We evaluated the incidence and risk factors for CLABSI in a cohort of neonates with femoral venous catheters (FVCs), UVCs, and PICCs, with a gestational age ≥34 weeks born between January 1, 2006 and June 30, 2013. We included 2,986 neonates with a total of 656 catheters.” Dubbink-Verheij et al (2017).

Abstract:

Central venous catheters (CVCs) in neonates are associated with a risk of central line-associated bloodstream infections (CLABSI). Most reports on the incidence of CLABSI in neonates focus on umbilical venous catheters (UVCs) and peripherally inserted central catheters (PICCs). We evaluated the incidence and risk factors for CLABSI in a cohort of neonates with femoral venous catheters (FVCs), UVCs, and PICCs, with a gestational age ≥34 weeks born between January 1, 2006 and June 30, 2013.

We included 2,986 neonates with a total of 656 catheters. The CLABSI incidence rate varied from 12.3 per 1,000 catheter-days in FVCs to 10.6 per 1,000 catheter-days in UVCs and 5.3 per 1,000 catheter-days in PICCs. In a Kaplan-Meier survival analysis, we did not find a
difference in CLABSI risk between the catheter types (p = 0.29). The following factors were independently associated with an increased risk of CLABSI: parenteral nutrition, male gender (HR 2.63, 95% CI 1.17-5.90), and higher birth weight (HR 1.04, 95% CI 1.002-1.09), whereas antibiotic treatment at birth (HR 0.25, 95% CI 0.12-0.52) was associated with a decreased risk.

CONCLUSION: In our cohort, we did not find a difference between the CLABSI incidence in FVCs, PICCs, and UVCs. Occurrence of CLABSI is associated with parenteral nutrition, male gender, and higher birth weight. Antibiotic treatment at birth was associated with a decreased risk of CLABSI.

Reference:


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