Among those with short-term PICCs, 374 (9.6%) experienced a complication, including 99 (2.5%) experiencing VTE and 17 (0.4%) experiencing CLABSI events” Paje et al (2018).

Abstract:

BACKGROUND: The guidelines for peripherally inserted central catheters (PICCs) recommend avoiding insertion if the anticipated duration of use is ≤5 days. However, short-term PICC use is common in hospitals. We sought to identify patient, provider, and device characteristics and the clinical outcomes associated with short-term PICCs.

METHODS: Between January 2014 and June 2016, trained abstractors at 52 Michigan Hospital Medicine Safety (HMS) Consortium sites collected data from medical records of adults that received PICCs during hospitalization. Patients were prospectively followed until PICC removal, death, or 70 days after insertion. Multivariable logistic regression models were fit to identify factors associated with short-term PICCs, defined as dwell time of ≤5 days. Complications associated with short-term use, including major (eg, venous thromboembolism or central line-associated bloodstream infection) or minor (eg, catheter occlusion, tip migration) events were assessed.
RESULTS: Of the 15,397 PICCs placed, 3902 (25.3%) had a dwell time of =5 days. Most (95.5%) short-term PICCs were removed during hospitalization. Compared to PICCs placed for >5 days, variables associated with short-term PICCs included difficult venous access (odds ratio [OR], 1.54; 95% confidence interval [CI], 1.40-1.69), multilumen devices (OR, 1.53; 95% CI, 1.39-1.69), and teaching hospitals (OR, 1.25; 95% CI, 1.04-1.52). Among those with short-term PICCs, 374 (9.6%) experienced a complication, including 99 (2.5%) experiencing VTE and 17 (0.4%) experiencing CLABSI events. The most common minor complications were catheter occlusion (4%) and tip migration (2.2%).

CONCLUSION: Short-term use of PICCs is common and associated with patient, provider, and device factors. As PICC placement, even for brief periods, is associated with complications, efforts targeted at factors underlying such use appear necessary.

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