The aim of this study was to retrospectively analyze the use of PICCs in our clinic for critically ill newborns to evaluate the relationship between catheter related factors and the occurrence of complications” Li et al (2019).

Abstract:

Peripherally inserted central catheters (PICCs) can provide nutritional and medical support for very low birth weight or critically ill newborns. The aim of this study was to retrospectively analyze the use of PICCs in our clinic for critically ill newborns to evaluate the relationship between catheter related factors and the occurrence of complications. Retrospective analysis was conducted for all newborns consecutively admitted at the Neonatal Intensive Care Unit (NICU), Chongqing Health Center for Women and Children, who underwent PICC insertion between May 2011 and March 2018. Data collected included total puncture success rate, one puncture success rate, infection rate, complication rate, unplanned catheter withdrawal rate, device days, and catheter indwelling time. Five-hundred eighty-eight infants (304 males and 284 females) aged 3.4 ± 3.9 days, mean gestational age of 30.9 ± 2.7 weeks and a mean body mass of 1.38 ± 0.47 kg at insertion were included. Total puncture success rate was 99.65%, one puncture success rate was 77.77%. The mean catheter retention was 13.6 ± 6.7 days: more than 30 days in 15 (2.61%) cases, 20 to 30 days in 60 (10.43%) cases, 10 to 19 days in 372 (64.70%) cases, and 62 days in 1 case. Complications occurred in 63 (10.71%) cases: with PICC insertion within 24 hours after birth in 29 (15.43%), within 48 hours in 13 (6.63%),
and after 48 hours in 21 (10.99%) cases. Catheter tip culture was positive in 3 cases and there was 1 case of catheter-related bloodstream infection. Nursing measures of the maintenance of body temperature and the evaluation of blood vessels were important conditions for improving the success rate of one puncture in critically ill neonates. PICC catheterization as early as 48 hours will not increase the difficulty of PICC puncture. Nor did it increase the incidence of PICC complications.

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