

Abstract:

Background: This study was to evaluate the effectiveness and safety of vancomycin-lock therapy for the prevention of catheter-related bloodstream infection (CRBSI) in very low body weight (VLBW) preterm infant patients.

Methods: One hundred and thirty-seven cases of VLBW preterm infants who retained peripherally inserted central catheters (PICCs) were retrospectively reviewed, including 68 treating with heparin plus vancomycin (vancomycin-lock group) and 69 with heparin only (control group). The incidence of CRBSI, related pathogenic bacteria, adverse events during the treatment, complications, antibiotic exposure, PICC usage time, hospital stay, etc. were compared between the above two groups.

Results: The incidence rate of CRBSI in the vancomycin-lock group (4.4%, 3/68) was significantly less than in the control group (21.7%, 15/69, $p = 0.004$). Total antibiotic exposure time during the whole observation period was significantly shorter in the group than in the control group (11.2 ± 10.0 vs 23.6 ± 16.1 d; $p < 0.001$). No hypoglycemia occurred during the locking, and the blood concentrations of vancomycin were not detectable.

Conclusions: Vancomycin-lock may effectively prevent CRBSI in Chinese VLBW preterm infants and reduce the exposure time of antibiotics, without causing obvious side complications.

Reference:

Liang H, Zhang L, Guo X, Sun L. Vancomycin-lock therapy for prevention of catheter-related bloodstream infection in very low body weight infants. *BMC Pediatr.* 2021 Jan 4;21(1):3. doi: 10.1186/s12887-020-02482-2. PMID: 33397325; PMCID: PMC7780620.

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