Data Deficit: What Are We Missing in Dialysis Access?

Fifteen years ago, most of us thought very little about dialysis access. Surgeons made arteriovenous (AV) access circuits and placed peritoneal dialysis catheters. Surgeons and interventional radiologists maintained AV circuits with surgical revision or angioplasty, respectively. Venous catheters were placed and exchanged when necessary. Everyone was busy, but most of us suspected that we really did not know much about the optimal way to manage our patients' dialysis access needs.

Given the morbidity, mortality, and cost associated with end-stage renal disease (ESRD) and the paucity of data and clinical practice guidelines related to dialysis access, it became clear that there was a lot to learn. The KDOQI guidelines[1] were developed by a multidisciplinary group working through the National Kidney Foundation. Initially published in 1997 and most recently revised in 2006, the guidelines on dialysis access provided a wealth of information for clinicians, and perhaps more importantly, highlighted areas where research was sorely needed.

In 2002, Pisoni et al[2] published the ground-breaking data from the Dialysis Outcomes and Practice Patterns Study (DOPPS), which demonstrated that the United States was far behind Western Europe in using AV fistulas for dialysis access. With the general belief that an AV fistula was "better" than either an AV graft or venous catheter, efforts were launched to increase the use of AV fistulas in the United States. In 2003, all 18 of the United States ESRD Networks, along with the Centers for Medicare & Medicaid Services, clinicians, dialysis providers, and patients, developed a 3-year plan called the National Vascular Access Improvement Initiative, which was renamed the Fistula First Breakthrough Initiative a year later. The goal was to implement strategies to improve patient vascular access outcomes by increasing AV fistula use.

From that time to the present, a great deal of research, including numerous multicenter prospective clinical trials, has focused on dialysis access. Today, it is quite easy to obtain information regarding ESRD, renal replacement, and dialysis access through the United States Renal Data System website (www.usrds.org).

But what are we missing? Do we know how to select the right dialysis modality for each patient? How good are our training programs for new surgeons? Do we understand the biology of AV access venous stenosis and if therapy can be individualized? Are clinical trials being designed with suitable endpoints to answer our questions? Can new procedures, devices, or approaches improve outcome or facilitate care? Hear what our experts have to say about the data deficit in dialysis access and what's being done to leap forward. Put your fingers on this issue of *Endovascular Today* and feel the thrill. ■

1. NKF-DOQI clinical practice guidelines for vascular access. National Kidney Foundation-Dialysis Outcomes Quality Initiative. Am J Kidney Dis. 1997;30(4 suppl 3):S150–S191.
2. Pisoni RL, Young EW, Dykstra DM, et al. Vascular access use in Europe and the United States: results from the DOPPS. Kidney Int. 2002;61:305-316.

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