

To compare the rates of catheter-associated bloodstream infection (CABSI) in preterm infants born at <30 weeks' gestation who received a peripherally inserted central catheter (PICC) versus an umbilical venous catheter (UVC) immediately after birth as their primary venous access" Shalabi et al (2015).

Abstract:

OBJECTIVE: To compare the rates of catheter-associated bloodstream infection (CABSI) in preterm infants born at <30 weeks' gestation who received a peripherally inserted central catheter (PICC) versus an umbilical venous catheter (UVC) immediately after birth as their primary venous access.

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METHODS: This retrospective matched cohort study examined data from infants born at <30 weeks' gestation and admitted between January 2010 and December 2013 to neonatal units in the Canadian Neonatal Network. Eligible infants who received a PICC on the first day after birth (day 1) were matched with 2 additional groups of infants, those who received a UVC on day 1 and those who received a UVC on day 1 that was then changed for a PICC after 4 days or more. The primary outcome was number of infants with CABSI per 1000 catheter days, which was compared between the 3 groups using multivariable analyses.

RESULTS: Data from 540 eligible infants were reviewed (180 per group). There was no significant difference in infants with CABSI/1000 catheter days between the 3 groups (9.3 vs 7.8 vs 8.2/1000 catheter days, respectively; $P > .05$) despite lower rates of late onset sepsis in the group of infants who received only a UVC.

CONCLUSIONS: There was no significant difference in the incidence of CABSI between very preterm neonates who received a PICC, UVC, or UVC followed by PICC as the primary mode of venous access after birth. A prospective randomized controlled trial is justified to further guide practice regarding primary venous access and reduction of infection.

Reference:

Shalabi, M., Adel, M., Yoon, E., Aziz, K., Lee, S. and Shah, P.S. (2015) Risk of Infection Using Peripherally Inserted Central and Umbilical Catheters in Preterm Neonates.



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