This is the first longitudinal, multicenter assessment of complication rates for PICCs and TIVADs in a large cohort of adults and children with CF” May et al (2017).

Abstract:

BACKGROUND: Totally implantable venous access devices (TIVADs) or peripherally inserted central venous catheters (PICCs) are commonly used in the care of patients with cystic fibrosis (CF), but they are associated with various complications, including thrombosis, infection, and insertion site symptoms.

METHODS: We conducted a retrospective review of PICC and TIVAD use in adults and children with CF over an 8-year period at 3 accredited care centers. Patient attributes included CFTR genotype, comorbidities, lung function, body mass index, use of anticoagulation, and respiratory tract microbiology. Catheter data included line type, caliber, and lumen number. We assessed practice variation by surveying physicians.

RESULTS: In a population of 592 CF patients, 851 PICC and 61 TIVADs were placed between January 1, 2003 and July 1, 2011. Larger catheter caliber and increased lumen number were risk factors for PICC complications in adults. Patient-related risk factors for PICC complications included poor nutritional status, infection with Burkholderia cepacia spp., and having ≥5 lines inserted during the study period. The probability of a PICC complication varied across centers (2.6% to 14.1%, p=0.001) and remained significant after adjustment for patient-and line-related risk factors. The median complication-free survival of TIVADs, however, did not vary significantly by center (p=0.85).

CONCLUSIONS: This is the first longitudinal, multicenter assessment of complication rates for PICCs and TIVADs in a large cohort of adults and children with CF. Specific patient- and catheter-related characteristics were associated with increased risk of complications. Center effects on complication rates were observed for PICCs.
Reference:


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