

## **Abstract:**

**BACKGROUND:** The purpose of this study was to compare postoperative outcomes of pediatric patients with complicated appendicitis managed with or without a peripherally inserted central catheter (PICC).

**METHODS:** Patients aged  $\leq 18$  y in the Pediatric Health Information System database with complicated appendicitis that underwent appendectomy during their index admission in 2000-2012 were grouped by whether they had a PICC placed using relevant procedure and billing codes. Rates of subsequent encounters within 30 d of discharge along with associated diagnoses and procedures were determined. A propensity score-matched (PSM) analysis was performed to account for differences in baseline exposures and severity of illness.

**RESULTS:** We included 33,482 patients with complicated appendicitis; of whom, 6620 (19.8%) received a PICC and 26,862 (80.2%) did not. The PICC group had a longer postoperative length of stay (median 7 versus 5 d,  $P < 0.001$ ) and were more likely to undergo intra-abdominal abscess drainage during the index admission (14.4% versus 2.1%,  $P < 0.001$ ), and have a reencounter (17.5% versus 11.4%,  $P < 0.001$ ) within 30 d of discharge. However, in the PSM cohort ( $n = 4428$  in each group), outcomes did not differ between treatment groups, although the PICC group did have increased odds for the development of other postoperative complications (odds ratio = 3.95, 95% confidence interval: 1.45, 10.71).

**CONCLUSIONS:** After accounting for differences in severity of illness by PSM, patients managed with PICCs had a similar risk for nearly all postoperative complications, including reencounters. Postoperative management of pediatric complicated appendicitis with a PICC is not clearly associated with improved outcomes.

## **Reference:**

Sulkowski, J.P., Asti, L., Cooper, J.N., Kenney, B.D., Raval, M.V., Rangel, S.J., Deans, K.J. and Minneci, P.C. (2014) Morbidity of peripherally inserted central catheters in pediatric complicated appendicitis. *The Journal of Surgical Research*. March 13th. (epub ahead of print).