

REPLY

Dear Editor,

I read with interest the comments made by Drs. Tokgoz and Sert. I agree that wrist arterio-venous fistula (wAVF) has a high rate of early failure, but the failure rate varies widely in the literature where it is reported to be between 12 and 71% (1).

One of the reasons for such an outcome disparity is surgeon policy in the use of sub-optimal vessels to preserve more proximal veins. We analyzed our data to find a trade-off between 2 suitable objectives, one aiming to achieve a greater early success rate, and the other, a higher number of patients with wrist fistula. We based our study on the practice of 2 surgeons with different background training. The 1-year failure rate was 12 and 27%, and the proportion of wAVF was 18 and 52%, respectively, in the 2 groups (2). Given the results, there is a slight benefit to a strategy aimed at maximizing wAVF creation. I agree that early failure of wAVF could also be due to poor surgical technique. Stenosis of the initial post-anastomotic segment and inadequate curvature of the vein may yield to venous kinking. Careful attention should be paid when constructing the anastomosis by performing small dissection of the vein to avoid post-surgical fibrosis.

When creating a wrist AVF, we usually produce side-to-side anastomosis. The vein is then ligated and transected distal to the anastomosis. We often dilate the anastomosis, the draining vein as well as the artery when a vascular spasm is present through the stump of the vein. These manoeuvres help to reduce early failure. We also, as suggested by the authors, undertake vascular mapping of arm vessels to select the best AVF option pre-operatively according to vascular anatomy. Venous anatomy is the determinant of vascular access selection.

Dialysis Outcome Quality Initiative (DOQI) guidelines recommend the placement of natural AVF more than prosthetic grafts. Wrist access has been selected as the best AVF option by the panel of experts who reviewed more than 3,000 related articles (3). When a wrist AVF is not feasible, the upper arm fistula (UAF) seems to be the second option, as suggested by DOQI guidelines. This type of access is simple to create and has a high success rate. Multiple surgical techniques for UAF have been described. One involves a venous bridge between the cephalic vein and the artery (4). The other uses direct anastomosis between the cephalic vein and the brachial/radial artery. In the latter, anastomosis between the vein and the artery can be done either side-to-side or end-to-side. The choice of the

method depends on surgeon experience and patient anatomy. UAF has a good patency rate. As reported in our paper, the 1-year mean success rate of UAF is 80%. However, patient demographics may account for the discrepancy in vascular access outcomes seen in different countries (5).

The technique of radial transposition described by Drs. Tokgoz and Sert is a variation of a UAF. It consists of extensive dissection of the radial artery for use in the elbow. We usually limit our dissection of the artery. Large dissection of the artery in the forearm may jeopardize arterial inflow to the extremity. If the objective is to use the cephalic vein in the upper arm, brachial or radial arteries are easily accessible in the elbow. Indeed, venous anatomy is the Achilles heel when creating an AVF, not arterial characteristics.

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