LETTERS TO THE EDITOR

Stepwise Attempts on the Forearm Protect Against Exhaustion of Vascular Access Options

To the Editor:

We read with interest the article from Pisoni et al focused on international differences in the location and use of arteriovenous accesses for hemodialysis. The large shift from predominantly lower- to upper-arm arteriovenous fistula (AVF) creation in the United States raises the question of whether this may place patients at greater risk for exhausting available sites for future AVF creation if needed. Our view is that the longest patient survival without loss of vascular access options, not primary patency, should be the priority. Despite most AVFs in our patients already being located in the forearm, we introduced anatomic snuffbox AVF as the first AVF option in October 2012. Contrary to Siracuse et al, who performed radiocephalic fistulas in only 4.5% of patients, from January 2016 to September 2017, of 316 AVFs, we created 88 (27.8%) at the snuffbox, 144 (45.6%) in distal, 56 (17.7%) in middle, and 17 (5.4%) in proximal parts of the forearm. Only 9 (2.8%) originated from a brachial artery. An upper-arm AVF is considered only if vessels at the snuffbox and 4 areas of the forearm (low and high wrist, middle, and proximal) are not suitable. Stepwise AVF creation attempts on the forearm protect against exhaustion of vascular access options.

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References


In Reply to ‘Stepwise Attempts on the Forearm Protect Against Exhaustion of Vascular Access Options’

We appreciate the letter from Letachowicz et al regarding our article. The experiences and perspectives they share provide excellent examples of how the majority of first arteriovenous fistulas (AVFs) created can successfully occur at either the snuffbox or 4 areas of the forearm, as they have accomplished for 97% of their patients. Similar efforts to increase lower-arm AVFs are occurring at some US centers.

As Letachowicz et al mention, we raised concerns about the large US shift from lower- to upper-arm AVFs during the last 2 decades and the long-term implications for hemodialysis patients. By foregoing use of possible lower-arm locations for AVF creation, these patients are at greater risk for exhausting available sites for AVF creation and for other potential adverse long-term effects of upper-arm AVFs (eg, higher frequency of steal syndrome, symptomatic cephalic arch and central vein stenosis, and high AVF blood flow effects on cardiac function). Although an upper-arm AVF may provide a higher rate of success for an individual procedure, AVF creation must be viewed in the context of lifetime access planning. We greatly appreciate the important context that Letachowicz et al have provided for some of the vascular access practices observed internationally in the Dialysis Outcomes and Practice Patterns Study (DOPPS). Although our article did not include opportunities to address international disparities, their results suggest that activities to increase awareness, promote best practices, and maximize training could foster increased lower-arm AVF use.

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