We attribute our low rates of major complications to a nurse-led expert insertion team, standardized care and maintenance protocols, high insertion volumes, novel catheter material and continuous quality-improvement initiatives that are implemented and evaluated regularly. We conclude that the considerable benefits PICCs provide to patients are attained with a low risk of major complications” McDiarmid et al (2017).

Abstract:

Background: Peripherally inserted central catheters (PICCs) provide enormous benefit to patients. However, recent publications have highlighted relatively high PICC-associated complication rates. We report on patient and device outcomes from a nurse-led program.

Methods: We performed a retrospective analysis of a prospective cohort of consecutive patients undergoing PICC insertion at The Ottawa Hospital between Jan. 1, 2013 and Dec. 31, 2014. Of the 8314 BioFlo PASV PICCs inserted, we randomly selected a sample of 700 and obtained a complete data set for 656. We measured the cumulative incidence of major complications (catheter-related bloodstream infections and deep vein thrombosis) and use of a thrombolytic to alleviate occlusions.

Results: The total number of catheter days was 58486, and the median dwell time 45 days. We observed 4 cases of catheter-related bloodstream infection (0.6% [95% CI 0.17%-1.55%]) (0.07/1000 catheter days). Ten patients (1.5% [95% CI 0.83%-2.78%]) (0.17/1000 catheter days) had catheter-related deep venous thrombosis. At least 1 dose of thrombolytic was required in 75 catheters (11.4% [95% CI 8.61%-13.39]), 31 (7.1%) of the 436 single-lumen catheters and 113 (25.7%) of the 440 lumina of dual-lumen catheters (p < 0.001).

Interpretation: We attribute our low rates of major complications to a nurse-led expert
insertion team, standardized care and maintenance protocols, high insertion volumes, novel catheter material and continuous quality-improvement initiatives that are implemented and evaluated regularly. We conclude that the considerable benefits PICCs provide to patients are attained with a low risk of major complications.

**Full Text**

Reference:


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