

Comparison Of Blood Stream Infection Rate And Catheter Dwell Time Between Conventional Peripherally Inserted Central Line

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Purpose: This study aimed to compare the infection rate and catheter dwell time of a newly proposed tunneled peripherally inserted central catheter (PICC) method with the conventional PICC method.

Materials and Method: We prospectively performed conventional PICC and tunneled PICC on two separate groups of 50 patients each. Informed consent was obtained from all the patients before enrollment. The types of PICCs used in this study are given in Table 1. The tunneled catheters were placed by interventional radiologists using a standardized technique (Figure 1). All patients were reviewed until either the occurrence of PICC-related complication necessitated removal, completion of therapy, death or till the end of the study. CLABSI was confirmed in each case by demonstrating concordance between isolates colonizing the PICC at the time of infection and from blood cultures. Statistical analysis was done using SPSS 20.0. Kaplan-Meier analysis was used to study differences in time to infection and independent t-test was used to compare the catheter dwell time. A p-value of

Results: The infection rate significantly decreased from 34% to 16% in tunneled PICC patients ($p < 0.05$). The mean catheter dwell time was increased from 27 days in conventional PICC to 47 days in tunneled PICC (p

Conclusion: Tunnelling a PICC has the potential to reduce the infection rate while increase the catheter dwell time compared to conventional PICC.