Abstract:

Purpose: To evaluate reasons for tunneled central venous catheter (TCVC) usage in our prevalent hemodialysis population and assess the impact of a surgically aggressive approach to definitive access creation.

Methods: Clinical review of all patients in the West of Scotland dialyzing via a TCVC in November 2010 was performed. Reasons for TCVC usage and TCVC complications were evaluated. Over the subsequent year, aggressive intervention was undertaken to achieve definitive access in all suitable patients and outcomes re-evaluated a year later (November 2011).

Results: There was no significant difference in the proportion of patients dialyzing via a TCVC in 2010 compared to 2011 (30.3% (n=193) vs. 31.7% (n=201), respectively; p=0.56). All patients now have a “vascular access plan.” Of patients dialyzing via a TCVC in 2010, 37% had died by 2011, 22% remained on long-term line, 20% had successful arteriovenous fistula (AVF) creation, 1% had an arteriovenous graft and 2% were transplanted; 10.4% developed complications of vascular access and required ligation of a functioning AVF. A further 6.5% died within 28 days of surgery. The incidence of culture-positive Staphylococcus aureus...
bacteremia was 1.6 per 1,000 catheter days.

Conclusions: Aggressive strategies of AVF creation resulted in one-fifth of patients on a long-term TCVC having successful creation of an AVF. This was offset against high failure and significant complication rate from AVF creation in this population. One-third of patients dialyzing via a TCVC died in the subsequent year. Correct patient selection for AVF creation is essential and predialysis care must be optimized to avoid the need for TCVCs entirely.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).