



This observational study investigated the consequences of a catheter-salvage strategy related to CRBSIs” Tribler et al (2018).

Abstract:

**BACKGROUND:** In intestinal failure (IF) patients receiving home parenteral support (HPS), catheter-related bloodstream infections (CRBSIs) frequently result in replacement of their tunneled central venous catheters (CVCs), which may lead to future loss of central venous access.

**OBJECTIVE:** This observational study investigated the consequences of a catheter-salvage strategy related to CRBSIs.

**DESIGN:** All CRBSIs from 2002 to 2016 in the Copenhagen IF and microbiological databases were retrospectively analyzed. Catheter salvage was defined by successful antimicrobial therapy with a retained CVC at discharge. Re-occurrences of CRBSIs with the same microbial species and identical antibiogram were defined as a relapse (<30 d) or as a recurrent (30-100 d) infection. Cox regression analyses incorporated a frailty factor to account for recurrent events and overrepresentation by some patients. Cumulative incidence curves are presented with a competing risk model.

**RESULTS:** There were 2006 tunneled CVCs inserted in 715 adult HPS patients covering 2014.3 CVC years, with a CRBSI incidence rate of 1.83/1000 (n = 1350) and a mortality rate of

0.007/1000 CVC days (n = 5). The mean  $\pm$  SD salvage rate was 55.3%  $\pm$  5.5%, varying according to infection type and causative microorganism. The overall risk of CRBSI relapse was 7.5%, and the risk of CRBSI recurrence was 7.3%. The HR for a subsequent CRBSI was 14% lower in a replaced than in a retained CVC (95% CI: 0.74, 0.99). The HR for a new CRBSI after catheter salvage was 36% higher after polyinfections than after monoinfections (95% CI: 1.03, 1.79). Enterobacteriaceae entailed an increased risk of CRBSI recurrence compared with CoNS (2.26; 95% CI; 1.08, 4.75) and *S. aureus* (4.45; 95% CI: 1.28, 15.5).

**CONCLUSIONS:** High catheter-salvage rates related to CRBSIs were achievable and safe in HPS patients within a broad range of microorganisms but contributed to an increased risk of CRBSI relapse or recurrence.

#### Reference:

Tribler, S., Brandt, C.F., Fuglsang, K.A., Staun, M., Broebeck, P., Moser, C.E., Scheike, T. and Jeppesen, P.B. (2018) Catheter-related bloodstream infections in patients with intestinal failure receiving home parenteral support: risks related to a catheter-salvage strategy. *The American Journal of Clinical Nutrition*. 107(5), p.743-753.

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