Abstract:

HIGHLIGHTS: A lower central venous catheter (CVC) infection rate suggests an improvement in practice and education. CVC infection remains a complication that often requires significant health care resources. Use of tunneled CVC and patient education on catheter care reduces CVC infection rates.

OBJECTIVES: CVC infection is one of the most frequent, life-threatening complications in home parenteral nutrition (HPN) patients. Our objective was to conduct a 5-year retrospective chart review regarding CVC infections in 3 adult HPN programs.

METHODS: Data were collected from the Canadian HPN Registry and patient charts that include demography, infection diagnosis, blood cultures, and treatments.

RESULTS: Results are reported as median (range) ± standard error of mean or population frequency. Eighty-one charts were reviewed. Mean age was 51.98 ± 1.71 years. Short bowel syndrome (54.3%) was the primary diagnosis, with 36 months (range, 1324 months) median length of HPN therapy. Forty-seven subjects (58%) had infections over a 5-year period. Of these, there were 144 sepsis events. There was positive correlation (r=0.423; P<0.001) between number of infections and HPN duration. The median length of time the CVC was in place was 281 (range, 14-4380) days. There were 66.7% tunneled CVCs; 25.9% peripherally inserted central catheters (PICCs), and 7.4% implanted venous port. In this sample, there was no association between line infection and catheter type. Most patients presented with fever (58.3%) and chills (38.2%). Blood cultures were done (89.6%), and coagulase negative Staphylococcus was the resulting pathogen present in 25.7%. Patients with bloodstream infection were treated for 17.9 ± 1.2 days with combination antibiotics (22.2%). Overall, the CVC infection rate was 0.97 per 1000 catheter days.

CONCLUSION: We found the standard approach to infection prevention is comparable to reports in literature. However, a subset of patients with multiple CVC infections require education with an emphasis on preventive techniques in order to reduce the incidence of infection.

Reference: