

**Abstract:**

**AIMS:** Central venous catheter access in an acute setting can be a challenge given underlying disease and risk for venous thrombosis. Peripherally inserted central venous catheters (PICCs) are commonly placed but limit sites for fistula creation in patients with chronic renal failure (CKD). The aim of this study is to determine the incidence of venous thrombosis from small bore internal jugular (SBIJ) and PICC line placement. This investigation identifies populations of patients who may not be ideal candidates for a PICC and highlights the importance of peripheral vein preservation in patients with renal failure.

**MATERIALS AND METHODS:** A venous Doppler ultrasound was performed at the time of SBIJ insertion and removal to evaluate for thrombosis in the internal jugular vein. Data was collected pre- and post-intervention to ascertain if increased vein preservation knowledge amongst the healthcare team led to less use of PICCs. Demographic factors were collected in the SBIJ and PICC groups and risk factor analysis was completed.

**RESULTS:** 1,122 subjects had PICC placement and 23 had SBIJ placement. The incidence of thrombosis in the PICC group was 10%. One patient with an SBIJ had evidence of central vein thrombosis when the catheter was removed. Univariate and multivariate analysis demonstrated a history of transplant, and the indication of total parenteral nutrition was associated with thrombosis ( $p < 0.001$ ). The decrease in PICCs placed in patients with CKD 6 months before and after intervention was significant ( $p < 0.05$ ).

**CONCLUSIONS:** There are subsets of patients with high risk for thrombosis who may not be ideal candidates for a PICC.

**Reference:**

Hammes, M., Desai, A., Pasupneti, S., Kress, J., Funaki, B., Watson, S., Herlitz, J. and Hines, J. (2015) Central venous catheters: incidence and predictive factors of venous thrombosis. *Clinical Nephrology*. May 22th. .