Abstract:

Tunneled cuffed catheters provide reliable and instant long-term intravenous access for a large variety of therapeutic purposes, including chemotherapy, parenteral nutrition, and apheresis. The most frequent application is for patients with renal failure as an access device for hemodialysis. In this capacity, the rate of catheter use has remained stable in the United States, despite the promotion of arteriovenous fistulas and arteriovenous grafts. The latter 2 procedures achieve superior longevity and much higher cost-efficiency. Tunneled catheters, however, serve as bridging devices during maturation of newly placed arteriovenous fistulas or as the final option in patients in whom fistulas and grafts have failed. High-quality vascular access is a hallmark of interventional radiology, and its significance for patient care and for our specialty cannot be overestimated. Familiarity with basic concepts of the device and procedural techniques are crucial to achieve successful long-term venous access. The following article demonstrates key concepts of tunneled venous catheter placement by means of dialysis, inasmuch as dialysis catheters represent the most commonly placed tunneled central venous catheters. The principles of placement and techniques utilized, however, are applicable to devices that are used for chemotherapy or parenteral nutrition, such as the Hickman, Broviac, Groshong, or tunneled peripherally inserted central catheters.