



Guidewire catheter exchange (GCE) replaces a CVC without repeat venipuncture. This study evaluated the indications, success rate, and complications of GCE in a large cohort of pediatric cancer patients” Fernandez-Pineda et al (2016).

Abstract:

BACKGROUND: Maintaining long-term central venous catheters (CVCs) in children undergoing chemotherapy can be challenging. Guidewire catheter exchange (GCE) replaces a CVC without repeat venipuncture. This study evaluated the indications, success rate, and complications of GCE in a large cohort of pediatric cancer patients.

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PROCEDURE: Medical records of pediatric cancer patients who underwent GCE at our institution between 2003 and 2013 were retrospectively reviewed. Variables analyzed included gender, age at GCE, primary cancer diagnosis, indication for GCE, absolute neutrophil count (ANC) at GCE, vein used, success rate, and postoperative complications (

RESULTS: A total of 435 GCEs performed in 407 patients (230 males and 177 females) were reviewed. Median age at GCE was 8 years (range, 0.2-24). Acute lymphoblastic leukemia was

the most common diagnosis (50.6%). The primary indication for GCE was the desire to have an alternative type of CVC (71%). Other indications included catheter displacement (17%), catheter malfunction (11%), and catheter infection (1%). Median ANC at GCE was 2,581/mm<sup>3</sup> (range, 0-43,400). Left subclavian vein was more commonly used (57.7%). The success rate of GCE was 93.4% (406 of 435 procedures, 95% confidence interval: 91.0-97.5%). A total of 33 (7.5%) postoperative complications occurred including central line associated bloodstream infection (CLABSI) (n = 20, 4.5%), catheter dislodgement (n = 6, 1.4%), and catheter malfunction (n = 7, 1.6%).

**CONCLUSIONS:** We conclude that GCE in pediatric cancer patients is associated with a high success rate and a low risk of complications. The most common postoperative complication, CLABSI, occurred at a rate significantly lower than following de novo CVC placement.

Reference:

Fernandez-Pineda, I., Ortega-Laureano, L., Wu, H., Wu, J., Sandoval, J.A., Rao, B.N., Shochat, S.J. and Davidoff, A.M. (2016) Guidewire Catheter Exchange in Pediatric Oncology: Indications, Postoperative Complications, and Outcomes. *Pediatric Blood & Cancer*. February 12th. .

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