Strict compliance by patients and caregivers with evidence-based instructions together with supervision by well-trained HPN providers is the most effective strategy to prevent CRBSIs” Pichitchaipitak et al (2018).

Abstract:

OBJECTIVES: The aim of this study was to determine the incidence and predictive factors of catheter-related bloodstream infections (CRBSIs) acquired through a central venous catheter for delivery of home parenteral nutrition (HPN) therapy among a patient population in Thailand.

METHODS: This retrospective review was conducted with adult patients with intestinal failure who received HPN from October 2002 to April 2014, at Ramathibodi Home Parenteral and Enteral Nutrition Referral Center in Bangkok.

RESULTS: Seventy-two patients (45.8% male, mean age 56.2 ± 15.7 y) were included in the analysis. Incidence of CRBSIs was 1.47 per 1000 catheter days. Over the 12-y period, there were 21 CRBSIs among 10 patients. There were 26 pathogens isolated from these CRBSIs,
mostly coagulase-negative staphylococci. Univariate Poisson regression analysis revealed that the incidence rate ratio of CRBSIs was significantly higher in patients who used an implanted port (compared with tunneled catheter), alcohol-based povidone-iodine solution as disinfectant (compared with 2% chlorhexidine gluconate in 70% isopropyl alcohol), cyclic HPN infusion (compared with continuous HPN), and hospital-based compound HPN formulations (compared with 3-in-1 commercial formulations). Furthermore, longer duration of HPN (>250 d) was associated with CRBSIs. Multivariate analysis revealed that longer duration of HPN, cyclic HPN, and hospital-based compound HPN were significantly associated with CRBSIs.

CONCLUSIONS: CRBSI is a significant complication in patients receiving long-term HPN. Individualized therapy with a multidisciplinary team in centers with HPN management expertise is required. Careful selection of the catheter type and HPN formulation for each patient is necessary to best meet patient requirements and minimize HPN-related complications. Strict compliance by patients and caregivers with evidence-based instructions together with supervision by well-trained HPN providers is the most effective strategy to prevent CRBSIs.

Reference:


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