A review of the incidence of central line infections in repaired catheters


Abstract:

Background – There have been very few studies conducted to assess the infection risk of repairing a ruptured or broken tunneled central venous access device or a ruptured peripherally inserted central catheter (PICC), a procedure that is fairly common in a certain population of patients.

Methods – In a retrospective review of repairs to both tunneled central venous access devices and PICCs in a large metropolitan health system, 258 medical records were reviewed. During a 4-year period there were 258 repairs, 202 to PICC lines and 56 to tunneled catheters. The system-wide infection database was the source queried to provide evidence for and confirmation of a central line infection. This database is maintained by the infection control team using strict guidelines, reducing inter-rater reliability issues.

Results – The Fisher exact test for proportions was used to compare infection rates between repaired infected and repaired noninfected lines. The infection rate was 5% in repaired catheters and 5.9% in unrepaired catheters (P = 1.00). On average, repaired catheters were in place longer (mean log 2.71 vs 2.31). Despite repairs and longer dwell times the repaired catheters did not have a significantly higher rate of infection when compared with unrepaired
Conclusions - Despite longer dwell times the infection rate for repaired catheters was not statistically significant when compared with unrepaired catheters.