

“Pre-procedural blood screening did not predict bleeding in hospitalized children without a known bleeding diathesis undergoing PICC insertion” Woodley-Cook et al (2015).

Reference:

Woodley-Cook, J., Amaral, J., Connolly, B. and Brandão, L.R. (2015) Do children without a known bleeding tendency undergoing PICC placement require coagulation laboratory testing? Pediatric Radiology. February 6th. .

Do children undergoing PICC placement require coagulation laboratory testing?  
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Abstract:

**BACKGROUND:** Obtaining basic hemostatic laboratory investigations prior to peripherally inserted central catheter (PICC) insertion remains controversial, even if the procedure is converted to a tunneled central venous line (CVL) placement.

**OBJECTIVE:** To determine the value of pre-procedural blood screening (hemoglobin level, platelet count, aPTT/INR) in hospitalized children without a known bleeding diathesis.

**MATERIALS AND METHODS:** This retrospective review included pediatric patients undergoing PICC insertion who had both laboratory screening and post-PICC hemoglobin level. Two cohorts (A: 0-3 months; B: >3 months-18 years) were analyzed for procedural major/minor bleeding.

**RESULTS:** Of 1,441 consecutive children identified during a 3-year period, 832 patients (226 in cohort A, 606 in cohort B) fulfilled the inclusion criteria. Overall, 36% (300/832) of the patients had at least one abnormal laboratory result. Only 0.2% (3/1,441) of patients required conversion to a central venous line. In cohort A no major bleeding occurred; the minor bleeding frequency was 30% (68/226). Neither abnormal laboratory results nor correction of abnormal laboratory results was associated with minor bleeding complications. The positive and negative predictive values (PPV/NPV) of having abnormal laboratory screening were 0.22 and 0.68, respectively. In cohort B the major bleeding frequency was 1% (6/606) but no patient required any blood transfusion; minor bleeding occurred in 29% (174/606). Neither abnormal laboratory results nor correction of abnormal laboratory results was associated with minor bleeding complications. The PPV and NPV of abnormal



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laboratory screening results were 0.24 and 0.72, respectively.

**CONCLUSION:** Pre-procedural blood screening did not predict bleeding in hospitalized children without a known bleeding diathesis undergoing PICC insertion. The rarity of major bleeding complications and need for conversion to a central venous line did not support a need for laboratory screening.

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