



In the new catheter group, taurolidine showed a clear decrease in CRBSI rate” Wouters et al (2018).

Abstract:

**BACKGROUND:** The catheter lock solutions 2% taurolidine and 0.9% saline are both used to prevent catheter-related bloodstream infections (CRBSIs) in home parenteral nutrition patients.

**AIMS:** To compare the effectiveness and safety of taurolidine and saline.

**METHODS:** This multicentre double-blinded trial randomly assigned home parenteral nutrition patients to use either 2% taurolidine or 0.9% saline for 1 year. Patients were stratified in a new catheter group and a pre-existing catheter group. Primary outcome was the rate of CRBSIs/1000 catheter days in the new catheter group and pre-existing catheter group, separately.

**RESULTS:** We randomised 105 patients, of which 102 were analysed as modified intention-to-treat population. In the new catheter group, rates of CRBSIs/1000 catheter days were 0.29 and 1.49 in the taurolidine and saline arm respectively (relative risk, 0.20; 95% CI, 0.04-0.71;  $P = 0.009$ ). In the pre-existing catheter group, rates of CRBSIs/1000 catheter days were 0.39 and 1.32 in the taurolidine and saline arm respectively (relative risk, 0.30; 95% CI, 0.03-1.82;  $P = 0.25$ ). Excluding one outlier patient in the taurolidine arm, mean costs per patient were

\$1865 for taurolidine and \$4454 for saline ( $P = 0.03$ ). Drug-related adverse events were rare and generally mild.

**CONCLUSIONS:** In the new catheter group, taurolidine showed a clear decrease in CRBSI rate. In the pre-existing catheter group, no superiority of taurolidine could be demonstrated, most likely due to underpowering. Overall, taurolidine reduced the risk for CRBSIs by more than four times. Given its favourable safety and cost profile, taurolidine locking should be considered as an additional strategy to prevent CRBSIs.

**TRIAL REGISTRATION:** Clinicaltrials.gov, identifier: NCT01826526.

#### Reference:

Wouters, Y., Theilla, M., Singer, P., Tribler, S., Jeppesen, P.B., Pironi, L., Vinter-Jensen, L., Rasmussen, H.H., Rahman, F. and Wanten, G.J.A. (2018) Randomised clinical trial: 2% taurolidine versus 0.9% saline locking in patients on home parenteral nutrition. *Alimentary Pharmacology & Therapeutics*. July 5th. .

doi: 10.1111/apt.14904.

