

"We suggest discussing with patients the benefits and risks when starting taurolidine, especially in patients who are considered to have a higher risk for CRBSIs" Wouters et al (2020).



### Abstract:

**BACKGROUND:** Use of catheter lock solutions (CLSs) as a strategy to prevent catheter-related bloodstream infections (CRBSIs) has been evaluated in recent clinical trials. Our aim was to identify the most effective CLS formulation in patients receiving home parenteral nutrition (HPN). **METHODS:** We conducted a systematic review and individual-patient data meta-analysis (IPDMA). Prospective randomized clinical trials in adult HPN patients using CLS were identified from PubMed, EMBASE, Web of Science, CINAHL, Cochrane library, and ClinicalTrials.gov. Primary outcome was the number of CRBSIs per 1000 catheter days for each CLS. Other outcomes included time to CRBSI and identification of patients with a higher risk for CRBSIs. **RESULTS:** In total, 1107 studies were screened for eligibility, of which three studies comprising 162 HPN patients and 45,695 catheter days were included in the IPDMA. CRBSI rates were significantly decreased in patients using taurolidine (rate 0.13; 95% confidence interval, 0.05-0.32) when compared with saline (rate 0.74; 95% CI, 0.31-1.74;  $P = .002$ ) or heparin (rate 2.01; 95% CI, 1.03-3.91;  $P < .001$ ). The cumulative proportion of CRBSI-free patients using taurolidine, saline, and heparin after 1 year was 88%, 56%, and 14%, respectively. Three risk factors for CRBSIs were identified: type of CLS, intestinal dysmotility as underlying condition, and use of central venous catheters. **CONCLUSIONS:** Taurolidine was the most effective CLS formulation in HPN patients for the prevention of CRBSIs. We suggest discussing with patients the benefits and risks when starting taurolidine, especially in

patients who are considered to have a higher risk for CRBSIs.

Incidence of peripheral intravenous catheter failure in paediatric patients

Non-antibiotic antimicrobial catheter lock solutions in patients on home parenteral nutrition

Bundles for peripheral intravenous catheter care

**Full Text**

**Reference:**

Wouters, Y., Causevic, E., Klek, S., Groenewoud, H. and Wanten, G.J.A. (2020) Use of Catheter Lock Solutions in Patients Receiving Home Parenteral Nutrition: A Systematic Review and Individual-Patient Data Meta-analysis. JPEN. January 27th. doi: 10.1002/jpen.1761. .

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