

## Seeking solutions for arteriovenous fistula formation for hemodialysis

Hemodiyaliz için arteriyovenöz fistül oluşturulmasında çözüm arayışları

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We read the article with great interest by Kocaaslan et al.<sup>[1]</sup> titled “Comparison of the mid-term results of proximal and distal radiocephalic arteriovenous fistulas created for hemodialysis” published in the Issue 3/2018 of the journal. Congratulations to the authors for this article.

As it is known, long-term patency, the optimal blood flow of the arteriovenous fistula (AVF) is of utmost importance and necessary to provide optimum benefit to the patient regarding several complications such as ischemic steal syndrome, high flow rate, and heart failure.<sup>[2-4]</sup> The most commonly used anatomical localizations for AVF in patients with chronic renal failure (CRF) are distal/proximal radiocephalic or brachiocephalic AVFs in the upper extremities. In these patients, due to the facilitating factors such as advanced age, diabetes mellitus, hypertension, dyslipidemia, metabolic syndrome and smoking, there is often an inappropriate vessel bed/quality. Radial artery pulse due to radial artery atherosclerosis may not be detected in physical examination. In patients with CRF, when the radial artery is atherosclerotic, it is difficult to perform AVF with sufficient flow rate in the forearm. In this case, the radial artery blood flow may need to be corrected first. To solve this problem, we first establish brachioradial bypass using a saphenous graft to the radial artery and, then, a graft-cephalic fistula (GSF) between the graft and the cephalic vein. Thus, we continue the AVF chance on the forearm and to delay the brachial AVF

procedure in the future. I believe that, if the distal cephalic vein is distorted or postflebitic in the forearm of patients with chronic hemodialysis due to CRF, or if there is an atherosclerotic condition in the radial artery, this method has some advantages. Since the cephalic vein is located on the lateral side of the arm, complications related to the brachial artery puncture are less common in the radiocephalic AVF, compared to AVFs using the basilica vein. When GSF is performed between the brachioradial bypass graft and cephalic vein in cases where the distal of the cephalic vein cannot be used (i.e., thrombophlebitis), the dorsiflexion of the elbow would not affect the fistula, as the elbow joint is expected to remain proximal. I also consider that ischemic steal syndrome would be less seen in the forearm using this technique. Due to the brachioradial artery bypass, the radial artery increases blood flow and the fistula is distal to the brachial artery.<sup>[4]</sup>

In conclusion, I believe that this method is applicable and that detailed research on such an important subject would be useful.

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