Peripherally inserted central venous catheters (PICCs) are widely used in intensive care units, but studies about procedures for detection of colonization are scarce in neonates” Martín-Rabadán et al (2017).

Abstract:

Accurate diagnosis of catheter-related bloodstream infection (CRBSI) is mandatory for hospital infection control. Peripherally inserted central venous catheters (PICCs) are widely used in intensive care units, but studies about procedures for detection of colonization are scarce in neonates. We sequentially processed 372 PICCs by 2 methods, first by the standard roll-plate (RP) technique and then by rubbing catheters on a blood agar plate after being longitudinally split (LS). With both techniques, we detected 133 colonized PICCs. Ninety-four events of CRBSI were diagnosed. The sensitivity, specificity, positive predictive value, and negative predictive value for detection of CRBSI were 58.5%, 92.8%, 73.3%, and 86.9%, respectively, for RP technique and 96.8%, 88.5%, 74.0%, and 98.8%, respectively, for LS technique. The LS technique increased the proportion of detected CRBSI by 38.3%. Neonatal PICC tips should be cultured after cutting them open. This technique is simple and sensitive to detect catheter colonization and also to diagnose CRBSI.

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