation method and coil embolization are important treatment methods in selected patients.

Keywords: Endovascular aort replacement, abdominal aort aneurysm, endoleak

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PP-197

Unexpected false lumen grafting in complicated type B aortic dissection

Onur Selcuk Goksel[1], Ilke Keles[1], Bulent Acunas[2]

[1]İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]İstanbul University, İstanbul Faculty of Medicine, Department of Radiology, İstanbul, Türkiye

Abstract

Thoracic endovascular aortic repair (TEVAR) has become a widely accepted treatment strategy for patients with thoracic aortic pathologies. We present a case of TEVAR where urgent desicions were made for the patient according to false lumen cataterization. A 78-year-old patient with severe co-morbidities was referred for symptomatic chronic type B aortic dissection. During TEVAR, a sudden collapse of the true lumen and unwarranted stent-grafting of the false lumen occurred. An urgent decision was made to create a fenestration between the true and false lumina so as to create an endovascular connection between the proximal and distal aorta with no endoleaks even at 6th months. False lumen endografting is a medical fatal situation which can be prevented and treated with appropriate management.

Keywords: Thoracic endovascular aortic repair, aortic dissection, false lumen endografting

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PP-198

Symptomatic carotid artery stenosis and coiling: Modified technique of resection and reimplantation

Ilke Keles, Cagla Canbay Sarilar, Onur Selcuk Goksel

[1]İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Kinking of the extracranial internal carotid artery is most often defined as an angulation of one or more cervical segments of the carotid artery due to elongation, which may cause disturbances in the blood flow to the brain with or without accompanying stenosis. We present two patients, aged 80 and 65 years old, with carotid artery stenosis and coiling operated with two different techniques. Division and resection of the redundant internal carotid artery in addition to carotid endarterectomy was performed as stenosis of the target area for reimplantation was present to enable an oblique end-to-end anastomotic technique to internal carotid artery ostium extending to distal common carotid artery with or without a teardrop-shaped dacron patch. Shortening of the ICA is not a very common procedure, but we consider that it should be remembered as a relevant technique in the armamentarium of the surgeon. In the literature, no large prospective cohort studies, systematic reviews, or randomized studies with clear indications for any technique, other than the surgeon's good judgement.

Keywords: Carotid artery stenosis, carotid artery elongation, carotid artery reimplantation

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PP-199

Endovascular repair of a giant iliac aneurysm with spontaneous iliocaval fistula in the octogenerian: A challenging case

Ilke Keles[1], Bulent Acunas[2], Onur Selcuk Goksel[1]

[1]İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]İstanbul University, İstanbul Faculty of Medicine, Department of Radiology, İstanbul, Türkiye

Abstract

The arteriovenous fistulae due to aortoiliac aneurysms are rare clinical entities described in only few series of cases in the literature. We present an 84-year-old patient with massive left lower leg and scrotal swelling due to an aortoiliac aneurysm with the left common iliac artery diameter exceeding 8 centimeters with a fistula to left common iliac vein-caval junction and he was treated with aortoiliac endografting with local anesthesia. Endoleak from various connections between the aneurismal sac and the venous side constituted serious problem and was successfully treated with ligation of the iliofemoral collateral branches.

Keywords: Aneurysm, endovascular-stent-grafting, arteriovenous fistula

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PP-200

Left vertebral artery transposition before TEVAR in a type 3 dissection patient

Mehmet Aydin Kahraman, Suleyman Aycan, Mehmet Kizilay, Osman Eren Karpuzoglu, Gozde Tekin, Huseyin Uzandi, Ismail Basyigit, Selen Ozturk

Dr. Siyami Ersek Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

A 71-year-old male patient presents to the emergency department with chest and back pain. CT angiography reveals type 3 dissection. The left vertebral artery appears to originate from the aortic arch. There was no additional pathology. Surgery Technique: The patient was under general anesthesia, through a left neck incision, and the left vertebral artery coming out of the arch was found and anastomized end-to-side to the carotid artery. Afterwards, the TEVAR graft was placed just distal to the left carotid artery, and then the proximal part of the left subclavian artery was occluded with an vascular plug. It was observed that the patient had no neurological complications after the procedure. Aortic arch vascular anatomy is an important consideration when planning open aortic arch repair or thoracic endovascular aortic repair (TEVAR). Preservation of antegrade flow to the left vertebral artery is often achieved by transposition or bypass of the left subclavian artery during zone 2 thoracic endovascular aortic repair. An anomalous left vertebral artery arising directly from the aortic arch is a common arch variant, reported in 4% to 6%, and increases the risk of stroke unless revascularization is performed. Another factor to consider is These patients are less likely to tolerate left subclavian occlusion without revascularization, because reduced collateral flow puts them at higher risk for arm ischemia symptoms. The purpose of this applied technique is to present our experience regarding the treatment of the left vertebral artery arising from the aortic arch before thoracic endovascular aortic repair. The left vertebral artery arising from the aortic arch is not a common condition and may create additional difficulties during hybrid aortic arch surgical repairs. Left vertebral artery transposition is a feasible, safe and durable reconstruction to reduce cerebrovascular complications after TEVAR.

Keywords: Thoracic endovascular aortic repair, endovascular, vertebral artery, transposition, stroke, peripheral angiography

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PP-201

Surgeon volume is associated with postoperative outcomes in carotid endarterectomy

Emre Yasar[1], Zihni Mert Duman[2], Muhammed Bayram[1], Unal Aydin[1]

[1]İstanbul Mehmet Akif Ersoy Cardiovascular Surgery Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]Elazığ Fethi Sekin City Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Carotid endarterectomy (CEA) is a commonly performed surgical procedure to prevent stroke in patients with carotid artery stenosis. Surgeon experience and volume have been hypothesized to impact CEA outcomes, but the extent of this relationship remains unclear.

Material and Methods: We conducted a retrospective study utilizing a comprehensive database of CEA procedures performed over a twelve-year period. Surgeon volume was categorized into two groups: surgeons performing more than 7 CEAs a year and those performing less. Patient demographics, surgical complications, and long-term outcomes were analyzed and compared between these groups.

Results: Our findings reveal a disparity in the incidence of stroke between the two surgeon volume groups. High-volume surgeons (more than seven CEAs a year) exhibited significantly lower rates of perioperative and postoperative strokes compared to their low-volume counterparts (less than seven CEAs a year) ($p=0.04$). However, there was no significant difference in mortality between the two groups ($p=0.20$).

Conclusion: Surgeon volume significantly impacts the incidence of stroke in carotid endarterectomy procedures. High-volume surgeons excel in stroke prevention strategies, which could lead to improved patient outcomes. These findings advocate for the consideration of surgeon experience and techniques in the planning and referral of CEA procedures.

Keywords: Carotid endarterectomy, surgeon volume, outcomes

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PP-202

Wrapping with polytetrafluoroethylene graft in a patient who underwent interposition with saphenous vein graft in carotid artery aneurysm

Canbolat Mert Holat[1], Sibel Gur[1], Aysegul Durmaz[1], Ali Ahmet Arikan[1], Tulay Cardakozu[2], Oguz Omay[1]

[1]Kocaeli University, Department of Cardiovascular Surgery, Kocaeli, Türkiye
[2]Kocaeli University, Department of Anesthesiology and Reanimation, Kocaeli, Türkiye

Abstract

Aim: Aneurysms are one of the rare pathologies of the carotid artery. 0.1-2% of all interventions applied to the carotid artery are due to aneurysm.Carotid artery aneurysms account for 0.4-4% of all peripheral arterial aneurysms.There are medical,surgical and endovascular treatment options.Although there are rare cases in large centers,it is important to master the treatment options in terms of the severity of complications that may occur.In our experience,interposition was performed with the saphenous vein graft,it was aimed to increase the durability by closing the saphenous vein graft with a polytetrafluoroethylene(PTFE) graft,despite the possibility of aneurysm development in the saphenous vein graft.

Material and Methods: The neck incision was made in accordance with the anatomy on the left side.Left common carotid artery(CCA) was turned proximally. External carotid artery(ECA),internal carotid artery(ICA) were explored.The patient was heparinized,proximal clamps were placed on the left CCA and ICA.The aneurysmatic segment was removed.The saphenous vein graft harvested from the left lower extremity was interposed between the CCA and ICA with 6-0 prolene sutures. In order to prevent the development of a possible aneurysm, the saphenous vein graft was wrapped with a number 6 PTFE graft.The skin and subcutaneous tissue were closed in accordance with the anatomy.

Results: A 39-year-old female patient presented with a neck pain.The patient has a history of asthma,rheumatoid arthritis and thyroidectomy.On physical examination a pulsatile mass on the left side of the neck was detected.In the computerized tomography(CT) angiography report,an aneurysmatic diameter increase of 6 mm on the right and 10 mm on the left was observed at the bifurcation level in the bilateral distal CCA.

Conclusion: Extracranial carotid aneurysms are rare cases and can be a source of serious morbidity,if left untreated.Although there are multiple treatment options,there is no clear guide on optimal treatment.Aneurysmal degeneration of the saphenous vein graft is a rare complication that can be encountered.In our own case experience,interposition was performed with the saphenous vein graft.The graft was covered with a PTFE graft considering the possibility of aneurysm development in the saphenous vein graft.In the two-year follow-up of the patient,the graft lumen is open and an aneurysmatic segment is not observed.

Keywords: Carotid artery aneurysm, peripheral arterial aneurysm, polytetrafluoroethylene graft

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PP-203

Treatment strategy of uncomplicated type B aortic dissection: Thoracic endovascular aortic repair (TEVAR) vs medical management (MED)

Gozde Tekin, Selen Ozturk, Mehmet Aydin Kahraman, Huseyin Uzandi, Suleyman Aycan, Mehmet Kizilay

Dr. Siyami Ersek Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The most common treatment strategies for uncomplicated type b aortic dissections(TBAD) are medical management (MED) or Thoracic Endovascular Aortic Repair (TEVAR). In this study we aim to compare this two options in terms of mortality, aortic dilation and aortic rupture.

Material and Methods: In this study we scanned patients who had acute uncomplicated type b aortic dissection from January 2017 to February 2023. Our study include comparison of TEVAR to MED for acute uncomplicated TBAD. Study outcomes include short (1 mont), intermediate (1 year) all-cause mortality. Additional outcomes included aortic dilation and rupture at 1 year.

Results: 196 patients scanned retrospectively in this study.(64.3 years; 75.8 % male). No difference was observed in short-term [OR] 0.73 with 95% confidence interval [CI] 0.47 to 1.12, P 5 0.15), intermediate (OR 0.99 with 95% CI 0.56 to 1.73, P 5 0.96). No difference in aortic dilation with either modality was noted at 1-year (OR 1.11 with 95% CI 0.76 to 1.64, P 5 0.59). TEVAR was associated with a significantly lower 1-year risk of aortic rupture (OR 2.49 with 95% CI 1.23 to 5.06, P 5 0.01).

Conclusion: There were no short or intermediate differences in mortality between TEVAR and MED in patients with acute uncomplicated TBAD. Although the dilation rate was similar between both groups,TEVAR was associated with lower likelihood of aortic rupture at 1 year.

Keywords: Endovascular aortic repair, medical therapy, uncomplicated type B aortic dissection

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PP-204

Can neutrophil to lymphocyte ratio (NLR) help predict 1 year life expectancy in first time hemodialysis patients who need AVF/AVG creation?

Chris Tae Young Chung[1], Hyo Kee Kim[2], Heungman Jun[3]

[1]Inha University Hospital, Department of Vascular Surgery, Incheon, South Korea
[2]Korea Univeristy Guro Hospital, Department of Vascular Surgery, Seoul, South Korea
[3]Korea Univeristy Anam Hospital, Department of Vascular Surgery, Seoul, South Korea

Abstract

Aim: The 2019 KDOQI guideline emphasizes the importance of choosing the method of hemodialysis based on the patient's life expectancy. However, it is not easy to predict a patient's life expectancy at the time of arteriovenous fistula/graft (AVF/AVG) creation. We investigated whether neutrophil to lymphocyte ratio (NLR), monocyte to lymphocyte ratio (MLR), and platelet to lymphocyte ratio(PLR) could predict survival prior to dialysis surgery to use as tool for deciding the method of hemodialysis access.
Material and Methods: Between Jan 2016 and Dec 2020, we retrospectively analyzed 1805 patients undergoing first-time AVF/AVG surgery at three tertiary care hospitals; Korea university Anam, Guro and Ansan hospital. Patients with WBC <1500, lymphocytes <5%, monocytes >20%, and PLT <50k were excluded. Patients who died within 1 year after surgery were defined as the short term survival group, and patients who survived after 1 year were defined as the long time survival group.
Results: There were 80 patients in the short term survival group and 1049 patients in the long term survival group. In the multivariate analysis, hypertension, age 70 years or older, and cancer were significant risk factors for 1 year mortality. In the subgroup analysis divided by age, 527 patients were 70 years or older, out of which 59 (11.2%) did not survive within 1 year. 602 patients were below 70 years of age, out of which 21 (3.5%) did not survive within 1 year. No risk factors for 1-year mortality were identified among the patient subgroup below 70 years of age. However, among the patient subgroup 70 years or older, the preoperative NLR and cancer were significant risk factors in the multivariate analysis. Preoperative NLR had an hazard ratio of 1.13 and a p-value of 0.009.
Conclusion: PLR, NLR, and MLR were not factors that could predict one-year survival at the time AVF/AVG creation. However, NLR may be a possible risk factor that could predict one-year survival for those over 70 years old. Further research is needed to utilize NLR to predict life expectancy and aid in the decision-making process of dialysis surgery.

Keywords: Neutrophil to lymphocyte ratio, hemodialysis, arteriovenous fistula

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PP-205

Incidental mycotic paediatric subclavian artery aneurysm

Fatma Akca, Evren Ozcinar, Levent Yazicioglu

Ankara University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

A 23 month old girl diagnosed with PRE-B-ALL presented left subclavian artery mycotic aneurysm.She had no complaint about aneurysm.Contrast-enhanced thoracic CT was performed on a patient with a fever that persisted despite antibiotic treatment revisions. Contrast-enhanced CT showed a 13 mm aneurysm with 2 cm peripheral thrombus. The patient was consulted to cardiovascular surgery for aneurysm treatment recommendations. After the case council conducted with radiology, pediatrics and cardiovascular surgery, it was decided to perform surgical aneurysm repair to the patient. Open surgery was performed under general anaesthesia with toracotomy. The aneurysm was located under the left clavicle, and invaded the apex parenchyma of the lung. After systemic heparinization the proximal part of the left subclavian artery and the distal right left axillary artery were controlled and clamped. The aneurysm sac was excised, Gore graft was used and end-side anastomosis was performed. The patient who underwent lobectomy due to lung parenchymal invasion, was sent to the paediatric ICU and discharged with no complications.Her left radial pulse was palpable, and graft patency was confirmed by duplex ultrasound.

Keywords: Subclavian artery aneurysm,mycotic aneurysm,surgery repair of aneurysm

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PP-206

Multidisciplinary management options and results of vascular malformations in the pediatric population: Our single center study

Nur Dikmen

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Vascular anomalies in children warrant special consideration for a multitude of reasons. Families will often have seen many other teams and been given a variety of diagnostic labels and misleading advice. Parents or care givers will have questions over the correct diagnosis and what it means for their child over the course of their childhood. Vascular malformations are present from birth, though often not clinically obvious until later. Low flow malformations present more frequently in children than high flow lesions, the latter often not becoming symptomatic until teenage years. Although many of the principles of sclerotherapy and embolisation are the same in adult and paediatric practice, there are some key differences in the approach for children, including some longer term thinking about managing these chronic diseases and their impact on a growing child. We aimed to report our results of 181 pediatric patients with vascular anomalies and review the current literature regarding the natural history and the clinical outcome after multimodality treatment in the pediatric population, as optimal management for pediatric vascular anomalies remains controversial. There are some key differences in the approach to vascular anomalies in children. A multidisciplinary approach using multimodality therapy if needed has been proved to be beneficial in approaching these lesions in all age groups.

Keywords: Arteriovenous malformations, pediatrics, vascular anomalies

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PP-207

The surgical approach to a patient developing forearm ischemia due to brachial artery aneurysm

Ebsar Ergenc, Fatih Yigit

University of Health Sciences Koşuyolu High Specialization Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

The brachial artery serves as the vital blood supply to the forearm, originating as a continuation of the axillary artery beneath the lower border of the teres major muscle. The normal diameter of the brachial artery ranges between 3.5 to 4.3 mm in females and 4.1 to 4.8 mm in males. A brachial artery aneurysm is defined as an expansion exceeding 50% of the artery's normal diameter. The creation of arteriovenous access for hemodialysis has led to an increase in the incidence of brachial artery aneurysms. Open surgical repair is generally the preferred treatment method, involving techniques such as patch interposition, resection with primary anastomosis, or simple suture repair. A 54-year-old male patient presented with complaints of pain in the right upper extremity. A brachial arteriovenous fistula (AVF) was created in the right arm 22 years ago for hemodialysis purposes. Ten years ago, a renal transplantation was performed, and the fistula has not been in use since then. On CT angiography, the brachial artery was measured at 37 mm in its widest segment. Surgery was decided due to brachial artery aneurysm and limb ischemia. An incision was made along the brachial artery tract from the antecubital fossa to the axillary artery. The aneurysmal segment extending to the axillary artery had a diameter of approximately 4.5 cm at its widest point and was about 20 cm long. A saphenous vein interposition was performed between the axillary and brachial arteries. During postoperative follow-ups, the patient remained asymptomatic. The pulse of the ulnar artery was palpable, and Doppler imaging showed a biphasic flow pattern in the radial artery. In the outpatient clinic, the palpable pulse of the ulnar artery was monitored. Doppler imaging confirmed the patency of the saphenous vein graft. Brachial artery aneurysms are rare but serious vascular conditions with varied diagnosis and treatment options based on factors like clinical status, aneurysm size, and surgical expertise. The development of arterial aneurysm following AVF can arise due to continuous high blood flow induced by AVF, causing increased arterial wall tension. This study offers vital insights, potentially enhancing treatment strategies for this uncommon pathology.

Keywords: Brachial artery aneurism, arteriovenous fistula, axillary artery aneurism

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PP-208

Basilic vein superficialization in patients who underwent brachiobasilic arteriovenous fistula operation for hemodialisis purposes: Our single center experiences

Yusuf Kuserli, Gokcen Ozkan, Onur Emre Satilmis, Sulenur Tokal

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Autogenous arteriovenous (AV) fistulas are great importance in chronic kidney disease (CKD) patients. In patients undergoing long-term dialysis, AV fistulas may cease to function effectively as a result of various complications. After the termination of AV fistulas created using the cephalic vein, the last autogenic method is to create an AV fistula with the basilic vein. It is known that the 1-year patency rate of brachiobasilic AV fistulas is up to 90%. In brachiobasilic fistulas with such high patency rates, superficialization of the basilic vein is required to intervene in the basilic vein during hemodialysis. We aimed to share the early results of our patients to whom we applied basilic vein superficialization.

Material and Methods: At the Department of Cardiovascular Surgery of Bakırköy Dr. Sadi Konuk Education and Research Hospital, 16 CKD patients who underwent brachiobasilic AV fistula between January 2021 and September 2023 were retrospectively examined. The same surgical technique was applied to creating an AV fistula and after maturation, brachial vein superficialization. Early postoperative results were evaluated.

Results: 56.25% (n=9) of the patients were female and 43.75% (n=7) were male, and the average age was 51.2 years. At the first month follow-up of the patients, it was observed that the fistula flow had reached sufficient flow (fistula maturation rate: 93.75%) except for one patient. Of the 15 patients who underwent basilic vein superficialization, one (n=1, 6.67%) had a hematoma in the basilic vein line and one (n=1, 6.67%) had bleeding from the incision line. These patients were taken into operation again. No complications were observed in 13 patients (86.67%). In the short-term follow-up of the patients in the first 6 months, it was observed that all of them were undergoing hemodialysis without any problems.

Conclusion: It can be said that dialysis with an autogenous AV fistula increases patient comfort compared to the use of dialysis catheters or non-autogenous grafts. Autogenous AV fistulas are the first method to be considered, and if the cephalic vein has been used before or is not suitable, the use of the basilic vein is a safe and must-be considered option.

Keywords: Chronic kidney disease, arteriovenous fistula, basilic vein superficialization

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PP-209

Hemoptysis developing due to aortobronchial fistula and it is endovascular treatment

Ahmet Deniz Kaya[1], Anil Sari[2], Ibrahim Uyar[2]

[1]Ağrı Training and Research Hospital, Departman of Cardiovascular Surgery, Ağrı, Türkiye
[2]Tepecik Training and Research Hospital, Departman of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Aortic bronchial fistulas (ABF) are abnormal connections between the thoracic aorta and the trecheobronchial system. The main symptom is hemoptysis. It's etiology is atherosclerosis, infections, especially tuberculosis, trauma, previous aortic surgery, and esophagectomy. ABFs may occur after any thoracic aortic lesion or surgical interventions for these lesions. The most commonly used methods to diagnose ABF are computed tomography, aortography, bronchoscopy and transesophageal echocardiography. Treatment of ABF may include surgery or thoracic endovascular aortic repair. Interventional treatments are an alternative to traditional treatment in ruptured aortas and have lower mortality and morbidity rates than traditional treatment. A 67-year-old male patient was admitted to our emergency department with the complaint of hemoptysis. Vital signs were stable. The patient underwent computed tomography angiography for diagnostic purposes. Images were compatible with aortic bronchial fistula. The patient was taken to the cardiovascular surgery intensive care unit with the current TEVAR plan and medical treatment was started. After the operation, the patient was taken back to the cardiovascular surgery intensive care unit. After the procedure in the intensive care unit, dual antiplatelet therapy and statin therapy were started. The patient, whose general condition was good and whose vitals were stable, was discharged on the 3rd postoperative day. The first ABF was described by Girardet in 1914. Etiology includes atherosclerosis, infections, trauma and previous aortic surgery. The most common location of ABF is between the descending aorta and the left bronchi. Previous aortic surgery is a common risk factor for pseudoaneurysm formation. It usually occurs at the suture line or cannulation site due to iatrogenic defects in the vessel wall and subsequent inadequate healing. Treatment is of two types: conventional open surgery and endovascular. Small lesions can only be repaired with sutures or fistula excision. However, in some cases, lung damage can be severe. In these patients, lobectomy or even pneumonectomy may be required. Repairs performed with stent graft may be associated with migration, endolic, bronchial erosion and recurrent fistulas. If the fistula is associated with aneurysm, open surgical repair is preferred over TEVAR.

Keywords: Thoracic endovascular aortic repair, aortobrochia lfistula, aort aneurysm

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PP-210

Hybrid treatment of iatrogenic iliac vein occlusion due to gynecologic surgery

Hidayet Demir, Mehmet Altug Tuncer

Okan University, Departman of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Chronic occlusion of the iliac veins and the inferior vena cava is a source of significant morbidity to often otherwise healthy patients, but it can be successfully managed with percutaneous recanalization and stenting. It could become after deep venous thrombosis as post-thrombotic syndrome or could be iliac compression syndrome. In this article, ı aim to present iatrogenic iliac vein occlusion after gynecologic surgery on one case. The patient was 32 years old, female. She was complaining of left leg pain, edema and burning even ulcer wound. It was living last three years after deep venous thrombosis. Deep venous thrombosis became after cesarean section. We performed doppler US and CT venography. and after the tests we diagnosed that it was not iliac compression syndrome or post thrombotic syndrome. It was iatrogenic totally occlusion of left iliac vein. In the anjiography unit we tried to cannulated poplitel vein and femoral vein by USG guiding but failed. So we decided to hybrid treatment and explore the femoral vein by incision. after that we reached the femoral vein and it was cannulated. venography gave us the results that there was ilio-femoral stenosis by post-thrombotic syndrome and there was totally iliac occlusion. Then we reached the vena cava through the lesion by 0.35 hidrophilic guidewire. than we performed PTA and after implanting stent. After the treatment we succeed the restore iliac vein and the complaints was decreased. Ulcer wound was fully recovered. After 6 months of surgery patient got pregnant. Iliac stenting is a good choice of iliac occlusion but it's not always could be possible percutaneous. We can decide to hybrid method to cannulation. And iliac occlusion may occur iatrogenic, rarely. As a result of correct evaluation, iatrogenic occlusions can also be treated with stents.

Keywords: Iatrogenic, iliac stent, hybrid treatment

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PP-211

Thoracoabdominal aortic aneurysm (Crawford type IV) + bilateral subclavian artery aneurysm open surgical repair, two years follow-up

Salih Anil Boga, Levent Yazicioglu, Evren Ozcinar,
Mehmet Cahit Saricaoglu, Ali Ihsan Hasde, Serenay Ersoy, Onur Buyukcakir

Ankara University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Thoracoabdominal aortic aneurysms result from continuous dilation of the descending thoracic aorta extending into the abdominal aorta. Subclavian artery aneurysms have a major risk of rupture, embolus, or thrombosis, and therefore should be repaired. In this report, open repair of thoracoabdominal and bilateral subclavian artery aneurysm is presented. A 48-year-old female patient was admitted to our clinic with palpable masses at the armpits. In the physical examination, vital signs were normal. Long arms, legs, fingers, and toes were remarkable. In addition to that, her height was 190 cm. Her CT angiography scan showed that there were giant aneurysms at the thoracoabdominal aorta (88*79 mm) and bilateral subclavian artery aneurysms (40*43 mm and 65*55 mm). After genetic testing, FBN1 gene mutation was found, and established a final diagnosis of Marfan syndrome. Two-stage surgery was planned. During the first surgery, the thoracoabdominal aortic aneurysm was repaired with a tubular graft from the thoracic aorta to the abdominal aorta. Also, visceral arteries were anastomosed to grafts. For providing visceral perfusion during cross-clamping, HTK solution and V-A ECMO were used. After the first surgery, extubation in the first 6 hours, 3 days ICU, and 15 days of hospital stay occurred and there was no complication. The patient was admitted again for subclavian artery aneurysm repair. Separated tubular grafts were anastomosed to bilateral subclavian arteries. After the second surgery, extubation in the first 3 hours, 2 days in ICU, and 10 days of hospital stay occurred and right-hand paralysis was seen. 2 years later, a control CT angiography scan showed that both grafts were patent and there was not any malperfusion sign in the visceral organs. Although TAAA open repairs remain challenging, contemporary techniques afford a good outcome and a durable repair in experienced centers. Especially, the visceral involvement makes it even harder to repair by surgical or endovascular methods. In this case, the reason for the decision of open surgery is the visceral involvement, young age, and fewer co-morbidities.

Keywords: Thoracoabdominal aortic aneurysm, subclavian artery aneurysm, Crawford classification, open repair, Marfan syndrome

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PP-212

Interwoven nitinol stents to treat juxta-anastomotic stenosis with severe calcification in AV fistula

Chai Hock Chua

Shin Kong Memorial Hospital, Department of Cardiovascular Surgery, Taipei, Taiwan

Abstract

Aim: Juxta-anastomotic stenosis is the most frequent stenosis found in AV fistula, with up to 2/3 of fistula fail to mature because of this stenosis. With increasing time of fistula use, we found that up to 20~30% of juxta-anastomotic junction will become calcified and occluded. To treat this problem, simple angioplasty always carry the high recurrence rate and finally leads to AVF failure. We reported our experience of using Supera stent to treat this juxta-anastomotic stenosis with severe calcification.
Material and Methods: From September 2019 to March 2022, a total of 20 patients who had a failing AVF caused by calcified JAS were treated with Supera stent. Up to 85% of patient were female and mean age of these fistula was around 12 years.
Results: Technical success was achieved in all patients. One year follow up showed that our access primary patency was 35%* but the target lesion primary patency was 75% *. Only 3 parent required reintervention because of stent edge stenosis. The reintervention rate was 0.15 procedures per year. All patients fistula were maintained during the follow up with secondary patency up to 100%*.
Conclusion: In our study, stenting with Supera across this calcified lesion showed promising result* the most important fact is that it can preserve these failing AVFs and maintain its dialysis function with less invasive method, which was benefit for these patient.

Keywords: Supera stent, juxtaanastomotic junction with severe calcification, reintervention

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PP-213

Approach to an adolescent with symptoms of chronic venous insufficiency; successful radiofrequency ablation and miniphlebectomy

Baris Akca, Nevzat Erdil

İnönü University, Faculty of Medicine, Department of Cardiovascular Surgery, Malatya, Türkiye

Abstract

The diagnosis and treatment of chronic venous disease has been well-standardized in adults. However, lower extremity varicose veins are rarely observed in adolescence and the treatment approach may be specific. A 15-year-old male patient presented to our clinic with complaints of left leg pain, swelling, itching for two years and a wound that had not healed for the last 6 months. Physical examination revealed CEAP C-6 varicose veins on the left lower extremity (increased leg diameter, truncal varicose veins and ulcerated wound on the medial 1/3 lower segment of the leg) and there was no difference between the leg lengths and no disruption in walking. No family history of varicose veins. The possibility of Klippel-Trénaunay syndrome, post-thrombotic syndrome and a compressive condition was kept in mind and lower extremity doppler ultrasonography (DUSG) and abdominal USG were performed. DUSG revealed continuous reflux in the great saphenous vein and its diameter was measured as 7.8 mm proximally and 5.2 mm above the knee. No abnormality was found on abdominal USG. We performed ultrasonographic mapping of the lower extremity and revealed no unusual condition other than classical chronic venous insufficiency so we decide to perform surgery. Above-knee radiofrequency ablation of GSV and below-knee miniphlebectomy performed under general anesthesia with laryngeal mask. The patient was discharged uneventfully and at the follow-up visit 3 months later, it was observed that the leg diameter decreased and the wound healed. The uncertainty of the factors that cause venous reflux in adolescents still remains today. Unless, congenital anomalies mimicking classic venous insufficieny and other possible cause should be kept in mind and etiological research should performed before an intervention plan especially in adolescent patients.

Keywords: Venous insufficiency, adolescent, surgery

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PP-214

Late unusual presentation of posttraumatic descendan aorta pseudoaneursym with dysphagia; Repair with TEVAR

Munevver Cevikkan, Ahmet Arif Aglar, Tufan Sener

Health of Sciences University Sultangazi Haseki Training and Research Hospital, Department Cardiovascular Surgery, İstanbul, Türkiye

Abstract

68 years old male patient presented with dysphgia and hemotamesis starting one week earlier from the hospital visit. He had a history of toracal travma 20 years ago. In the contrasted computed tomography a pseudoaneursym formation at the junction of aortic arc and descending aorta,growing through mediastinum was observed. He was scheduled for pseudoaneursym occlusion with TEVAR. After a succesful TEVAR application, altough pseudoanersym was repaired, hemotamesis develop fisrt, and hemoptysis was seen later on. An eosphageal and tracheal fistulization was diagnosed in his clinical follow-up.

Keywords: Thoracic endovascular aortic repair, dysphagia, pseudoaneursyma

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PP-215

Late total occlusion of the TEVAR stent of the proximal descendan aorta: Presenting with acute developing paraplegia and leg pain

Munevver Cevikkan, Nadir Aygutalp, Melike Elif Teker

Health of Sciences University Sultangazi Haseki Training and Research Hospital, Department Cardiovascular Surgery, İstanbul, Türkiye

Abstract

49 years old, female patient came to the hospital with new developing paraplegia and bilateral lower extremity pain. She is diabetic and obese. She had a history of TEVAR because of tip III aortic disection in 2020. In her physical examination, beside the computed tomographic findings of total occlusion of the TEVAR stent, there was no pulse in her femoral arteries. In emergency conditions, bilateral femoral embolectomy was attempted first, providing a partial antegrade flow through bilateral femoral arteries, relieving her leg pain and ischemia in her lower extremities.

Keywords: Paraplegia, thoracic endovascular aortic repair, tip3 Aortic disection

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PP-216

Comparison of high saphenous ligation and stripping, radiofrequency ablation, and subfascial endoscopic perforator surgery for the treatment of active venous ulcers: Retrospective cohort with five-year follow-up

Yusuf Kuserli, Ali Aycan Kavala, Saygin Turkyilmaz, Gulsum Turkyilmaz, Eylul Kafali Basaran, Gokcen Ozkan

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: To compare the use of high saphenous ligation and stripping, radiofrequency ablation, and subfascial endoscopic perforator surgery for the treatment of active venous ulcers.

Material and Methods: One hundred ninety-five (n=195) subjects who were treated for venous leg ulcers were enrolled between 2009 and 2014. Three groups were formed (Group A: high saphenous ligation and total stripping, Group B: radiofrequency ablation of the great saphenous vein + perforators, and Group C: radiofrequency ablation of the great saphenous vein + subfascial endoscopic perforator surgery) (n=65 for each group). The venous clinical severity score for baseline, 1st, 6th, and 12th months, great saphenous vein occlusion at the 1st, 6th, and 12th months, and ulcer rates for the 1st, 2nd, 3rd, 4th, and 5th years were recorded.

Results: For venous clinical severity score, only the first month decrease was significant for the subfascial endoscopic perforator surgery group (p=0.001). Great saphenous vein occlusion was higher at the 6th and 12th months for the high saphenous ligation and stripping and subfascial endoscopic perforator surgery groups than for the radiofrequency ablation group (p=0.036 and p=0.037). The rate of ulcers for the subfascial endoscopic perforator surgery group was lower at the second, third, fourth, and fifth years (p=0.011). No significant difference was found between groups for the five-year recovery rates (p>0.05).

Conclusion: Subfascial endoscopic perforator surgery technique in conjunction with radiofrequency ablation of axial vein was superior to both high saphenous ligation and stripping and radiofrequency ablation of axial and perforators for ulcer healing.

Keywords: Venous ulcer, endovenous treatment, perforator vein, venous insufficiency

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PP-217

Long-term comparison of closure rates of radiofrequency ablation and n-butyl cyanoacrylate embolization treatments in great saphenous vein insufficiency

Saygin Turkyilmaz, Gulsum Turkyilmaz, Filiz Bakkal, Necdet Kilicaslan

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: The use of endovascular treatments in the treatment of venous insufficiency is increasing. The most commonly used endovascular treatments today include radiofrequency ablation and n-butyl cyanoacrylate embolization. We aimed to retrospectively examine patients with great saphenous vein insufficiency to whom we applied these methods and share the long-term results.

Material and Methods: 301 patients who received endovascular treatment due to great saphenous vein insufficiency between January 2016 and June 2018 were retrospectively examined at Department of Cardiovascular Surgery of Bakırköy Dr. Sadi Konuk Education and Research Hospital. Preoperative, peroperative and postoperative data of 159 patients in the radiofrequency ablation group (RF group) and 142 patients in the n-butyl cyanoacrylate embolization group (SA group) were examined, and Doppler USG results at postoperative 1, 2 and 5 year controls were evaluated.

Results: The average age of 301 patients was 46.3 years, 56.8% (n=171) of the patients were female and 43.2% (n=130) were male. The average saphenous vein diameters and reflux degrees of the two groups were similar. Operation time and hospital stay were shorter in the SA group. When the postoperative Doppler USG results were examined, closure of the great saphenous vein was observed in 96.9% (n=154) of the patients in the RF group at the 1-year follow-up, while closure was observed in 92.3% (n=131) of the patients in the SA group. These rates; in the second year, 96.2% (n=153) for RF group, 90.8% (n=129) for SA group, and in the fifth year, 94.3% (n=150) for RF group and 90.1% (n=128) for SA group.

Conclusion: When looking at the literature data; In the second year, the closure rate in the saphenous vein is 93.7% for SA and 90.9% for RF, and in the fifth year it is 91.4% for SA and 85.2% for RF. On the contrary, in patients in our clinic, higher closure rates were observed in the RF group (RF: 96.2%, SA: 90.8% in the 2nd year, RF: 94.3%, SA: 90.1% in the 5th year). Both RF ablation and SA embolization methods can be considered as very effective and reliable methods in great saphenous vein insufficiency.

Keywords: Chronic venous insufficiency, radiofrequency ablation, cyanoacrylate embolization

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PP-218

Hybrid atherectomy for lower extremity peripheral arterial disease

Saygin Turkyilmaz, Ali Aycan Kavala, Gulsum Turkyilmaz, Selim Tumkaya

Bakırköy Dr. Sadi Konuk Education and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: To evaluate the effectiveness of directional atherectomy with a Phoenix atherectomy system in lower extremity peripheral arterial disease (LE-PAD).

Material and Methods: A retrospective review of subjects who had undergone atherectomy for severe and occluded LE-PAD. Demographic data, procedural properties, and follow-up information were recorded. The technical, procedural and clinical successes were reported.

Results: In total, 120 subjects were evaluated. The superficial femoral artery (SFA) group consisted of 64 subjects (53.3%), and the popliteal group consisted of 56 (46.7%) subjects. Groups did not differ in terms of age, gender, comorbid diseases and tobacco use. In both groups, four subjects (6.3% of SFA and 7.1% of the popliteal group) experienced extravasation was encountered in from the vessel during the procedure. During atherectomy, two (3.3%) of the subjects in the SFA group and one (1.9%) subject in the popliteal group experienced vessel dissection. Acute technical success in this study was 96.7% for SFA and 98.1% for the popliteal group. Overall technical success was 97.7%. In the first 72 h, three (5%) of the subjects in the SFA group and four (7.7%) of the subjects in the popliteal group experienced major adverse events. Acute procedural success in this study was 91.7% for SFA and 90.4% for the popliteal group. Overall procedural success was 91.1%. Success was defined as an improvement of at least one grade in the Rutherford classification; two (3.3%) subjects did not demonstrate improvements in the SFA group, and the clinical success rate was 96.7%. All subjects in the popliteal group demonstrated an improvement of at least one grade in the Rutherford classification, and clinical success was 100%. When the groups combined all subjects, the clinical success in this study was 98.2%.

Conclusion: Directional atherectomy with a Phoenix atherectomy system demonstrated comparable results with the literature.

Keywords: Atherectomy, lower extremity,phoenix atherectomy, technical success

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The single center investigation of knee phleboarthrosis patients' quality of life

Ernest A Shcheglov

Petrozavodsk State University, Republic of Karelia, Russia

Abstract

Aim: The combination of lower extremities varicosity with knee osteoarthrosis is called Phlebarthrosis. It is widespread, extremely in older people. Therefore one of the problems is the decrease of patients' quality of life (QoL). That is why it is very important to evaluate the QoL dynamics, when we assess the treatment results. The research objective was to evaluate the QoL before treatment and its dynamics during the treatment.

Material and Methods: We investigated 116 patients. They passed the clinical and instrumental examination in order to be included into the investigation. The instrumental examination included knee X-Ray, knee ultrasonography and venous ultrasonography. All examinations were performed before the investigation and in 6 and 12 months after it. Exclusion criteria were chronic arterial insufficiency level. We compared the QoL results with the results of 20 healthy volunteers. The treatment consisted of micronized purified flavonoid fraction 1000 mg daily, non-steroid anti-inflammatory drugs and disease modifying medications (so called chondroprotectors). All the patients strictly continued the pre-investigation scheme of non-steroid anti-inflammatory drugs and disease modifying medications application. The only change was the use of micronized purified flavonoid fraction.

Results: The scores of QoL assessment by using CIVIQ-20 were 47.6±2.9 points in Phlebarthrosis patients and 25.9±1.7 points in healthy patients before the treatment. After 6 months the results in Phlebarthrosis patients group were 37.58±1.74 points and after 12 months they were 33.46±1.72. The same situation was observed when using the KOOS Scale. Before treatment the result was 32.15±9.17 points, 6 months later - 46.29±7.11 points and 12 months later - 55.44±8.03 points. The Lequesne Index was 10.49±1.12 points before the treatment that indicated "severe osteoarthritis", 6 months later it decreased to 9.14±0.97 points and 12 months later it decreased to 7.85±0.83 points indicating "moderate osteoarthritis".

Conclusion: The combination of lower extremities varicosity with knee osteoarthrosis leads to severe decrease of patients Quality of Life. The use of micronized purified flavonoid fraction may increase the Quality of Life. The use of micronized purified flavonoid fraction in such patients may also decrease the severity of knee osteoarthritis from severe to moderate.

Keywords: Knee phleboarthrosis, quality of life, micronized purified flavonoid fraction

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PP-220

Can we reduce the risk of gastro-intestinal bleeding in patients, who receive NOAC?

Ernest Shcheglov[1], Natalia Alontseva[2]

[1]Petrozavodsk State University, Republic of Karelia, Russia
[2]Petrozavodsk First Aid Hospital, Republic of Karelia, Russia

Abstract

We use anticoagulants widely now. But we must remember, that these drugs can lead to very dangerous bleeding, including gastroduodenal one. The research objective was to estimate the gastroduodenal bleeding risk in the group of patients with deep venous thrombosis, receiving anticoagulant drugs and to work out the safe algorithm for their application and primary and secondary prevention tactics. 731 patients with deep venous thrombosis were treated. 722 patients underwent gastro-duodenoscopy before treatment. There were no signs of gastric problems in 84 (11.6%) patients. This group received anticoagulant drugs only. The second group of patients (538 (74.5%)) had some gastric problems, but without any signs of bleeding. The third group (86 patients (11.9%)) had gastric or duodenal bleeding during the investigation, but it was stopped using coagulation with stable hemostasis. Anticoagulant drugs together with proton pump inhibitor (omeprazol) was administrated in the second and third groups. At last the fourth group of patients had gastric or duodenal bleeding which was stopped during the gastro-duodenoscopy, but the hemostasis was unstable. This group consisted of 14 (1.9%) patients. Proton pump inhibitor was administrated initially. Later we made the second gastro-duodenoscopy and administrated the anticoagulant drug if the bleeding was not continued. In groups 2-4 during gastro-duodenoscopy we found peptic ulcer in 55 (8.7%) cases, acute ulcer in 177 (27.8%) cases, gastric polypus in 41 (6.5%) cases, chronic gastritis in 219 (34.4%) cases, cancer in 114 (17.9%) cases. 290 (53.9%) group 2 patients had no signs of gastro-duodenal disorder. We had cases of clinically significant gastric or duodenal bleeding during the period of hospitalization. We also analyzed the history of the disease and found out that there was no bleeding during the period from 3 months to 4 years of anticoagulant treatment in these groups of patients. 88.4% patients with deep venous thrombosis has gastric or duodenal erosions or ulcers. The bleeding is found in 13.9%. Many patients had no signs of gastric disorders. The use of proton pump inhibitor together with anticoagulant drug can prevent bleeding. The use of gastro-duodenoscopy and adequate treatment make the use of anticoagulant drug safety.

Keywords: Anticoagulation, gastric bleeding, gastroscopy

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PP-221

The simulator for elastic bandage applying skills development

Ernest Shcheglov

Petrozavodsk State University, Republic of Karelia, Russia

Abstract

Aim: Elastic compression is one of the most important parts of venous diseases treatment. The use of stockings is onerously in cases with unstable edema. Such cases are the indication for elastic bandage. To create and evaluate the special simulator for developing the skills of elastic bandage applying.

Material and Methods: The simulator consists of a foot dummy with 5 piezoelectric transducers. Transducers evaluate the bandage pressure. The result is visible on a special screen. We can evaluate either the pressure on the separate transducer or the pressure difference between two of them. We evaluated the basic compression near the ankle, which must be the biggest. We also evaluated the foot pressure distribution. At the first stage we evaluated the elastic bandage applying skills of 100 medical students. They were divided in two equal groups. In the first group we didn't describe the rules of elastic bandage applying and the students did as they thought right. The second group students passed a detailed briefing of the elastic bandage applying and they knew what the graduated compression means. At the second stage we combined all the students in one group, then we had a lesson of elastic bandaging, explained errors and the students passed the special training.

Results: Basic compression. Only 16% of the first group students achieved the right result. In the second group the correct result was in 46 %. 70% of students didn't pass the task. Pressure distribution. In the first group it was correct in 12% and in the second one in 28%. The most common mistake was the middle pressure near the ankle, the highest was near the knee and the smallest on the top of the leg. Only 20% of students passes this task. After the training the ankle pressure was correct in 44% and the pressure distribution was correct in 35% of students.

Conclusion: Students, without information about elastic bandaging make mistakes during this procedure. Just the simple description improves the bandaging skills. After the special training these skills became better. We must teach the students how to apply the elastic bandage correctly.

Keywords: Elastic bandaging, simulator, graduated pressure

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PP-222

Safe management of carotid body tumor resection without preoperative embolization: Turgut Özal Medical Center experience

Olcay Murat Disli, Nevzat Erdil, Baris Akca, Mehmet Cengiz Colak

İnönü University, Faculty of Medicine, Department of Cardiovascular Surgery, Malatya, Türkiye

Abstract

Aim: The diagnosis and management of vascular lesions of the neck is a challenging task that requires a multidisciplinary approach. This study assesses the single center experience of Carotid body tumors (CBTs).

Material and Methods: We included adults with CBTs, between January 2019 and Febuary 2023. A total of 6 patients with CBTs were included. In the Shamblin classification, 4 tumors were type I, and 2 were type II. Surgical excision of 6 vascular lesions were performed in 6 patients with a mean age of 51.56 ± 17.35 years at the time of operation.

Results: Intra- and/or postoperative clinical and histological assessment revealed unilateral glomus caroticum. During the follow-up period, no tumor recurrences were observed, and the morbidity and mortality were minimal.

Conclusion: Preoperative evaluation concerning the size, extent, and anatomical relationships of the tumor thoroughly should be investigated. Multidisciplinary approach involving vascular surgery, otolaryngology, and radiology is preferred to treat these patients for better outcomes. It has been observed that safe surgery can be performed with an experienced approach without embolization.

Keywords: Carotid body tumors, carotid glomus, Shamblin classification, without preoperative embolization, paragangliomas

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PP-223

Axillary artery aneurysm: Case report

Mert Celik, Mucteba Saricaoglu, Cengiz Ovali

Osmangazi University, Faculty of Medicine, Deparment of Cardiovascular Surgery, Eskişehir, Türkiye

Abstract

Aim: The incidence of upper extremity peripheral artery aneurysms is much lower than lower extremity peripheral artery aneurysms. Traumatic aneurysms can be divided into two groups: false and true. False aneurysms may develop after a penetrating injury to the vessel wall. Bleeding from a penetrating injury is limited by surrounding soft tissues, and a hematoma forms. The organization continues with the lumen of the pseudoaneurysm sac, leading to fibrosis and eventual recanalization. Axillary artery aneurysms secondary to blunt trauma are rare and are usually diagnosed late. The reason for the late diagnosis is that the symptoms of aneurysm in the muscle and bone structures surrounding the chest and shoulder regions are overlooked due to the location of the axillary artery. In addition, distal peripheral pulses may be strong due to extensive upper extremity collateral circulation.

Material and Methods: Under intratracheal general anesthesia, an incision was made in the left infraclavicular region and left axillary region. The subclavian artery was suspended proximally by turning it. The distal axillary artery was turned from the incision in the axillary region and suspended. The aneurysm sac was found to be highly adherent to the brachial plexus. The aneurysm sac was opened and excised.A 6 mm collagen-coated graft was anastomosed from the subclavian artery to the axillary artery.

Results: Following the surgery, our patient's postoperative peripheral pulses were manually positive, and his complaints of numbness, pain, and weakness in the left upper extremity showed regression. The patient was discharged on the seventh postoperative day with full recovery and without any complications.

Conclusion: This case, we determined that the use of infraclavicular and axillary incisions is an effective method for accessing and exploring the axillary artery, controlling bleeding, exploring the aneurysm sac, performing graft interposition, and relieving the symptoms associated with brachial plexus compression. We predict that the infraclavicular and axillary incisions utilized in our case will facilitate exploration. In vascular surgery, we recommend careful intervention for the early diagnosis of axillary artery aneurysms, considering the neurological and motor complications related to the compression of the brachial plexus, which is closely located along its course.

Keywords: Axillar artery, aneurysm, brachial plexus, pain, surgical treatments

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PP-224

Surgical treatment of brachial aneurysm

Uzeyir Tapdigli, Salih Ozcobanoglu, Rauf Onder, Ozan Erbasan, Ilhan Golbasi, Cengiz Turkay, Omer Bayezid

Akdeniz University Hospital, Deparment of Cardiovascular Surgery, Antalya, Türkiye

Abstract

A 60-year-old male patient is admitted to our clinic with the complaint of painful swelling after blood sampling from the left brachial region. On physical examination, the swelling is pulsatile. The patient reports that this swelling has been increasing in the last 2 months. Upon these complaints, the patient underwent tomography. Tomography report: A partial thrombosed aneurysm with axial dimensions of approximately 25x25 mm is observed in a section just before the bifurcation in the distal part of the right brachial artery. The transverse diameter of the opacified lumen is approximately 15 mm. The vertical extension of the aneurysm was measured as approximately 27 mm. radial and ulnar artery opacifications after the aneurysm were evaluated as normal. The patient is scheduled for surgery. After the brachial incision was made, brachial,radial and ulnar arteries are found and turned.The aneurysmatic segment at the level of bifurcasio is excised.Saphenous vein graft interposition is performed between the brachial and ulnar artery.The proximal part of the radial artery is anastomosed to the saphenous vein.There were no complications in the postoperative period.The patient was discharged on the third postoperative day.

Keywords: Aneurysm, brachial, pulsatile

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PP-225

Tumor excision and revascularization with pericardial roll-patcplasty in vena cava superior syndrome: Case report

Muhammed Emir Sahin, Birol Akdogan, Nilgun Yaziksiz, Anil Varol, Turkan Tansel

İstanbul University, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Vena Cava Superior Syndrome (VCSS) is a clinical picture that develops due to partial or complete disruption of normal venous return from the head, upper extremities, thorax and right atrium. It may develop due to infectious diseases, malignancy and thrombosis. In this report, we present a case of VCS revascularization after tumor excision using pericardial roll-patchplasty technique. A 60-year-old woman with a history of known coronary artery disease, tuberculosis lymphadenitis and endometrial ca, presents to the internal medicine outpatient clinic with complaints of facial edema which had been present for about 2 years and increased in the last 2 months. Thoracic computed tomography (CT) of the thorax performed at an external center was evaluated in favor of thrombus in the VCS and anticoagulants were started at a therapeutic dose. VCS tumor excision was performed in a joint operation with the thoracic surgery unit. After excision, it was seen that primary end-to-end repair of the VCS could not be performed due to loss of long segment VCS lumen. VCS revascularization was achieved by roll patchplasty with pericardium (otogreft). The tumor tissue obtained peroperatively was frozen and sent to the pathology unit for detailed study. Pathology study of the tumor tissue taken from the patient perop is ongoing. VCS vascular structure repaired with pericardial roll-patchplasty showed flow in postop control imaging. The patient did not develop VCSS in postop clinical follow-up. Symptoms may be mild or severe depending on the degree of compression or obstruction. Clinically, cape-like edema of the face and upper extremities, orthopnea, headache may be observed. If it develops due to a malignancy,surgery, chemotherapy, radiotherapy depending on the type of tumor, and endovascular stenting may be performed in some patients who do not respond to treatment or relapse. There are many different options for the treatment of VCSS. The most important factor determining the treatment plan is the etiology of the syndrome. In patients in whom surgical treatment is decided, the repair of VCSS should be evaluated in a multidimensional manner and the most appropriate repair method should be decided.

Keywords: Vena cava superior syndrome, edema, surgical revascularization

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PP-226

How to manage ruptured AVF mega pseudoaneurysm that an elective planned surgery turn into emergency case

Atilla Orhan, Mucahit Tahsin Demirtas, Eyup Cihan Kaya

Selçuk University, Faculty of Medicine, Department of Cardiovascular Surgery, Konya, Türkiye

Abstract

The arterio-venous fistula is the most commonly used vascular access for hemodialysis. It's a fascinating medical procedure that can help improve the quality of life for those undergoing hemodialysis. Pseudoaneurysm is a rare complaint about seeing the surgeon. The false aneurysm or pseudoaneurysm is a medical condition that typically occurs due to damage to the vascular wall, often as a result of medical interventions.the pseudoaneurysm that arising in arterio-venous fistulas created for vascular access results from repeated puncturing of the vein at the same site. It is a rare complication but may cause the arteriovenous fistula to fail. Pseudoaneurysm bleeding is quite unwonted clinical situiation but it is emergancy circumstance that has high mortality. A 35-year-old male patient scheduled for elective pseudoaneurysm surgery was consulted with us due to bleeding during hemodialysis via central venous catheter. The patient had a 26-year history of chronic renal failure, and the right iocephalic AVF was used for hemodialysis. He has a history of papillary thyroid carcinoma and underwent thyroidectomy. He takes levothyroxine sodium. The patient was planned emergency surgery. Two huge non-tender pulsatile pseudoaneurysms that hade active bleeding were detected on local physical examination in operating room. His laboratory workup was not within normal range due to interruption of dialysis. We performed the operation under general anesthesia. Arteries, outflow vein and inflow vein were controlled. The mass was exposed and excised. The pseudoaneurysm in the cephalic vein was excised, and the healthy vein segments were reanastomosed towards the basilic vein and revised. The second pseudoaneurysm surgery was planned as elective surgery because of hemodialysis emergency.

Keywords: Arteriovenous fistula, vascular access, emergency vascular surgery

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PP-227

Is surgery the only fate of the patient with leriche syndrome? Our endovascular therapy results early follow-up outcomes

Metin Onur Beyaz[1], Senem Urfalı[2], Sefer Kaya[1], Dilan Oruç[1], Iyad Fansa[1]

[1]Hatay Mustafa Kemal University, Tayfur Ata Sökmen Faculty of Medicine, Department of Cardiovascular Surgery, Hatay, Türkiye
[2]Hatay Mustafa Kemal University, Tayfur Ata Sökmen Faculty of Medicine, Department of Anesthesiology And Reanimation, Hatay, Türkiye

Abstract

Aim: In this research, we aimed to present early follow-up results of the endovascular treatment in patients with Leriche syndrome at our single center.

Material and Methods: Between October 2020 and January 2022, 14 patients with Leriche syndrome (12 men, two women) who underwent endovascular treatment at our center retrospectively were evaluated. Before the treatment, the ankle-brachial index (ABI) was found 0.50±0.11 on the right leg and 0.45±0.09 on the left leg.

Results: All of the patients with Leriche syndrome applied to our clinic for the first time. In five patients, the fully occluded lesion length was over 3 cm (ranging between 3.5-7.2 cm), hence they were treated with aortic and bilateral iliac bare metallic stents. Although in one patient, the aortic occluding lesion was below 3 cm; it was treated with a bare aortic and bilateral bare iliac stent application because the lesion in the aorta was too calcific. In eight patients, the lesion length was less than 3 cm, bilateral iliac metal bare stents were applied in a kissing stent way.

Conclusion: Endovascular therapy for chronic aorto-iliac occlusive disease has an early high technical success with primary and secondary patency rates. Especially in patients with high risk factors, it may be considered as a good alternative to conventional surgery.

Keywords: Leriche syndrome, endovascular therapy, vascular stent

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PP-228

Successful treatment of iliac artery dissection after blunt trauma with embolectomy

Mucahit Tahsin Demirtas, Nizami Aliyev, Ibrahim Enes Ozdemir, Eyup Cihan Kaya, Omer Faruk Cicek

Selçuk University, Faculty of Medicine, Department of Cardiovascular Surgery, Konya, Türkiye

Abstract

Vascular injuries can occur after penetrating or blunt trauma. Penetrating injuries are more common in developing countries. Vascular injuries (intimal damage, dissection, arteriovenous fistula) can also be observed due to blunt trauma. We present the case of a patient with atheromatous plaque rupture and occlusion in the iliac artery. A 64-year-old male patient was admitted to the emergency room after a traffic accident. He had subarachnoid hemorrhage and multiple fractures in the pelvis. He also had liver laceration and bladder perforation. Total occlusion was detected in the right external iliac artery on CT angiography. The patient was given femoral embolectomy without heparin. A dissected and retracted intimal flap was seen in the embolectomy material (Figure-1). The patient with palpable peripheral pulses was transferred to Critical intensive Care Unit. Vascular injuries increase mortality and morbidity in traumas. Penetrating injuries are more common, blunt injuries are much less common. However, the prognosis of blunt trauma is worse than penetrating injuries and is known with higher amputation rates. The patient had blunt trauma. He had iliac artery damage due to blunt trauma. There was no need for post-operative amputation or fasciotomy. External iliac artery damage due to blunt trauma is very rare, with less than 30 cases reported before. Abdominal surgery carries a high risk of blood loss and mortality in patients with pelvic fractures and intraperitoneal organ damage. In our patient, abdominal surgery was avoided, and femoral embolectomy was successfully performed without heparin application. In cases of atherosclerotic plaque rupture and dissection, the need for saphenous vein and graft may be needed. In our case, the atherosclerotic plaque and intimal flap were removed as embolectomy material during femoral embolectomy and the patient was successfully transferred to the intensive care unit. In cases of lower extremity occlusion caused by peripheral atherosclerotic plaque rupture and intimal flap, the limb can be saved with prompt embolectomy. We think that in such cases, rapid femoral embolectomy should be preferred instead of abdominal surgery in properly selected patients.

Keywords: Vascular trauma, dissection, iliac artery

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PP-229

Critical factors leading to wound complications in amputated patients: Low hematocrit levels

Sinan Omeroglu, Ibrahim Demir, Metin Onur Beyaz, Sefer Kaya, Iyad Fansa

Hatay Mustafa Kemal University, Tayfur Ata Sökmen Faculty of Medicine, Department of Cardiovascular Surgery, Hatay, Türkiye

Abstract

Aim: Patients with diabetes-induced lower extremity infection and gangrene suffer from post-amputation wound complications. The aim of this report is to identify critical factors leading to wound complications in amputated patients.

Material and Methods: 50 patients with ipsilateral transmetatarsal (TMA) or finger amputation treated in Istanbul University Medical Faculty between 2001 and 2013 were retrospectively reviewed. Amputations were caused by diabetic foot infection. None of the patients had peripheral artery disease (ABPI>1.1).

Results: In 9 (18%) patients, revision was required despite appropriate antibiotherapy after amputation. 7 (78%) of these patients were women, 8 (89%) were smokers and hematocrit levels were below 25% in all of them. 4 of the 5 patients (80%) with chronic kidney disease were among the patients in need of revision.

Conclusion: The risk of wound complications after amputation is high. These complications increase morbidity and treatment costs. This study showed that low hematocrit value is a risk factor for the development of wound infection after amputation.

Keywords: Hematocrit, diabetic foot, amputation, infected wound

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PP-230

Timing of thrombectomy after stroke in a patient who underwent postoperative carotid endarterectomy

Mustafa Said Esen, Salih Ozcobanoglu, Muhammet Safa Yigit, Cemal Kemaloglu, Ozan Erbasan, Ilhan Golbasi, Cengiz Turkay, Omer Bayezid

Akdeniz University, Department of Cardiovascular Surgery, Antalya, Türkiye

Abstract

In this case, a 71-year-old man with a known history of smoking, hyperlipidemia and atherosclerotic heart disease; We examined a patient with transient ischemic attacks who applied to our clinic with the complaint of numbness in the left arm. In the carotid CT angiography examination performed on the patient, a pre-occlusive plaque was observed extending in a segment of approximately 26 mm to the proximal of the right internal carotid artery(ICA), and its component was in a segment of approximately 7 mm at the level of the right ICA exit. We planned an endarterectomy. After the carotid CT angiography performed on the patient, who developed neurological symptoms on the first postoperative day, we saw that the right ICA was occluded. The patient underwent an emergency right ICA thromboendarterectomy and was discharged on the 14th postoperative day without any neurological deficit after receiving the necessary medication and physical therapy. We observed that early thrombectomy had a positive effect on the patient who developed neurological symptoms after carotid endarterectomy in preventing the patient from having a neurological deficit.

Keywords: Acute ischemic stroke,carotid occlusion,cerebral perfusion outcome,surgical embolectomy,carotid endarterectomy

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PP-231

A case report: Treatment using thrombin injection of early pseudoaneurysm after arteriovenous fistula creation

Emre Kubat, Isil Tasoz Ozdas, Muharrem Emre Ozdas, Tayfun Ozdem, Kubilay Karabacak

Health and Science University, Gülhane Training and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Development of pseudoaneurysm after arteriovenous fistulas (AVF) creation for hemodialysis is rare but can be life-threatening. We report the treatment using thrombin injection of an early pseudoaneurysm in a patient with radiocephalic arteriovenous fistula. Case presentation: An 81-year-old male, seronegative spondyloarthritis and amyloidosis, chronic kidney disease, without previous history of hemodialysis, was admitted to routine hemodialysis program by the nephrology clinic due to general condition deterioration after covid 19 infection. Radiocephalic fistula was performed in our clinic. The patient presented with swelling in the incision area 20 days after the surgery and doppler ultrasonography revealed a 4 cm pseudoaneurysm originating from the anastomotic line. Percutaneous thrombin injection therapy was performed under ultrasonography guidance. Control doppler ultrasonography showed total thrombosis of the pseudoaneurysm and patent vascular structures. The patient received routine dialysis treatment 2 days a week and the AVF was functional at 1-year follow-up. Percutaneous thrombin therapy may be considered as a rapid, effective and fistula-sparing treatment in patients with pseudoaneurysm originating from created AVF anastomotic line.

Keywords: Arteriovenous fistula, pseudoaneurysm, thrombin

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PP-232

Comparison of the outcomes of carotid endarterectomy in the patients with contralateral carotid stenosis and patients with unilateral carotid stenosis

Haluk Caglar Karakaya, Muhammet Turhan, Murat Ugur

Prof. Dr. İlhan Varank Research and Training Hospital, Deparment of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Carotid artery disease (CAD) is one of the most important causes of stroke. 1 Treatment of CAD is important to avoid stroke and its related complications. Different treatment modalities have been reported regarding revascularization methods (stenting/surgery) and surgical methods (shunt/non-shunt, primary repair/patch plasty). 2-3 Contralateral carotid stenosis is important clinical condition to decide revascularization strategy without increasing postoperative complications. In this study, revascularization methods and follow-up of the patients with contralateral carotid stenosis were investigated.

Material and Methods: Patients who underwent carotid endarterectomy at Sancaktepe Education and Research Hospital Cardiovascular Surgery Department between 01.01.2019 and 28.02.2023 were retrospectively analysed. Postoperative outcomes of patients with contralateral >50% stenosis (Group 1) were compared with the data of patients with unilateral stenosis (Group 2). The operation was performed under general anesthesia in all patients. Intraoperative bilateral NIRS monitoring was performed routinely and systolic blood pressure was kept above 130 mmHg throughout the operation. The surgical strategy was not changed other than routine practice during the operation. Shunt did not used. Primary closure was performed for arteriotomy in 122 patients. Patch plasty method was used in 3 patients. Two groups were compared in terms of neurological complications during the postoperative hospitalization period.

Results: There were 65 patients in Group 1 (unilateral stenosis) and 60 patients in Group 2 (bilateral stenosis). The average cross-clamp time during the operation was 12±9 minutes 13.6±12 minutes retrospectively. In group 1, monoplegia developed in 2 patients, in group 2, monoplegia developed in 2 patients.

Conclusion: In the surgical treatment of contralateral carotid artery stenosis, performing the operation with standard procedures without changing surgeon's routine practice has similar results to the surgical approach applied to unilateral stenosis. In these patients, the operation might be performed safely with precautions such as cerebral monitoring and keeping systolic blood pressure above 135 mmHg.

Keywords: Carotid artery stenosis, contralateral stenosis, cerebrovascular disease

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PP-233

The impact of pedal artery anatomic factors in para/infra-malleolar bypass for CLTI patients

Daiki Uchida, Yuya Tamaru, Tsutomu Doita, Takamitsu Tasukawa, Naoya Kuriyama, Yuri Yoshida, Shinsuke Kikuchi, Nobuyoshi Azuma

Asahikawa Medical University, Division of Vascular Surgery, Asahikawa, Japan

Abstract

Aim: Expectations for the role of bypass surgery (BX) for CLTI patients have become higher with the results of recent BEST-CLI study, however, Litlle is known regarding the impact of pedal arterial calcification and vascular beds that are not reflected in GVG concepts. The aim of this study is to investigate its impact on clinical outcomes in para/infra-malleolar BX for CLTI patients.

Material and Methods: A single center, retrospective review was performed for CLTI patients who underwent para/infra-malleolar BX between 2014 and 2019. 166 limbs in 140 patients were enrolled. High-risk cases (group H) were defined as A:pedal Medial Arterial Calcification (pMAC) score grade: severe (point 5) or B:GLASS IM/pedal descriptor:P2 (GIMP2). The clinical outcomes of group H (37 limbs in 31 patients; 79% male, 88% dialysis, 81% diabetes) and group N (as non A or non B, 129 limbs in 109 patients) were examined retrospectively.

Results: Group H included WIfI stage 4:29 (76%), GLASS stage III:23 (62%), open bypass favor:22 (58%). Anatomical high-risk factors demonstrated pMAC score grade severe:19 (51%), GIMP2:14 (38%) and both:4(11%) respectively. Among the 99 dialysis cases, 29 cases identified as group H (29%, P=0.008, vs. non-dialysis cases). Distal target artery was mainly dorsal pedis artery:25 (68%) but pedal branch artery bypass was performed in 3 (8%). Low flow grafts (<20 ml/min) were observed in 15 (41%, P<0.001 vs. group N), but early graft failure (within 30 days) could be avoided in 6 (12%, P=0.053 vs. group N) by continuous graft infusion of vasodilators. Although there were no significant differences in primary patency (1y; 51% vs. 60%, P=0.104) or secondary patency (1y;84% vs. 90%, P=0.089), there were significant differences in wound healing rate (6Mo; 48% vs. 89%, P<0.001),survival rate (2y;43% vs 66%, P=0.002) and AFS (1y; 70% vs. 77%, P=0.003) between the two groups.

Multivariate analysis demonstrated GIMP2 (OR 1.83 (1.01-3.34), P=0.047) and pMAC score:severe (OR 2.30 (1.36-3.88), P=0.002) were significantly associated with delayed wound healing, and in addition GIMP2 (OR 1.88 (1.03-3.40), P=0.039) was significantly associated with mortality risk.

Conclusion: The GVG framework does not reflect pedal artery anatomic factors, and there is little evidence regarding IM grade or pMAC score. This study highlights the importance of assessing pedal artery anatomic factors in Para/Infra-Malleolar BX for CLTI patients.

Keywords: Para/infra-malleolar bypass, IM grade, pedal Medial Arterial Calcification score, wound healing, mortality

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PP-234

Extracranial carotid artery aneurysms: A case report

Elshad Mansimzada, Zoukou Mariefrancedominique Seri, Okay Karslioglu, Denizhan Akpinar, Ecem Tugba Yamac, Deniz Sarp Beyazpinar, Bahadir Gultekin, Hakki Tankut Akay

Başkent University Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Extracranial carotid artery aneurysm is considered rare and accounts for 0.4-1% of all arterial aneurysms and 4% of all peripheral arterial aneurysms. Pressure symptoms and related neurological symptoms, dissection and rupture are important complications of this disease. In this section, the extracranial carotid artery surgical approach to aneurysms has been tried to be examined. Here we review a case where, a 67-year-old female patient with an advanced saccular aneurysm underwent carotid endarterectomy operation and was discharged with a good general condition. We also review the results of the surgery 4 years after the operation.

Keywords: Extracranial, carotid artery, aneurysms

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PP-235

Surgical treatment of May Thurner syndrome in an adolescent patient

Mete Gursoy, Tuba Mutu, Kubra Gozuacik, Salih Guner, Unal Aydin

Mehmet Akif Ersoy Cardiothoracic and Vascular Surgery Training and Research Hospital, Department of Cardiovascular Surgery İstanbul Türkiye

Abstract

Endovascular interventions are increasingly common in treatment of May Thurner Syndrome. However management of children and adolescent patients remain controversial. We report successful surgical treatment of non thrombotic May Thurner Syndrome in adolescent patient. 13 year old male admitted our institution with complaints of swelling, pain and bruising of left leg. Physical examination showed significant diameter difference between legs and apparent varicose dilatation groin to distaly at the left side. Doppler ultrasonography showed grade 4 reflux in superficial and deep veins and compressed preoclusive left common iliac vein between the right common iliac artery and columna vertebralis. Diagnosis was confirmed with venography. Treatment options was discussed by instutional Vascular Team and surgical treatment was planned. Patient underwent midline laparotomy. Aortoiliac bifurcation was found and dissected common iliac arteries were encircled with tapes. Significant compression of the right common iliac artery and prestenotic dilatation of the left iliac vein were diagnosed. The right iliac artery was clamped after heparinisation and transsected distal of the compression. The right Iliac artery repositioned below to compressed iliac vein and anostomosed end to end. Compressed part of the left iliac vein was narrowed and thickened. The iliac vein was reconstructed with autologous saphenous vein patch. Diameter difference decreased postoperatively. Patient was discharged postoperative 4th day in well condition. The iliac vein stenting is preferred approach in treatment of May Thurner syndrome currently. Age and growth related concerns, stent related complications(migrations, thrombosis), anticoagulation problems, limited data about long term outcomes, reintervention requirement and repeated radiation exposure are should be kept in mind while treatment decision. Open surgery may be curative option in selected cases.

Keywords: May Thurner, adolescent, stenting, surgery

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PP-236

Increased incidence of abdominal aortic aneurysm in women with early menopause

Jisum Moon[1], Mihyeong Kim[1], Hyungjin Cho[1], Kangwoong Jun[2], Jeongkye Hwang[1]

[1]The Catholic University of Korea Eunpyeong St. Mary`s Hospital, College of Medicine, Department of Surgery, Seoul, South Korea
[2]The Catholic University of Korea Bucheon St. Mary`s Hospital, College of Medicine, Department of Surgery, Gyeonggi-do, South Korea

Abstract

Aim: Abdominal aortic aneurysm (AAA) is a disease with a very different prognosis depending on whether it is ruptured or not. Therefore, screening tests are conducted on men who smoke 65 years of age or older to find asymptomatic AAA before rupture. On the other hand, in women, the incidence of AAA is low and cost-effectiveness is not obtained, so screening tests are not recommended. However, early detection and treatment are still important because women's AAA has a four times higher risk of rupture than men, and the outcome after surgery is also worse than men. Accordingly, we analyzed how the difference in exposure period of female hormones affects women's AAA risk to find characteristic risk factors for women.

Material and Methods: We selected subjects from National Health Insurance System database, among women aged 40 or older who underwent medical checkups and female cancer tests for one year from January to December 2009 (n=3,109,506), those in menopause (n=1,393,271) were studied. They were tracked until December 2015 to confirm whether AAA was diagnosed.

Results: A total of 3,629 cases of AAA were diagnosed. As a result of comparing AAA cohort and non-AAA cohort, it showed a decreasing trend as the menopause age was delayed. In the case of menopause after the age of 55, the risk of AAA decreased by 24% compared to menopause before the age of 40. The risk of AAA decreased by 21% compared to those with a total menstrual period of more than 40 years and less than 30 years.

Conclusion: It needs to pay attention to the risk of AAA in women with early menopause. Additional analysis is needed on how much impact female hormones have on AAA development.

Keywords: Abdominal aortic aneurysm, menopause, national health insurance system

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PP-237

The gradual and silent infection of cutibacterium acnes after thoracic aortic surgery

Takenori Kojima, Tomoya Miyamoto, Shuichi Urashita, Kenta Uekihara, Takeshi Sakaguchi, Mai Matsukawa, Ryo Hirayama, Ryusuke Suzuki

Japanese Redcross Kumamoto Hospital, Department of Cardiovascular surgery, Kumamoto, Japan

Abstract

Cutibacterium acnes is one of the well-known bacteria as it exists in the normal human skin flora and sometimes have problem with prosthesis valve endocarditis. In this presentation, we reported 3 cases of thoracic artificial blood vessel infection by cutibacterium acnes appearing several years after surgery and discussed its characteristics and problems. Case 1: 57 year-old male presented with exudate from previous operative scar on the chest. He received total arch replacement 3 years ago and undergone re-operation because of the suspection of artificial blood vessel infection and pseudo aneurysm of aortic root. Case 2: 52 year-old male presented with bulging of previous operative scar on the center of the chest. He received Bentall procedure +total arch replacement 3 years ago, and was diagnosed with sternal osteomyelitis. Abnormal fluid accumulation around the sternum was revealed by CT scan and cutibacterium acnes was detected from blood culture. Case3: 62 year-old male presented with pain of the right foot. By the CT scan, he was diagnosed with acute arterial occlusion of right popliteal artery and the embolus was detected in the thoracic aortic artificial vessel which was implanted 6 years ago because of acute aortic dissection. All patients above took re-operation and re-replaced their artificial graft to the new ones. Cutibacterium acnes was detected as a result of blood and artificial vessels culture from all the patients. They were all afebrile and their general impression was basically good even before their secondary surgery. They all received long-term postoperative antibiotic therapy for suppression and there was no reinfection so far. Thoracic artificial vessels infection by cutibacterium acnes was considered to progress gradually and silently in several years after aortic surgery mainly because it was less invasive than the other bacteria of normal skin flora. Therefore, its blood stream infection could not be lethal but there were some several problems like continuous purulent discharge or mycotic embolization. It was difficult to determine at what point the bacteria entered the mediastinum and caused infection retrospectively. Having thick body hair on the chest could be a risk factor of cutibacterium acnes infection.

Keywords: Artificial blood vessel infection, thoracic aortic surgery, mediastinitis, sternum osteomyelitis

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PP-238

Perineural nerve catheter inserted intraoperatively in major limb amputation does not reduce risk of developing chronic limb pain

Sarah Jia Ern Chew, Limi Lee, Joshua Wibowo, Ming Yii

Monash Health, Department of Vascular and Transplantation Surgery, Melbourne, Australia

Abstract

Aim: Chronic limb pain encompassing both stump pain and phantom limb pain post major limb amputation can result in significant morbidity and reduced quality of life. Perineural nerve catheter inserted intra-operatively has been shown to be effective in reducing post operative acute pain. However, it is unclear if it mitigates chronic pain. The objective of this study is to review if intraoperative insertion of perineural nerve catheter reduced incidence of chronic limb pain in patients undergoing major limb amputation under the Vascular Surgery unit.

Material and Methods: This was a retrospective cohort study conducted in an Australian tertiary centre. Records of all patients who underwent major limb amputation under the Vascular Surgery unit from July 2016 to December 2021 were retrospectively analysed. Intraoperative analgesia and post operative chronic limb pain were analysed using simple logistic regression. The most prevalent indication for major limb amputation were diabetic foot ulcer (53.6%) followed by critical (33.0%) and acute limb ischemia (5.0%).

Results: 181 patients underwent major limb amputation during the study period. 101 patients (55.8%) received a perineural nerve catheter whilst 80 patients did not. Of the 101 patients who had perineural nerve catheter inserted, the majority were inserted by the vascular surgical team under direct vision intra-operatively. Patients who had perineural nerve catheter inserted had a higher risk of developing post operative chronic limb pain (OR=1.716, 95% CI: 1.058 to 2.783, p=0.029).

Conclusion: This study suggests that nerve catheter insertion increased the risk of post operative chronic pain in patients undergoing major limb amputation. Though perineural nerve catheter insertion has been previously shown to reduce acute pain, the decision to insert a nerve catheter in patients at higher risk of developing chronic limb pain needs to carefully considered, and possibly not inserted for some cohort of patients.

Keywords: Major limb amputation, critical limb ischaemia, perineural nerve catheter

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PP-239

Thoracic endovascular aortic repair in an adolescent patient with thoracic aortic dissection due to blunt trauma: A case report

Shabnam Huseynzade, Birol Akdogan, Merve Dogru, Mohammad Skaik, Turkan Tansel

İstanbul University, İstanbul Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Thoracic aortic dissection (TAD) is a condition with a high mortality rate due to rupture of the intima layer of the aorta, which disrupts the normal circulatory pathway of blood and requires urgent medical intervention. Hypertension, aortic aneurysm, bicuspid aortic valve, collagen tissue diseases (eg. Marfan Syndrome) are the main causes. TAD most commonly occurs in the fifth to seventh decade of life and is rare in children and young adults. Literature studies show that congenital cardiovascular diseases are the most common predisposing factor in pediatric patients. Trauma-associated aortic dissection is considered to be a rare condition. In this report, we describe the application of Thoracic Endovascular Aortic Repair (TEVAR) in an adolescent patient with TAD due to blunt trauma. A 16-year-old male patient was admitted to our clinic with a non-vehicle traffic accident. On physical examination, distal pulses were palpated. Subsequently, thoraco-abdominal CT Angio imaging revealed TAD and he was operated under emergency conditions for TEVAR. CT Angio imaging showed an area compatible with a dissection flap with pseudoaneurysmatic dilatation accompanied by pseudoaneurysmatic dilatation with mural thrombus images in a segment approximately 3.5 cm long after the ascending left subclavian artery of the aorta. The decision was made to perform TEVAR. Access was obtained through the right common femoral artery and an endovascular stent was placed from the level of the aortic arch to the midregion of the descending aorta. After postoperative intensive care unit and ward follow-up, the patient was discharged with complete recovery. TAD caused by blunt trauma is rare in pediatric patients. In cases secondary to trauma, urgent evaluation by CT-Angio scanning of the case and planning the most appropriate treatment is important. The use of endovascular treatment methods, especially in the adolescent age group, is still a matter of debate due to lack of adequate usage.

Keywords: Thoracic endovascular aortic repair, adolescent patient, aortic dissection, blunt trauma

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PP-240

Successful internal carotid artery stenting in limb-shaking transient ischaemic attacks: A case report and review of the literature

Yunyi Wang, Bernard Bourke, Victor Bourke

Gosford Hospital, Department of Vascular Surgery, New South Wales, Australia

Abstract

Severe carotid occlusive disease can manifest in rare limb-shaking transient ischaemic attacks (TIAs) thought to be due to transient cerebrovascular insufficiency to motor territories. The purpose of this paper is to present a case of treatment with successful carotid artery stenting resulting in resolution of symptoms and review the literature for the management of this rare manifestation. We report a case of an 89-year-old female who developed right-sided upper and lower limb shaking episodes secondary to severe proximal left internal carotid artery (ICA) stenosis noted on arterial duplex ultrasonography. She was successfully treated with left internal carotid stenting. Digital subtraction angiography revealed a string of beads appearance beyond the plaque suggestive of fibromuscular dysplasia. A literature search was performed using MEDLINE, PubMed, Google Scholar and Embase. Search terms included 'limb-shaking', 'transient ischaemic attack', OR 'TIA' AND, 'carotid artery' OR, 'carotid artery stent'. At postoperative follow-up, the patient had complete resolution of her symptoms and remained neurologically intact. Her case was subsequently presented at a neurovascular multidisciplinary meeting and was thought to be caused by limb-shaking TIAs secondary to severe carotid occlusive disease. A review of the literature identified n=34 studies. Majority of studies were case reports with presentations treated with best medical therapy, particularly optimization of blood pressure. Of those treated with surgical revascularisation, carotid endarterectomy or extracranial-intracranial bypass remained most common. However, more recent literature has described carotid artery angioplasty and stenting as a promising alternative. Limb-shaking TIAs are a rare manifestation of carotid arterial disease that is difficult to diagnose and can greatly affect quality of life. Internal carotid artery stenting is a minimally invasive technique that should be considered in the treatment limb-shaking transient ischaemic attacks especially in patients with significant comorbidities.

Keywords: Limb-shaking, transient ischaemic attack, transient ischaemic attack, carotid artery stent, carotid stenosis

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PP-241

Our experience of glomus tumor surgical treatment

Ahmet Aydin, Elif Tuzdelen, Nazli Melis Coskun Yucel, Mert Can Dinccag, Mustafa Yilmaz, Murat Guvener

Hacettepe University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: To share our experience with surgical excision of glomus tumor and postoperative results. Glomus tumors (chemodectoma/paraganglioma/non-chromaffin paraganglioma) are tumors originating from chemoreceptors arising from the neural crest. Glomus tumors in the head and neck region include glomus tympanicum, glomus vagale, glomus jugulare, glomus caroticum and glomus laryngicum. Treatment may include excision, embolization or radiotherapy. Surgical radical resection is a high-risk method due to the anatomical localization of the tumor, but it is the most preferred technique due to prevention of recurrence and positive long-term results.

Material and Methods: Thirteen cases operated for glomus tumor were retrospectively analyzed.

Results: Between 2014 and 2023, 13 patients were operated for glomus tumor at Hacettepe University Medical Faculty Hospital. Of the 13 patients, 10 were female (77%) and 3 were male (23%). The median age of the patients was 49 years (19-81 years). The presenting complaints were neck swelling in 7 patients (53%), blurred vision in 2 patients (15%), hoarseness in 2 patients (15%), headache in 1 patient (7%), tinnitus and conductive hearing loss in 1 patient (7%). In the preoperative period, intravascular embolization of the tumor was performed in 2 patients. 12 patients were diagnosed with glomus caroticum and 1 patient with glomus vagale. 2 patients had artery/vein invasion and 1 patient had cranial nerve invasion. Primary repair of the carotid artery was needed in 3 patients during the operation. Postoperative complications included facial numbness in 1 patient, hoarseness in 3 patients, and hypoglossal nerve paralysis in 2 patients were seen. Median follow-up was 2 years (1-7) and no recurrence was observed. There were no perioperative or postoperative deaths.

Conclusion: The recurrence rate after radical resection of glomus tumors is low and effective nerve-sparing surgery should be performed for possible neurological complications. Preoperative intravascular embolization may facilitate surgical excision of the tumor and reduce morbidity and mortality.

Keywords: Glomus tumor, intravascular embolization, glomus caroticum, glomus vagale, paraganglioma

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PP-242

A bail-out procedure by viabahn endoprosthesis for difficult conditions in juxtarenal abdominal aortic aneurysm surgery

Sennur Kizilagac, Vusali Kasimovi, Aysen Yaprak Engin, Umit Kahraman, Osman Nuri Tuncer, Serkan Ertugay, Anil Ziya Apaydin, Hakan Posacioglu

Ege University Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Juxtarenal abdominal aortic aneurysm (JAAA) surgery may be challenging when renal arteries have concomitant conditions. In this article, it is aimed to represent a bail-out procedure with Viabahn Endoprosthesis to maintain renal perfusion when EVAR or Chimney procedures could not be performed. Case 1: A 66-year-old woman was diagnosed JAAA. The operation was performed in usual fashion except the right renal artery anastomosis, 500 cc of cold ringer's was used for renal protection. Since the right renal artery was atherosclerotic and dissected, a 6 mm x 5 cm Viabahn Endoprosthesis was placed and proximal end was anastomosed to the aortic graft. Case 2: For a 77-year-old male patient, operation was decided as the aneurysm was juxtarenal and right renal artery already had a bare metal stent. The operation was performed in a regular manner. Renal protection was performed by 500 cc of cold ringer's solution through the renal arteries. Additionally, a new 7mmx 5cm Viabahn Endoprosthesis was placed through the existing stent in the right renal artery. The proximal end of the stent was anastomosed to the dacron graft. Symptoms: No complications were developed in the postoperative period. Postoperative urea/creatinine values reached the maximum progression value on postoperative day 2 in both cases and regression was observed in the postoperative day 3. There was no postoperative decrease in urine output (oliguria/anuria) and no need for dialysis. Both patients were discharged after 1 week of ward follow-up. Control computer tomography angiography imaging performed in both patients after discharge showed that the Viabahn stents were patent and no endoleak was observed. Surgical usage of Viabahn endoprosthesis may become a practical rescuer in difficult conditions and this technique is a feasible bail-out procedure.

Keywords: Juxtarenal aortic aneurysm, bail-out procedure, endoprosthesis, surgery

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PP-243

Sciatic neuropathy following radiofrequency endovenous ablation treatment for varicose veins: A case report and literature review

Yunyi Wang, Victor Bourke

Gosford Hospital, Department of Vascular Surgery, New South Wales, Australia

Abstract

Radiofrequency ablation (RFA) is a minimally invasive modality for the treatment of varicose veins and is associated with a high success rate and fewer postoperative complications than conventional surgery. However, rarely, neuropathy involving the sciatic nerve or its branches, have been reported in the literature in relation to this. These are important to identify as they may be associated with significant injury or disability postoperatively. We report a case of a 38-year-old female who developed right leg numbness day 1 postoperatively after radiofrequency ablation for right long saphenous vein incompetence via below knee vein puncture. On examination, she had a global reduction in ankle dorsi- and plantar flexion and reduced sensation in the heel and dorsum of her right foot. She was subsequently referred to a neurologist for further review and management. A literature search was performed with search terms including 'radiofrequency ablation', 'varicose vein', AND 'sciatic neuropathy' OR, 'neuropathy'. Prompt neurologist follow-up was attained, and investigations commenced. MRI demonstrated increased signal intensity and oedema in the dorsolateral aspect of the sciatic nerve and reported this was likely inflammatory in origin, with no haematoma or evidence of nerve damage. Nerve conduction studies showed slowed rather than absent conduction velocity in the common peroneal and sural nerve suggestive of sciatic nerve involvement proximally. The patient's presentation subsequently improved in time and with physiotherapy. There are only 2 case reports identified in the literature. Both studies describe minimal improvement with conservative or operative intervention. Recommendations included preoperative nerve mapping and implementation of guidelines for dosage and duration of RF exposure to minimise risk. Sciatic neuropathy can be a rare manifestation of post-radiofrequency endovenous ablation and may present with postoperative foot drop. Nerve conduction studies and MRI can be useful in its identification and diagnosis as well as neurological review at follow-up. Care during preoperative planning and intervention is recommended.

Keywords: Radiofrequency ablation, venous incompetence, varicose veins, sciatic, neuropathy

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PP-244

Unusal presentation of ascendan aorta pseudoaneuvrsym artery bypass grefting

Erdem Demirtas, Sadettin Cohcen, Ozgu Ozcan

University of Health Sciences, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

68 years old, male patient who had gone coronary artery bypass surgery (CABG) 7 months earlier presented with bleeding from the mediastinal sternotomy insicion. In his story, there is a sternal repair operation because of sternal detachment after 15 days of CABG operation. Bleeding was in oozing character from an small openning in upper median sternotomy incision. In contrast enhanced toracal tomography, a hematom formation with contrast extravasation from ascending aorta was observed just behind the upper sternum.In convantional anjiography, a pseudoaneursym formation of ascending aorta was corraleted with other findings after 7 months of CABG surgery. A cathater based closure of pseuodo anersym was aimed.

Keywords: Ascendan aorta, coronary artery bypass surgery, pseudoaneuvrsym,

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PP-245

Significant impact of osteomyelitis on wound healing and ambulation after revascularization for chronic limb-threatening ischemia

Yuri Yoshida, Shinsuke Kikuchi, Yuya Tamaru, Tsutomu Doita, Seima Ohira, Takamitsu Tatsukawa, Naoya Kuriyama, Daiki Uchida, Nobuyoshi Azuma

Asahikawa Medical University, Department of Vascular surgery, Asahikawa, Hokkaido, Japan

Abstract

Aim: Evidenced-based revascularization (EBR) is established for the revascularization of chronic limb-threatening ischemia (CLTI) in the Global Vascular Guidelines. However, wound status sometimes postoperatively deteriorated despite of EBR. This study aims to assess whether osteomyelitis of foot bones, a cause of foot infection, could be significant in the deterioration, wound healing, and limb prognosis.

Material and Methods: This is a single-center and retrospective study. Among 304 limbs (241 patients) with tissue loss due to CLTI that were treated between 2014 and 2019, 297 limbs whose limb severity was evaluated after revascularization were included as study subjects. The wound, ischemia, and foot infection clinical stage were evaluated before and after revascularization, and factors related to deterioration of postoperative wound grade were analyzed. Although osteomyelitis was diagnosed using magnetic resonance imaging (MRI), amputated bones were also pathologically evaluated for accurate diagnosis. Clinical impact of osteomyelitis was statistically analyzed in terms of wound status deterioration, wound healing, and ambulatory status after revascularization.

Results: EBR was performed in 90% of limbs. Postoperatively, 285 limbs were found to have improved ischemic grade, which resulted to wound healing reaching to 78% and 98% at 6 and 12 months, respectively. Osteomyelitis developed in 99 limbs, resulting in a number of minor amputations to be significantly required more in cases with osteomyelitis, compared to those cases without osteomyelitis. Based on 126 bone pathological subjects, sensitivity and specificity for MRI to diagnose osteomyelitis was 79% and 39%, respectively. Osteomyelitis significantly delayed wound healing at 3 months after revascularization, compared to those cases without osteomyelitis. The postoperative deterioration of wound grade developed in 128 limbs, which was the strongest negative factor related to wound healing, as with dialysis, wound grade ≥2, foot infection ≥2, and osteomyelitis. Multivariate analysis demonstrated that non-ambulatory status and osteomyelitis were significantly associated with the postoperative wound deterioration. Moreover, recovery of ambulation status was significantly impaired by osteomyelitis at 3 months but was not significant at 12 months after revascularization.

Conclusion: These results showed the significant impact of osteomyelitis in CLTI treatment. It was significantly associated with deterioration of limb severity, wound healing, and recovery of ambulation after revascularization.

Keywords: Chronic limb-threatening ischemia, osteomyelitis, PAD

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PP-246

The importance of multilayer compression bandage systems in the treatment of chronic venous ulcers

Emine Depboylu[1], Fidan Atesgoz[1], Serkan Ergozen[2], Ramina Javed[3], Burak Can Depboylu[3]

[1]Muğla Education and Research Hospital, Chronic Wound Care Unit, Muğla, Türkiye
[2]Muğla Sıtkı Koçman University, Faculty of Medicine, Department of Hyperbaric Oxygen and Underwater Medicine, Muğla, Türkiye
[3]Muğla Sıtkı Koçman University, Faculty of Medicine, Department of Cardiovascular Surgery, Muğla, Türkiye

Abstract

Chronic venous ulcers (CVU) occur due to venous hypertension (VHT) that develops as a result of valve dysfunction in the deep, superficial or perforator veins, obstruction in the deep veins or failure of the calf muscle pump. VHT causes CVU by causing edema, tissue hypoxia, and increased inflammatory response. This condition may be accompanied by lymphatic dysfunction. Although active and/or recovered CVU (CEAP-C5,6) is seen in 1-2% of adult population, its treatment is long, difficult, high-cost and causes serious workforce loss. Compression therapy and chronic wound care, including infection control, debridement to clean necrotic tissue, and the use of appropriate wound products, which are considered to be conservative treatment approaches in CVU treatment, are important part of the treatment. Use of multilayer compression bandage systems (MCBS) together with chronic wound care increase venous return and allow CVU to be treated in shorter time and at lower cost by reducing VHT. Herein, treatment of a patient with infected CVU using chronic wound care and MCBS and subsequent grafting is presented. A 55-year-old male patient was admitted to the outpatient clinic due to an 11x15cm active venous ulcer (C6EPAD,SPR) in medial and antero-lateral region of the left leg. Wound debridement was applied. Due to the delay in wound healing and the growth of pseudomonas aeruginosa in the tissue culture taken 1 week ago, patient was hospitalized and IV antibiotic therapy (ceftazidime 1gr 3x2, colistametate 4500000IU 2x1) and medical treatment was started. During the 21-day hospitalization, debridement and wound care products (Ag-Hydrofiber® wound dressing) were applied to the patient 3 times a week. Left lower extremity was elevated and MCBS (Betaven®) was applied. After 21 days, as the infection disappeared, wound dimensions decreased to 9x13cm, and sufficient granulation tissue was formed, patient was transferred to plastic and reconstructive surgery for grafting. Patient was discharged on the postoperative 10th day with the recommendation of wearing low-pressure compression stockings and medical treatment. The application of MCBS is extremely important in the treatment of CVU. By supporting medical and surgical treatment methods with MCBS, effective, low-cost treatment can be provided in a short time and workforce loss can be prevented.

Keywords: Chronic venous insufficiency, venous stasis ulcer, compression bandage

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PP-247

Unlocking a rare vascular conundrum: Popliteal entrapment syndrome

Ahmet Daylan, Koray Unsal, Onder Turgut Bozkurt, Enver Oguzhan Metehan, Daglar Cansu, Sahin Bozok

İzmir Bakırçay University, Faculty of Medicine, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

Popliteal entrapment syndrome (PES) is a rare vascular disorder characterized by compression of the popliteal artery and/or vein by adjacent musculotendinous structures, leading to a spectrum of symptoms ranging from intermittent claudication to acute limb ischemia. This case report highlights the clinical significance of early diagnosis and appropriate management of this condition. 24 years old male patient without any comorbidities and smoking history presented with severe calf pain and numbness in the lower extremity. Detailed history of patient revealed that he was suffering from recurrent pain and significant decrease in walking distance for couple of months and seeking for medical attention in different medical disciplines. The affected extremity was significantly cold, and capillary refill was prolonged. Additionally, there was no palpable pulse in the popliteal artery and distally. Also ATA and PTA pulse could not be detected with the hand-held Doppler, and consequently, the ankle-brachial-index (ABI) couldn't be measured. A CT angiography confirmed the diagnosis of acute criticial limb ischemia due to PES and popliteal artery aneurysm. This underscores the importance of a high index of suspicion in patients with unexplained lower limb symptoms. Patient was offered emergency revascularization. Popliteal graft interposition and embolectomy in prone position was performed. During surgery it is observed that aneurysmatic popliteal artery was compresses by popliteus muscle in a manner consistent with Type 4 PES and distal vasculature was totally thrombosed. After surgery symptoms were relieved immediately and walking distance is improved significantly. Patient was discharged with 100mg/day ASA on post operative fifth day without any complication and neurological defisit. Both ATA and PTA pulses were palpable and ABI was 1.1 for both lower extremites. The incidence of PES is 0.17%-3.5% of the general population in the United States. 85% of patients are males, with almost 60% of cases occurring in young athletes during the third decade of life. The disease has a bilaterally symptomatic presentation in the 30% of the cases and the Type 4 PES is the rarest subtype among popliteal entrapment syndromes. The presented case highlights the clinical importance of thorough examination of symptoms in unexpected patiens like in this case.

Keywords: Popliteal entrapment, vascular compression, popliteal aneurysm

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PP-248

General anesthesia and local anesthesia methods in carotid endarterectomy cases comparison

Rauf Onder, Cemal Kemaloglu, Salih Ozcobanoglu, Ozan Erbasan, Ilhan Golbasi, Cengiz Turkay, Omer Bayezid

Akdeniz University, Department of Cardiovascular Surgery, Antalya, Türkiye

Abstract

General or local anesthesia for carotid endarterectomy (CEA) has been a debated topic in the literature since the first Cochrane review. The GALA study, the largest study on the subject, showed no difference in patient outcomes – stroke incidence and 30-day mortality after surgery. Carotid endarterectomy seems to be the most effective treatment for severe carotid artery stenosis. There are some gray areas as to whether the surgery should be performed under general anesthesia or under local anesthesia.In our study, we retrospectively reviewed carotid endarterectomy cases performed in our clinic between 2013 and 2023 to compare general and local anesthesia.In our study, there was a statistical difference between local and general anesthesia groups in terms of procedure side lesion (%) ($p=0.027<0.05$). The procedure side lesion (%) of the local anesthesia group was higher than the general anesthesia group. There was no statistical difference between anesthesia groups in terms of oposit side lesion (%) ($p=0.923>0.05$). There was a statistically significant relationship between the surgical method and anesthesia groups ($p=0.016<0.05$). Under local anesthesia, primary repair was performed in 73.5% of the patients, eversion was performed in 11.8%, and patch plasty was performed in 14.7%. Primary repair was performed in 94% of patients under general anesthesia, eversion was performed in 2%, and patch plasty was performed in 4%. In postop control Doppler ultrasonography, procedure side restenosis (%) value was statistically different between local and general anesthesia groups ($p=0.03<0.05$). Procedure side restenosis (%) in postop control doppler ultrasonography of the local anesthesia group was higher than the general anesthesia group.

Keywords: Carotid, endarterectomy, anesthesia general, local

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PP-249

Our experience of thoracic outlet syndrome surgical treatment

Elif Tuzdelen, Nazli Melis Coskun Yucel, Mert Can Dinccag,
Ahmet Aydin, Serkan Uysal, Safak Alpat, Mustafa Yilmaz, Riza Dogan

Hacettepe University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: To share our experience and postoperative results in the surgical treatment of Thoracic Outlet Syndrome. Thoracic Outlet Syndrome (TOS) occurs as a result of compression of upper extremity neurovascular structures in the thoracic outlet region. NTOS due to brachial plexus compression is approximately 90%, VTOS due to subclavian and/or axillary vein compression is approximately 5% and ATOS due to subclavian and/or axillary artery compression is approximately 1%. While the treatment of NTOS is conservative or surgical, the main treatment for ATOS and VTOS is surgery.
Material and Methods: Eleven cases operated with the suprainfraclavicular approach for TOS were retrospectively analyzed.
Results: Between 2014 and 2023, 11 patients were operated for TOS in the Department of Cardiovascular and Thoracic Surgery, Hacettepe University Faculty of Medicine. Of the 11 patients, 7 were female (64%) and 4 were male (36%). The median follow-up age was 31 years (19-64 years). The most common presenting complaints were pain, numbness, tingling and embolism in the upper extremity. 5 patients were evaluated as ATOS, 2 patients as VTOS, 1 patient as ATOS+VTOS, and 3 patients as ATOS+VTOS+NTOS. All patients underwent 1st rib and cervical rib resection via suprainfraclavicular approach. Muscle resection in 5 patients (scalene and subclavian), venolysis in 4 patients, arterial bypass grafting in 4 patients, sympathectomy in 1 patient and patchplasty in 1 patient have done. In the postoperative period, Low-Molecular-Weight Heparin (LMWH) was given early in the treatment of 4 patients who underwent bypass and acetylsalicylic acid (ASA) was given in the maintenance treatment, and in the treatment of 1 patient who underwent graft interposition, Heparin+LMWH+ASA was given early and novel oral anticoagulants (NOAC) was given in the maintenance treatment. No complications and recurrence were observed in the follow-up of the patients until today. There were no perioperative and postoperative deaths.
Conclusion: Suprainfraclavicular approach with resection of the 1st rib and cervical rib, scalene muscle resection and venolysis should be preferred in TOS surgery because of its high success rate, low morbidity and mortality.

Keywords: Thoracic outlet syndrome, suprainfraclavicular approach, rib resection

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PP-250

Fenestrated baloon expendable aortic stent implantation in a patient with aort coarctation acompanied by right aberran subclavien artery

Serenay Ersoy, Onur Buyukcakir, Nur Dikmen, Levent Yazicioglu, Evren Ozcinar, Ali Ihsan Hasde, Mustafa Sirlak, Mustafa Bahadir Inan, Salih Anil Boga

Ankara University, Faculty of Medicine, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Patients with aortic coarctation at the isthmus level accompanied by right aberrant subclavien artery (ARSA) are very scarce at adult population. Aortic coarctation makes up 5 to 7 percent of all congenital cardiovascular malformations. The current treatment modalities are surgery, balloon angioplasty and endovascular stenting. Here we report, an adult female with coarctation of aorta accompanied by ARSA originating distal to aortic interruption and how successfully percutaneous reconstruction with covered stent that fenestrated at the orifice of ARSA was made. A 31-year-old female with coarctation was referred to us with history of hypertension, shortness of breath (NYHA II) for the last year and right arm pain during exercise. There was no claudication. On physical examination, the pulsations in the lower limbs were faint. Routine blood chemistry and urine analysis was normal. Echocardiogram showed a bicuspid aortic valve, left ventricular hypertrophy and 80 mmHg max gradient on descending aorta. A contrast CT angiogram showed a coarctation of the descending aorta at the isthmus narrowing the lumen to 11mm. Also an ARSA was shown originating distal to coarctation. Transcatheter stent implantation inside coarctation and fenestrating the stent at the orifice of ARSA under general anaesthesia was the planned treatment strategy. A 6F-11cm sheath was placed in the right femoral artery via a surgical cut down. A 8F-11cm sheath was placed in the right bracial artery via a surgical cut down. Also an access was employed on left brachial artery for safety. First the 20x37mm BeGraft balloon expandable aortic stent was implanted and it was fenestrated via right brachial access. Than, a 'kissing'12x60mm Advanta balloon expandable stent implanted at the orifice of ARSA. The 3 months follow-up CT imaging has shown that both stents were patent. To our knowledge this is one of the first case reports to show fenestrated aortic stent implantation as a treatment approach to patients with aortic coarctation cooccuring with ARSA. Our attempt is advancing the endovascular approaches for the management of aortic coarctation in adult population, therefore we can avoid morbidity and mortality associated with more invasive procedures.

Keywords: Aort coarctation, aberrant subclavien artery, fenestration, aortic stent

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PP-251

Small saphenous vein insufficiency treatment options and importance of tumescent anesthesia during radiofrequency ablation

Recep Oktay Peker, Mert Can Dinccag, Elif Tuzdelen, Ahmet Aydin, Timucin Sabuncu, Mustafa Yilmaz

Hacettepe University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: SSV reflux is responsible for ~15% of all varicose vein disease. Symptomatic SSVI is a significant problem and can result in severe impairment of quality of life. SSV treatment is considered more challenging and may be associated with nerve injury. We aimed to investigate different treatment options for SSVI and the importance of adequate tumescent anesthesia administration to minimise the nerve injuries.

Material and Methods: 42 patients in our hospital who had SSV RFTA, cyanoacrylate glue closure, SSV ligation and striping surgery between January 2019 to August 2023 were retrospectively recruited to the study. 29 of the patients had single SSV procedure. Totally 13 patients had additional great saphenous vein (GSV) intervention as well. Seven of these GSV procedures were performed on the same leg with parva intervention.

Results: Pain, swelling and tenderness, itching,burning,discoloration of the legs were the main symptoms. The average age of the patients was 49.1 years. We used RFTA alone or in combination with miniflebectomy/sclerotherapy in 30 patients, combined saphenopopliteal junction ligation (SPJL) with RFTA (and miniflebectomy or sclerotherapy) in 4 patients, glue (Venablock) in 4 patients (additional miniphlebectomy in a patient), and SPJL with miniflebectomy in 2 patients, ligation with striping in 2 patients with thrombophlebitis history. In postoperative 7th day control all the patients were cosmetically in good condition. 2 patients had postoperative thrombophlebitis treated with antibiotics and lowmolecularweightheparin (LMWH) use for 6 weeks. 3 patients had edema that resolved with compression therapy and Micronized Purified Flavonoid Fraction (MPFF) use. Paresthesia were seen in two patients who underwent RFTA. One patient had also neuralgic pain started at the postoperative 2nd week and resolved with gabapentins in a month time. Temporary dorsiflexion deficit occurred in one female patient secondary to probable peroneal nerve injury. This patient required physiotherapy and gabapentin use. Symptoms completely healed at 6 months.

Conclusion: Nerve injuries during the SSV procedures were more common than GSV procedures. So interventions to SSV are more challenging. Several authors have described nerve complications after thermal ablation of the SSV related with adjacent nerves. Applying tumescent anesthesia under US guidance may help us to isolate the vein from the adjacent nerve tissue, thus reducing the incidence of nerve injuries during RFTA.

Keywords: Radiofrequency ablation, glue, small saphenous vein, striping, venous insufficiency

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PP-252

Cardiac comorbidities in geriatric patients with chronic venous insufficiency

Sevinc Bayer Erdogan, Osman Murat Bastopcu, Muhammed Ozaydogdu

Dr. Siyami Ersek Thoracic and Cardiovascular Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Geriatric patients differ from the general population in that the incidence of comorbidities are increased. Patients in the geriatric age group present with varicose veins and lower leg edema to the outpatient clinics and a holistic approach is warranted. We investigated the comorbidity profile of geriatric venous insufficiency patients and the association of comorbidities with disease severity according to the CEAP classification.

Material and Methods: Patients aged ≥65 treated in the outpatient clinic with the diagnosis of venous insufficiency between January 2023 and August 2023 were included in the study. Patients with missing records were excluded. Presence of comorbidities, echocardiography results and CEAP classification at outpatient visit were recorded.

Results: The study included 309 patients. The mean age of the patients was 73.3±6.0 years. The rate of any comorbidity was 88.3%. Diabetes mellitus was observed in 60 patients (19.4%), hypertension in 186 (60.2%), coronary artery disease in 87 (28.2%), and atrial fibrillation in 57 (18.4%). Echocardiography revealed left heart failure in 30 (9.7%), right heart failure in 36 (11.7%), pulmonary hypertension in 66 (21.4%), and valvular disease in 78 (25.2%) patients. According to CEAP classification, patients were most commonly CEAP 2 (43.7%). CEAP 4 was more common in patients with atrial fibrillation (10.5% vs 1.2%, p=0.003), CEAP 3 was more common in patients with left ventricular failure (40% vs 22.6%, p=0.031), CEAP 3 was more common in patients with right heart failure (41.7% vs 22%, p=0.013), CEAP 2 was more frequent in patients with pulmonary hypertension (59.1% vs 39.5%, p=0.041) and CEAP 2 was more frequent in patients with valvular disease (57.7% vs 39.0%, p=0.005). In patients with CEAP class 2 or higher symptoms, valvular heart disease (p=0.002) and right heart failure (0.003) were more common.

Conclusion: Comorbidities and cardiac diseases are common in venous insufficiency patients of the geriatric age groups. These patients should be evaluated for cardiac disease including valvular disease and right heart failure, especially if presenting symptoms are CEAP class 2 or higher.

Keywords: Venous insufficiency, geriatrics, comorbidity, cardiac disease

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PP-253

Pulmonary embolism originate from great saphenous vein and crural veins

Pelin Eskin, Ozgur Ozsoy, Muhammet Turhan, Murat Ugur

Prof Dr İlhan Varank Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Pulmonary embolism is a life threatening complication of deep vein thrombosis and should be treated immediately according to its localization affected in the pulmonary bed. In our classical knowledge most dangerous thrombosis for pulmonary embolism are common iliac veins, common femoral veins and deep femoral veins. Since oral anticoagulant treatment is suggested in these thrombosis. In addition catheter-directed treatment procedures are advised for suprainguinal thrombosis. Superficial venous system and below the knee veins, which we ignore the most, might cause pulmonary embolism. A 55-year-old, female patient was hospitalized in the cardiology department due to repeating syncopes. She had no significant medical history. Patient had leg pain, swelling and tenderness for 10 days and she did not mention this problem before. Right ventricular dilatation was revealed in transthoracic echocardiography then CT pulmonary angiography (CTPA) was performed with the suspicion of pulmonary embolism. Bilateral massive pulmonary embolism was shown in CTPA. Bilaterally thrombolytic catheter was deployed into the pulmonary arteries and 3 mg bolus alteplase was done to each artery. Then continuous alteplase infusion with dosage of 0.5 mg/h with each catheter for 24 hours was performed. The patient's oxygen saturation increased to 94 in room air 2 hours after the procedure and the patient fully recovered after catheter-directed thrombolytic treatment. Doppler ultrasonography of the lower extremity veins revealed acute thrombosis of the left great saphenous vein and crural veins. A common belief that the risk of pulmonary embolism originated from thrombosis in the great saphenous vein (GSV) and crural veins is lower in general. In this case we present a rare complication, bilateral massive pulmonary embolism caused by thrombosis in GSV and crural veins. We believe that reporting this type of rare complications are important for those who came across similar practices. As in our case, underestimated veins below the knee and the superficial venous system might cause life threatening pulmonary embolism. Anticoagulant therapy might be used in these types of patients to avoid life-threatening complications.

Keywords: Pulmonary embolism, great saphenous vein trombosis, crural veins trombosis

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PP-254

Progression of a type 3 aortic dissection to type 1 after TEVAR

Ozgur Ozsoy, Pelin Eskin, Muhammet Turhan, Murat Ugur

Prof Dr İlhan Varank Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aortic dissection is an acute life-threatening event and necessitated earlier diagnosis and treatment to avoid further complications. Acute Type 1 and 2 dissection must be treated with surgical approach after the diagnosis. Type 3 should be treated medically for blood pressure regulation, pain control and needed close follow-up for the findings of malperfusion. Also Type 3 dissection might be treated with thoracic endovascular stent graft implantation (TEVAR). Type 3 dissection might be progressed to Type 1 dissection with retrograde migration especially in the patients with unregulated hypertension. Type 1 dissections are life threatening phenomenons. A 55-year-old, male patient admitted to emergency service complaining of sudden back and waist pain. Computerized tomography angiography (CTA) revealed Type 3 aortic dissection with intimal tear just below the subclavian artery. Left renal artery was originated from the false lumen. The patient was hospitalized in the intensive care unit (ICU) for blood pressure regulation and pain control. Due to the malperfusion finding and uncontrolled blood pressure TEVAR was performed to the patient. During the procedure, the proximal landing zone of the stent graft was proximal of the subclavian artery. Six hours after the procedure confusion was developed in the patient. Intimal flap in the arcus aorta was shown in the trans-thoracic echocardiography. Aortic dissection of the arcus aorta was confirmed with CTA. The patient was transferred to urgent operation. Graft implantation to ascending aorta and arcus aorta was done at the operation. Distal anastomosis of the graft was done with including the proximal part of the stent graft and aorta. Close follow-up of the patient is important after the TEVAR procedure to avoid further complications. Retrograde migration of the dissection should be kept in mind in the unexpected clinical findings such as persistent pain, resistant hypertension and neurological findings. Suspicion of retrograde dissection in the changes of clinical condition is helpful for earlier diagnosis and treatment.

Keywords: Aortic dissection, type 1 aortic dissection, type 2 aortic dissection

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PP-255

Clinical results of heart, vascular and lung injuries caused by gunshots and knife wounds

Hasan Attila Keskin

Ankara Etlik Specialization Training and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: A large number of cardiovascular injuries come to the emergency clinic. We would like to evaluate the surgical results of our newly established center.

Material and Methods: Between 2012 and 2023, 111 patients with gunshots and knife wounds were treated in our emergency service.

Results: Out of 111, 11 of them were female (10%), 100 of them where male (90%). Average age of the group is calculated as 31.3 (15-79). 63 (57%) of them were reported as knife wounds, 48 (43%) of them were reported as gunshots. 84 of the patients had peripheral artery injuries, 19 of them had only heart injuries, 4 of them had only injured lung, 3 of them had both lung and heart injuries. Out of 11 patients who have undergo cardiopulmonary resuscitation, 6 of them had cardiac inury, 4 of them had major vascular injury, 1 of them had injury of pulmonary artery and lung injury. Of 22 patients with cardiac injuries, 18 underwent median sternotomy and 4 underwent thoracotomy. There was right ventricle injury in 12 of the patients, left ventricle injury in 10 patients, right atrium injury in 2 patients, left atrium injury in 2 patients, right coronary artery injury in 1 patient, pulmonary artery injury in 1 patient, and ascending aorta injury in 1 patient. Primary repair was performed in 21 patients with heart injury, and CABG was performed with saphenous vein graft to the right coronary artery in a functioning heart in 1 patient. Vascular interposition and end-to-end anastomosis are the most commonly used techniques in the repair of vascular injuries. Throughout patients with peripheral artery injuries, amputation is observed on 3 of them. Early postoperative mortality was observed in 9 (41%) patients with cardiac injury, 3 (4%) in patients with vascular injury, and 2 (15%) in patients with lung injury. Excluding the 6 patients who underwent surgery with cardiopulmonary resuscitation for cardiac injury, the early postoperative mortality of cardiac injuries was 3 (19%).

Conclusion: Surgical mortality and complication rates of vascular and cardiac emergencies caused by gunshots and knife wounds are at an acceptable level.

Keywords: Heartinjury, vascular injury, gunshots and knife wound

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PP-256

Aberrant right subclavian artery: A case of vertebrobasilar insufficiency

Osman Nuri Tuncer, Islam Yalic, Irem Demiray, Umit Kahraman, Ayse Yaprak Engin, Yuksel Atay

Ege University Hospital, Department of Cardiovascular Surgery, İzmir, Türkiye

Abstract

The aberrant right subclavian artery (ARSA) is a rare congenital malformation in which the right subclavian artery arises distal to the left subclavian artery. We present the case of a 73-year-old patient with ARSA who presented at our clinic with vertebrobasilar symptoms. The co-occurrence of these two conditions is much rarer in the literature, and a PubMed search revealed only eight cases before our case. Doppler ultrasonography showed retrograde flow in the vertebral artery. Thoracic computed tomography angiography revealed an aberrant right subclavian artery that was occluded at the origin of the aorta and distally perfused by the right vertebral artery. This condition causes subclavian steal syndrome and vertebrobasilar insufficiency. Given the complex anatomy of this condition, treatment should aim to resolve the symptoms. A supraclavicular incision was made, and carico-subclavian bypass surgery with an 8 mm dacron graft was performed. After surgery, the patient's right arm weakness and vertebrobasilar complaints completely resolved. In conclusion,ARSA is a congenital defect which most commonly results in dysphagia lusoria. Here we have presented a rare case in ARSA which led to subclavian steal syndrome and vertebral basilar symptoms. We also reviewed literature on this rare topic and present our findings. As in our case, surgery was highly effective in relieving the symptoms. Endovascular interventions are also an alternative to open surgery in appropriate cases.

Keywords: Aberrant right subclavian artery, vertebrobasilar insufficiency, subclavian steal syndrome

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PP-257

Common iliac venous aneurysm treated with venous stenting: A case report

Emre Kubat[1], Gokhan Erol[1], Kubilay Karabacak[1], Vedat Yildirim[2], Suat Doganci[1]

[1]Health and Science University, Gülhane Training and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Health and Science University, Gülhane Training and Research Hospital, Department of Anesthesiology, Ankara, Türkiye

Abstract

Aneurysms of the iliac veins are very rare but are potentially fatal due to their potential to cause thromboembolic complications or even rupture. We herein report a case of left common iliac venous aneurysms in a 40-year-old female who presented with left groin pain and bilateral edema. Case presentation: 40-year-old female patient with bilateral edema and left groin pain for 4 years admitted to outpatient clinic. The patient had peoximal deep venous aneurysm history. The CT venography revealed that vena cawa inferior thrombosis and left common iliac vein aneurysm. Total oclusion and iliac venous aneurysm was treated endovascular venous stent implantation. Postoperative period was uneventful. The patient discharged one day after intervention. The CT venography revealed all of the stents were patent and left iliac venous aneurysmatic segment around the stent was found to be thrombosed one year after intervention. We consider that venous stenting may be good alternative for treating the iliac venous aneurysm

Keywords: Aneurysm, stent, iliac vein

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PP-258

Hybrid treatments in same session are effective in patients with coexistence of ipsilateral iliac and femoral artery disease

Emre Kubat, Isil Tasoz Ozdas, Tayfun Ozdem, Muharrem Emre Ozdas, Gokhan Erol, Hakan Kartal, Vedat Yildirim, Kubilay Karabacak

University of Health Sciences, Gülhane Training and Research Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: Hybrid treatments aim to reduce conventional open surgery invasiveness and address multilevel peripheral arterial disease. Herein, the simultaneous hybrid treatments treatment in patients with ipsilateral chronic limb-threatening ischemia is reported.

Material and Methods: Retrospective analysis, for the period from June 2021 to April 2023, of patients presenting multilevel peripheral arterial disease addressed with simultaneous hybrid treatments. The outcomes of these interventions were measured the following metrics: early technical successes (within 30 days following treatment) and late technical successes (30 days or more following treatment) and included mortality, morbidity symptoms recurrence, and amputation. The mean follow-up was 12.6±6.6 months (range: 6-24 month).

Results: 12 patients (mean age: 61+7.62; range 47-73 year) with treated 13 extremities were included the study. Hybrid treatment procedure was consisted of iliac arterial stenting and femoropopliteal bypass in same session. Technical success was 100% without perioperative mortality. Great saphenous vein was used for 10 extremities, PTFE graft was used for 3 extremities during femoropopliteal bypass. One femoropopliteal bypass graft occlusion using a PTFE graft was observed in late postoperative period (7.7%). Amputation was not seen in the study period.

Conclusion: We concluded that hybrid treatments in same session are effective in addressing patients presenting with coexistence of ipsilateral iliac and femoral artery disease. Larger studies with longer-term outcomes are required to validate the hybrid approach, indications, and results.

Keywords: Stent, periferal artery, bypass surgery, hybrid

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PP-259

A rare case: Surgical correction of superior vena cava syndrome

Abdulkadir Bilgic, Burak Toprak

Mersin University, Department of Cardiovascular Surgery, Mersin, Türkiye

Abstract

Superior vena cava syndrome (SVCS) is a potentially life-threatening disease. SVCS revascularization can be achieved by endovascular or surgical reconstructions. In this patient we reported, when endovascular methods were ineffective, bypass was performed with an 8mm PTFE graft from the internal jugular vein to the right atrium, which is a rare technique. A 31-year-old male patient, who had been in the dialysis program with the diagnosis of chronic renal failure for ten years, applied to our clinic with the complaint of swelling on both sides of the face and neck that had been present for 1.5 years. The patient's complaints increased when he was not on dialysis, when he was lying flat in bed, and with excessive fluid intake. On physical examination of the patient, there was edema in the neck and face. There was hyperemia in the patient's conjunctiva and venous collaterals on the anterior thorax wall. In computerized tomography and conventional angiography examinations, it was observed that the right and left subclavian vein and the right and left jugular veins were not visualized. Cross clamps were placed on the distal and proximal parts of the left internal jugular vein and an end-to-side anastomosis was performed using an 8mm PTFE ring graft. For atrial anastomosis, a side clamp was placed to widely cover the right atrial appendage. A PTFE graft was anastomosed to the apex of the right atrium. Polyprolene was used as the suture material. It was determined that the pressure in the internal jugular vein, which was 40 mmHg before the procedure, decreased by 18 mmHg. The patient's complaints improved significantly immediately after the operation. Postoperative CT angiography showed good graft flow. In selected cases with superior vena cava syndrome, vascular reconstruction using appropriate grafts and techniques can be used as an alternative to endovascular interventions. The duration of use of permanent dialysis catheters in patients with chronic renal failure should be kept short, and vascular access should be provided through an AV fistula opened as soon as possible.

Keywords: Superior vena cava syndrome, surgery, correction

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PP-260

Treatment of extracranial internal carotid artery aneurysms

Abdulkadir Bilgic, Burak Toprak

Mersin University, Department of Cardiovascular Surgery, Mersin, Türkiye

Abstract

In this article, we present a real case of CCA who presented with complaints of a pulsatile mass and pain on the left side of the neck, right arm paralysis, and difficulty swallowing. We treated with resection and graft interposition. The aim of this study is to discuss this phenomenon in the light of current literature information. The patient is an 87-year-old hypertensive female patient who has smoked 20 cigarettes/day for 45 years. Firstly, in 2007, with the diagnosis of a mass on the left side of the neck, USG and subsequent left carotid selective angiography revealed a 3x2.5 cm aneurysm in the left carotid interna cervical segment. Cervical CT angiography was urgently requested for the patient who applied to our polyclinic with loss of strength in the right arm twice in the last 7 days and difficulty in swallowing. It was determined that the aneurysm in the internal carotid artery reached 3x4.2 cm in size and its walls were calcified in places. According to the CTA findings, a decrease in the flow in the internal carotid artery was detected due to aneurysm compression. The aneurysm is limited to the SCM at the back, the thyroid cartilage in the front, and the mandible above. It pushed the internal and external carotid arteries medially. It originated from the internal carotid artery 2 cm above the bifurcation. The aneurysm was resected without shunting, the sac was clean, continuity was ensured with a 6 mm PTFE graft. The patient had an uneventful postoperative period and was discharged 3 days later. In the light of the above information, it would be appropriate to decide on CAA treatment according to the type of aneurysm, its location, comorbid factors and the surgeon's experience. In our case, we preferred surgical treatment due to the size of the left carotid aneurysm and acute neurological deficit. The decision to use open surgery was based on low surgical risk and accessible anatomy.

Keywords: Extracranial internal carotid artery, aneurysm, surgical treatment

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PP-261

Endovascular approach to penetrating subclavian artery trauma

Seymur Kerimoglu, Levent Ceylan, Muhammet Turhan, Ozgur Ozsoy

Sancaktepe Şehit Prof. Dr. İlhan Varank Training and Research Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Subclavian artery traumas are one of the major vascular traumas that have high mortality and morbidity rate if goes untreated. Due to the anatomical location of subclavian artery, surgical interventions are uneasy. As Sancaktepe Şehit Prof.Dr. İlhan Varank Training and Research Hospital we posses surgical and endovascular approaches to vascular traumas. In this study we cover endovascular approach to subclavian artery trauma due to stabbing. A 29 years old male patient applied to the emergency service with a left supraclavicular stab wound. Approximately 4 cm of stab wound was observed with around 5 cm depth. The patient was in stable condition showing no signs of massive blood loss such as tachycardia or hypotension. Since active bleeding on wound site was observed, immidiate CT Angiography was taken showing an extravasation on mid-segment of subclavian artery. With the judgement of surgical team, the desicion was concluded in favor of endovascular approach. Patient was taken to angiography unit. Left brachial artery is cannulated under local anesthesia. Catheter was delivered to subclavian artery. Extravasation was observed on the distal segment of IMA, Vertebral artery and Thyrocervial trunk. 7x40mm and 8x40 mm stent grafts were placed. Balloon dilatation was applied. No extravasation was observed. Operation was completed successfully. Patient was discharged after 2 days of ICU follow up. Clopidogrel and ASA consumption was recommended for at least 6 months. Endovascular approach can be considered as a treatment option on various major vascular traumas. Over the last years endovascular approach has eased the treatment of complicated vascular traumas giving the surgical team a chance to commit maximal efficiency in minimal time. In endovascular approaches; as a complication we may observe acute thrombosis or migration on stent grafts. To minimalize the risk of acute thrombosis, patients are followed with antiaggregant medications.

Keywords: Subclavian artery, stent graft, penetrating trauma, endovascular, vascular trauma

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PP-262

Rate of venous insufficiency development in medical treatment and percutaneous thrombectomy treatment applied to patients diagnosed with deep vein thrombosis

Tarik Tastekin, Aykut Sahin, Emrah Sisli, Gurkan Demirdizen

Eskişehir Osmangazi University, Faculty of Medicine, Department of Cardiovascular Surgery, Eskişehir, Türkiye

Abstract

Aim: Deep vein thrombosis (DVT) is a clinical condition characterized by the formation of thrombus in the deep venous system as a result of risk factors such as stasis, endothelial damage and hypercoagulability. In addition to serious complications such as pulmonary embolism, late-term consequences may include venous insufficiency due to valve damage and intravascular scarring associated with post-thrombotic syndrome. Early mechanical removal of the intravascular thrombus reduces the risk of developing chronic venous insufficiency attributed to valve damage caused by the thrombus. However, it important to note that mechanical thrombectomy during the procedure can potentially disrupt venous valve integrity of the venous valves, causing venous insufficiency. In this study, we aimed to investigate the differences in the long-term development of venous insufficiency resulting from medical treatment and mechanical thrombectomy in patients diagnosed with deep vein thrombosis in our clinic.

Material and Methods: Our study included 20 patients who were diagnosed with deep vein thrombosis extending to the iliofemoral vein and received medical treatment and 20 patients who underwent percutaneous thrombectomy in our clinic between January 2020 and September 2022.Patients who developed new thrombosis or whose patency was less than 80% on Doppler ultrasonography at the 6th follow-up were excluded from the study. Doppler ultrasonography results were compared with clinical examination findings at 6-month follow-up.

Results: In addition to serious complications such as deep vein thrombosis and pulmonary embolism that result in mortality, it can also cause post-thrombotic syndrome, which negatively affects the quality of life of patients due to the damage of the thrombus material to the venous valves. Although there is a possibility of venous valve damage during percutaneous thrombectomy due to trauma, early thrombus removal significantly reduces the development of post-thrombotic syndrome. In our study, we found no significant difference in the rate of chronic venous insufficiency between patients treated with percutaneous mechanical thrombectomy and those who received medical therapy. Therefore, we believe that pharmacomechanical thrombectomy has a minimal impact on the development of venous insufficiency and can be safely utilized.

Keywords: Deep venous insufficiency, deep vein thrombosis, percutaneous thrombectomy

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PP-263

A new method of vascular tissue decellullarization based on formaldehyde and hexane

Igor Kozin[1], Larisa Volova[1], Tatiana Kozina[1], Pavel Timchenko[2], Elena Timchenko[2], Roman Skidanov[2]

[1]Samara State Medical University, Samara, Russia
[2]Samara National Research University, Samara, Russia

Abstract

Aim: A variety of decellularization techniques have been described and used to achieve effective immunogenic agent removal from a developed vascular scaffold. Although several decellularized vascular grafts are currently on the market, clinical outcomes are still poor due to graft-associated thrombosis, infection, and aneurysm. Given the increasing number of cardiovascular procedures in the world it is necessary to improve existing grafts and look for new methods for scaffolds development.

Material and Methods: Two human thoracic aortas were harvested from cadaveric material and decellularized with 1% formaldehyde and hexane pure for analysis. Hematoxylin-Eosin staining and Raman spectroscopy were used to confirm complete decellularization. For an in vivo experiment two grafts from human saphenous veins were decellularized using the same protocol. Afterwards they were implanted in two Flemish Giant rabbits in the abdominal aorta position. A grafts patency was assessed with contrast computer tomography. A Doppler ultrasound was used to measure velocity characteristics of blood flow through the conduits. On days 14 and 28 grafts were harvested. Hematoxylin-eosin staining and light microscopy were used to estimate cell repopulation of decellularized implants.

Results: Hematoxylin-eosin staining of the aortas after decellularization demonstrated a complete elimination of cell nuclei. Analysis of the Raman spectra revealed a decrease in the intensity peak specific for deoxyribonucleic acid. All animals survived after surgeries. CT and ultrasound showed good patency of the grafts. The mean peak systolic velocity in the first third of the conduits was 122±13 cm/sec and the blood flow rate - 100±3 ml/min. After the 14th and 28th days of implantation we observed cell recellularization of the decellularized extracellular matrix and the formation of neointima on the histological images. At the 14th day the infiltration of immune cells outside of the graft persisted and at the 25th day no prolonged inflammation was observed.

Conclusion: A new method of aortic implants decellularization with formaldehyde and hexane application makes it possible to achieve a complete elimination of cellular and nuclear contents. The small animal model demonstrated the adequate patency of the grafts, consistent cell repopulation of the extracellular matrix and absence of the hyperinflammatory immune response in a short-term period.

Keywords: Tissue engineered vascular grafts, decellularization, vascular implants, decellularized aortic scaffolds

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PP-264

Early and mid-term results of endovascular reconstructive treatment of aorto-iliac occlusive disease with covered stents

Ali Fuat Karacuha[1], Ahmet Kayan[2], Emre Sen[3], Yusuf Corbacioglu[3], Mehmet Cahit Saricaoglu[3], Nur Dikmen[3], Ali Ihsan Hasde[3], Cagdas Baran[3], Evren Ozcinar[3], Mustafa Bahadir Inan[3], Mustafa Sirlak[3], Levent Yazicioglu[3]

[1]Trabzon Kanuni Training and Research Hospital, Department of Cardiovascular Surgery, Trabzon, Türkiye
[2]Kırıkkale High Specialization Hospital, Department of Cardiovascular Surgery, Kırıkkale, Türkiye
[3]Ankara University, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aorto iliac occlusive disease (AOD), characterized by symptoms of claudication, impotence and absence of femoral pulses, has been one of the main areas of interest in vascular surgery due to its serious mortality and morbidity rates. Over the years, as innovations in graft technology, radiologic advances and experience in endovascular intervention have increased, new surgical techniques requiring more complex treatment procedures have been developed, and hybrid interventions and endovascular treatment have become available. Surgical approach with aorto bifemoral graft or endarterectomy has been the first-line treatment for AOD with patency rates of up to 90%. However, this procedure has an early mortality rate of 4%. In the appropriate patient group, the technique of Endovascular Reconstruction of Aortic Bifurcation with Covered Stent (CERAB), a minimally invasive treatment approach with high long-term patency rates and lower morbidity and mortality compared to the open surgical approach, developed by Goverde et al. can be applied. This technique uses three balloon expandable covered stents to reconstruct the aortic bifurcation. Recent studies show a technical success rate of over 90% for CERAB with an annual patency of 87% and 90% for TASC II C lesions and TASC II D lesions, respectively, with a shorter hospital stay compared with aorto bifemoral graft and endarterectomy. We evaluated the early and mid-term results of patients who underwent CERAB technique in our clinic between 2020 and 2021. For TASC II C and D patients, the CERAB technique was shown to be safe and feasible with a 2-year primary patency rate of 81.8%, avoiding the open surgical approach and higher perioperative complication rate. Our results correlate with the primary patency rates of similar international studies. Today, we treat many patients with aorto iliac occlusive disease with CERAB in our clinic. Our experience in this field is increasing with the increasing number of CERAB procedures and endovascular interventions in complex aorto iliac diseases.The CERAB technique is an endovascular approach for reconstruction of the aortic bifurcation in patients with AOD with early and mid-term results that appear to be safe and feasible. However, long-term, multicenter, prospective studies comparing it with open surgery are needed.

Keywords: Endovascular reconstruction of aortic bifurcation with covered stent, CERAB, aorto iliac occlusive disease

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PP-265

Crush syndrome with upper extremity injuries

Cagla Canbay Sarilar, Muhammed Emir Sahin, Gulchin Nabiyeva, Nilgün Bozbuga, Ibrahim Ufuk Alpagut

İstanbul University, Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Brachial artery is the most commonly injured vessel in the upper extremity. Upper extremity crush syndromes are the systemic result of soft tissue injury and compartment syndrome. It is characterised by myoglobulinemia, myoglobulinuria, acidosis, hyperkalemia, cardiac arrhythmia, renal failure, hypovolemic shock and may be fatal. In our clinic, 14 patients with upper extremity crush injuries who were surgically revascularised between 2018 and 2023 were enrolled. 1 of them was a 5 year old pediatric patient and the brachial artery was repaired primarily. 13 patients underwent saphenous vein interposition to the brachial artery. 2 of the 14 patients developed acute renal failure due to crush syndrome and required haemodialysis. 1 patient died due to septic shock after haemodialysis requirement and development of infection in large tissue defect. 13 patients were discharged with palpable distal pulses.

Keywords: Crush syndrome, brachial artery injury, saphenous vein interposition

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PP-266

Early term results of concurrently femoral artery endarterectomy with embolectomy in acute lower extremity ischemia

Ufuk Sayar

Health Sciences University, Trabzon Ahi Evren Thoracic Cardiovascular Surgery Health Application and Research Center, Trabzon, Türkiye

Abstract

Aim: The purpose of this study was to evaluate the early term results of concurrently femoral artery endarterectomy with embolectomy because of acute lower extremity ischemia.

Material and Methods: From July 2017 to December 2022, concurrently femoral endarterectomy with embolectomy performed in 10 patients because of acute lower extremity ischemia. Femoral endarterectomies were common femoral artery and superficial femoral artery (n:4); common and superficial and profunda femoral artery (n:3); only common femoral artery (n:2); only superficial femoral artery (n:1).

Results: Avarage age was 79.4±10.4. There were 5 male and 5 female. The embolectomy catheter could be passed down an average of 41.5±25.9cm from the proximal to the distal superficial femoral artery in nine patient. It couldn't passed down in one patient because of superficial femoral artery ostium totally occluded. Average femoral endarterectomy lenght was 4±1.2 cm from common femoral artery to superficial femoral artery. Preoperative neurological disfunction of the lower extremity (drop foot) was 60% (10/6). All of them resolved postoperatively. Compartment syndrome because of reperfusion injury was 10% (10/1). The in-hospital early mortality and lower extremity amputation was 10% (10/1). Late mortality due to comorbidities other than lower extremity vascular diseases was 60% (10/6).

Conclusion: While embolectomy is performed for acute lower extremity ischemia, endarterectomy may be required for severely atherosclerotic femoral artery. Early results are satisfactory.

Keywords: Femoral, embolectomy, endarterectomy

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PP-267

CT angiographic follow-up of the clinical course of pediatric and adult patients with crush syndrome after the 6 -February 2023 earthquake

Cagla Canbay Sarilar, Ilke Keles, Merve Dogru, Mehmet Sertac Cicek, Ibrahim Ufuk Alpagut, Nilgun Bozbuga

Istanbul University, Faculty of Medicine, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

n February 6, two major earthquakes of magnitude 7.8 and 7.7 occurred and more than 50,000 deaths were reported. Immediately after the earthquake, cases of crush syndrome with various imaging findings were referred to major tertiary hospitals. Crush syndrome is characterised by hypovolemia, hyperkalaemia and myoglobinuria and may be mortal due to the victims being under debris for days. A total of 34 earthquake victims were referred to our hospital with a prediagnosis of crush syndrome and 14 of them were pediatric patients. Two 13-year-old male patients required urgent haemodialysis because of acute tubular necrosis due to crush syndrome. The creatinine values of the other patients were within normal limits. Contrast-enhanced computed tomography angiography performed for limb crush syndrome showed limb edema and arteriovenous fistula-like pathologies that disrupted microcirculation due to increased capillary permeability. In patients without elevated creatinine, evaluation of microcirculation by computed tomography angiography should be considered in terms of clinical course, hyperbaric oxygen therapy requirement and surgical treatment protocol.

Keywords: Earthquake, crush syndrome, computed tomography angiography

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PP-268

Our clinical experience in the management of COVID-19-related arterial thrombosis with acute limb ischemia

Anıl Ozen[1], Alp Yildirim[1], Enis Burak Gul[1], Gorkem Yigit[2], Metin Yilmaz[3], Hakki Zafer Iscan[1]

[1]Ankara City Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye
[2]Hitit University Erol Olçok Education and Research Hospital, Department of Cardiovascular Surgery, Çorum, Türkiye
[3]VM Medicalpark Hospital, Department of Cardiovascular Surgery, Ankara, Türkiye

Abstract

Aim: It has been reported that COVID-19 infection predisposes to arterial and venous thrombosis resulting in morbidity and mortality. The aim of this study was to report our clinical experience regarding the surgical management and perioperative treatment strategy of patients who presented to our clinic or were consulted with COVID-19 associated acute limb ischemia (ALI).

Material and Methods: This retrospective observational single-center study was conducted at the Ankara City Hospital, between January 2020 and April 2021. A total of 40 patients aged 67.2±16.9 years were included in the study. All the patients suffering from mild to severe COVID-19 infection and presenting with acute limb ischemia were diagnosed and managed. The primary outcomes of the study were. freedom from reocclusion, freedom from amputation, ALI related early-late term survival, absence of early reocclusion (<30 day), forefoot ischemia, major amputation and death <24 hours post operatively. Secondary outcomes were postoperative complications.

Results: The mean age was 67.2±16.9 years. There was a significant relationship between early mortality and main femoral artery involvement (p=0.046). There was also a significant relationship between early mortality and COVID-19 PCR test (p=0.013). Early mortality was observed in 100% of those who had been intubated. Age and median fibrinogen levels of the group with late mortality were significantly higher than the group without late mortality (p values of 0.014 and 0.021, respectively). The median fibrinogen levels of those with amputation was found to be significantly higher than those without amputation (p=0.048). Eleven patients included in the study died in the early period (27.5%) where as five died in the late period (12.5%). Amputation was performed in 3 patients (7.5%) and complications developed in 7 patients (17.5%).

Conclusion: According to the results of this study, in patients with COVID-19 and owing to the hypercoagulable state, surgical intervention for ALI might be difficult and more challenging than anticipated. Cardiovascular surgeons and physicians should be aware of the benefits of extended pre and postoperative anticoagulant administration.

Keywords: COVID-19, thrombectomy, acute limb ischemia, arterial thrombosis, embolectomy

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PP-269

Role of coronary angiography prior to interventions for abdominal aortic aneurysm and aortoiliac occlusive disease

Osman Murat Bastopcu, Kagan Usca, Busra Ongun

Dr. Siyami Ersek Thoracic and Cardiovascular Research and Training Hospital, Department of Cardiovascular Surgery, İstanbul, Türkiye

Abstract

Aim: Patients undergoing abdominal aortic surgery share many of the risk factors for coronary artery disease. The benefits of performing coronary angiography prior to surgical or endovascular interventions for abdominal aortic diseases is open to question, especially in the EVAR era. In this study, we investigated the importance of coronary angiography prior to surgical or endovascular treatment in patients electively treated for abdominal aortic aneurysm (AAA) or prior to surgery for aortoiliac occlusive disease (AOD).

Material and Methods: Patients who underwent surgery for AAA or AOD and EVAR for AAA between 2018 and 2023 in a single referral center were retrospectively included. Patient demographics and coronary angiography (CAG) status and postoperative outcomes were recorded. Patients with AAA and AOD were analyzed separately.

Results: During the study period, 304 patients underwent elective treatment for abdominal aortic disease. 160 patients (52.6%) were treated for AAA and 144 (47.4%) were operated for AOD. 218 (66.9%) patients underwent CAG prior to intervention. Three vessel disease was present in 27 (21.6%) of aneurysm patients and 14 (15.1%) of AOD patients. Critical stenosis in at least one vessel was present in 66 (52.8%) of AAA and in 46.2% of AOD patients. Among patients operated for AAA, all-cause mortality was higher (26.7% vs 7.1%, p=0.048) in patients without CAG. An insignificant increase was observed in mortality among EVAR patients without CAG. In AOD, but not in AAA patients, history of percutaneous coronary intervention was associated with a higher likelihood of severe coronary stenosis requiring intervention (78.6% vs 40.5, p=0.008), increased age and male gender were associated with the presence of coronary artery disease of any severity (p=0.018, p=0.045), and diabetes was associated with increased likelihood of coronary stenosis requiring PCI or CABG (p=0.039). Hypertension was associated with coronary stenosis requiring intervention among AAA patients (p=0.045). Among patients operated for AAA, patients without CAG had higher APACHE scores on the postoperative day (p=0.026).

Conclusion: Even in the endovascular era, AAA and AOD patients may benefit from coronary imaging prior to surgical or endovascular intervention. Male patients with older age, diabetes, and hypertension may benefit most from CAG prior to intervention.

Keywords: Abdominal aortic aneurysm, vascular surgery, coronary angiography, outcome assessment

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PP-270

Investigation of common genes related to each other in vascular disease types

Cagla Canbay Sarilar[1], Gozde Oztan[2], Fatma Savran Oguz[2], Halim Issever[3], Ibrahim Ufuk Alpagut[1], Nilgun Bozbuga[1]

[1]İstanbul University, Department of Cardiovascular Surgery, İstanbul, Türkiye
[2]İstanbul University, Department of Medical Biology, İstanbul, Türkiye
[3]İstanbul University, Department of Public Health, İstanbul, Türkiye

Abstract

Aim: Types of vascular diseases include peripheral artery disease, carotid artery disease, venous disease, blood clots, aortic aneurysm, fibromuscular dysplasia, lymphedema, and vasculitis.The aim is to reveal the pathogenesis of vascular diseases by identifying genes that have common functions in these three types of vascular diseases: lymphedema, aortic aneurysm, and vasculitis, through bioinformatics databases.Genes associated with lymphedema, aortic aneurysm, and vasculitis were identified through the JensenLab Diseases database. Then, using the Bioinformatics & Evolutionary Genomics database, common genes associated with lymphedema, aortic aneurysm and vasculitis diseases were determined with a Venn diagram.Through the JensenLab Diseases database, 295 genes associated with aortic aneurysm (z score: ≥3), 133 genes associated with lymphedema (z score: ≥3), and 610 genes associated with vasculitis (z score: ≥3) were found.Then, 37 genes common to these three diseases (ITGAM, CD34, IGF1, KDR PECAM1, CD4, IL10, FGF7, IL2, IFNG, IL4, FGF2, ICAM1, FGF18, FGF6, CRP, FGF5 CXCL8, FN1, IL17A, MTOR, VCAM1, TP53, TNF, EGF, IL1A, AKT1, CD8A, IL1B, VWF ALB, TGFB1, IL13, CDH5, IL6, CSF2, PTPRC) were detected. We found 37 genes that were linked to lymphedema, aortic aneurysms, and vasculitis. PECAM1 function is important for making lymphatic vessels.It can be said that PECAM1 may be associated with sensitivity to lymphedema. A maladaptive immune response characterized by in situ activation of CD4+T cells is what causes vascular lesion formation.It is conceivable that CD34+cells can be used as a biomarker for risk stratification or as a potential therapy for aortic aneurysm.Treatment with IL-10 can reduce inflammation in aneurysm tissue by activating M2 macrophages and changing the production of Th1/Th2 cytokines.CDH5, expressed by endothelial cells, is a cadherin that plays a role in vascular morphogenesis and the maintenance of vascular integrity and lymphatic function. Therefore, it can be said that CDH5 may be a new gene that can be investigated in lymphedema patients. As a result, the common gene data we obtained regarding these three diseases may be helpful in elucidating the pathogenesis of these vascular diseases and planning treatment processes.

Keywords: Vascular diseases, lymphedema, aortic aneurysm, vasculitis, databases

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PP-271

Approach to life satisfaction of individuals after cardiovascular surgery

Gulcan Kendirkiran[1], Seda Nur Sungur[2]

[1]Haliç University, Faculty of Health Sciences, Department of Nursing, İstanbul, Türkiye
[2]Koç University Hospital, Operating Room, İstanbul, Türkiye

Abstract

Aim: This study was carried out in a descriptive and cross-sectional design to determine the approach to life satisfaction of individuals after cardiovascular surgery.

Material and Methods: The research covers the dates between 26.06.2023 and 10.09.2023 at XX University Hospital, and the data of the study were collected face to face between 10.07.2023 and 31.08.2023, following the approval of the ethics committee and the institution. While the population of the research consists of 70 patients hospitalized for cardiovascular surgery in XX University Hospital, the sample is; The population consisted of 59 patients, whose population was calculated with the known sampling method. Data were collected with the Personal Information Form and Adult Life Satisfaction Scale.

Results: The mean age of the subjects in the study was 53.32±12.94 (years), 52.5% were female, 67.8% were married, 83.1% had planned surgery, 32.3% bypass It was determined that 79.7% of them had surgery and stayed in the intensive care unit for 1 day. The general life satisfaction and self-satisfaction sub-score averages of those who underwent emergency surgery, and the average of self-satisfaction, job satisfaction, and HLS-total scores of those who had by-pass surgery were statistically significantly higher ($p<0.05$). There was a positive significant relationship between general life satisfaction and relationship satisfaction (moderate), self-satisfaction (poor), job satisfaction (poor), and HLSS-Total (high degree); A positive and statistically significant relationship was found between relationship satisfaction and self-satisfaction (moderate), satisfaction with social environment (poor), job satisfaction (poor), and HLS-Total (high degree) ($p<0.05$).

Conclusion: As the general life satisfaction of individuals increases, relationship satisfaction, self-satisfaction, job satisfaction, and life satisfaction will increase. Cardiovascular diseases and related surgical processes can create fear, anxiety, and stress for patients. These negative feelings can sometimes strengthen the individual's life satisfaction, and sometimes weaken it. Awareness can be created and individuals can be directed to social activities so that individuals who come to the operation process can experience life satisfaction after the operation.

Keywords: Patient, heart surgery, cardiovascular surgery, life satisfaction