The objective of this study was to compare the relative number of complications from peripherally inserted central venous catheters (PICC) and centrally inserted central venous catheters (CVC) in the neuroscience intensive care unit (NSICU)” Brandmeir et al (2019).

Abstract:

OBJECTIVE: The objective of this study was to compare the relative number of complications from peripherally inserted central venous catheters (PICC) and centrally inserted central venous catheters (CVC) in the neuroscience intensive care unit (NSICU).

METHODS: This study was carried out in a 32-bed NSICU in a large academic hospital in the USA from July 2015 until January 2017. Patients admitted requiring central venous access were randomly assigned to have a PICC or CVC inserted. Complications were recorded and compared. The primary outcome was all complications as well as combined numbers of large vein thrombosis, central-line-associated blood stream infections, and insertional trauma. Outcomes were compared using the Fisher’s exact test, logistic regression, or unpaired T tests, as appropriate.

RESULTS: One hundred and fifty-two patients were enrolled; 72 were randomized to the PICC arm and 80 to the CVC arm. There were no crossovers, withdrawals, nor losses to follow-up. The study was stopped at the second pre-planned interim analysis for futility. The combined number of large vein thrombosis, central-line-associated blood stream infection, and
insertional trauma was 4/72 in the PICC arm and 1/80 in the CVC group (OR 4.6 (95% CI 0.5-42.6) p = 0.14). The number of all complications in the PICC arm was 14/72 compared to 10/80 in the CVC arm (OR 1.7 (95% CI 0.7-4.1) p = 0.24).

CONCLUSIONS: PICCs and CVCs have similar numbers of complications when placed in patients admitted to the NSICU.

You may also be interested in…

PICC line practices in neonatal intensive care units
Pilot randomized controlled trial comparing PICC materials in pediatrics
Quality improvement initiative reduces the occurrence of PICC complications

Reference: