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Regarding “Side-to-side arteriovenous fistula at the elbow with perforating vein ligation”

We compliment Dr Majid Moini et al for the excellent results in their recent report, “Side-to-side arteriovenous fistula at the wrist with perforating vein ligation,” published in the Journal of Vascular Surgery. They referenced a publication from our surgical group of similar dialysis access procedures using the proximal radial artery. The authors stated, “He (Jennings) did not occlude the perforator vein.” This is not an accurate description of our surgical technique.

In an earlier report of these operations (and referenced in our paper), we described proximal radial artery arteriovenous fistulas (AVFs) and stated: “If the perforating vein was not used for an anastomosis, it was ligated to maximize flow into the superficial venous system.”

We agree with Dr Moini et al that attending to the perforating vein (deep communicating vein) is an important element of vascular access procedures in this location. We often use the perforating vein in an end-to-side anastomosis (thereby disconnecting it from the deep venous system). This is particularly useful and often necessary in obese patients where a side-to-side anastomosis is not possible and adequate vein quality and length will not otherwise reach the inflow artery. In the article that Dr Moini referenced, we stated:

The deep communicating vein, median antecubital vein, median cephalic vein or other vein was utilized for venous outflow with end-to-side anastomosis in the remaining 39 (37.2%) operations. Creating an AV fistula at the proximal radial artery site allows the surgeon to consider ligation of major side channels such as an unused deep communicating vein or the median cubital vein. Preventing outflow into non-dialysis venous channels may lead to earlier maturation of the fistula.

When the deep communicating vein is not used for an end-to-side anastomosis, we agree it should almost always be ligated. The few exceptions are when the superficial venous system is poor and all branches are left open to maintain AVF patency until one outflow path matures, becomes functional by interventional techniques, or requires a staged AV fistula transposition. The decision for intervention or staged transposition is generally made within 4 to 6 weeks.

My colleagues and I believe that these AVFs are generally simple and particularly safe when inflow is provided by the proximal radial artery. We believe that the deep communicating vein offers an opportunity for an end-to-side anastomosis when necessary and in most cases should be ligated if not used for that purpose.

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REFERENCES
2. Jennings WC. Creating arteriovenous fistulas in 132 consecutive patients: exploiting the proximal radial artery arteriovenous fistula: reliable,
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Reply

We thank Dr. Jennings for supporting the concept of perforating vein ligation for A-V fistulas at the elbow. It was not clear in his latest publication (Arch Surg 2006) that using the perforating vein for a direct anastomosis or ligating it when this could not be done was part of every elbow fistula operation. We regret that we did not reference his earlier paper where he advocates the use of the same principles we reported with splendid results.

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