



“This study shows that locking with TSC in patients with hematological malignancies significantly reduced the incidence of CVC-BSI with gram-negative rods. However, the incidence of CVC-BSI with coagulase-negative staphylococcus or CVC-related thrombosis was not reduced by TSC locking.” Boersma et al (2014).

#### Reference:

Boersma, R.S., Jie, K.S., Voogd, A.C., Hamulyak, K., Verbon, A. and Schouten, H.C. (2014) Concentrated citrate locking in order to reduce the long-term complications of central venous catheters: a randomized controlled trial in patients with hematological malignancies. Supportive Care in Cancer. June 20th. .

Citrate locking to reduce long-term central line complications <http://ctt.ec/2az9U+> @ivteam #ivteam

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#### Abstract:

**PURPOSE AND METHODS:** Central venous catheter (CVC)-related thrombosis and infections are frequently occurring complications in patients with hematological malignancies. At present, heparin is most often used as a locking solution. Trisodium citrate (TSC) had been shown to be a very effective antimicrobial catheter locking in hemodialysis patients. We performed a prospective randomized phase III multicenter trial to determine the efficacy of

TSC as a locking solution compared to heparin in preventing CVC-related thrombosis and infections in patients with hematological malignancies.

**RESULTS:** Thirty-four episodes of CVC-related bloodstream infections (CVC-BSI) occurred in the 108 patients who were randomized to locking with heparin compared with 35 episodes in the 99 patients who were randomized to locking with TSC ( $P = 0.654$ ). We did find seven times more CVC-BSI with gram-negative rods in CVCs locked with heparin ( $P = 0.041$ ). The cumulative incidence of symptomatic thrombosis was 10 % in the heparin group and 5 % in the TSC group (hazard ratio 0.525; 95 % confidence interval 0.182-1.512).

**CONCLUSION:** This study shows that locking with TSC in patients with hematological malignancies significantly reduced the incidence of CVC-BSI with gram-negative rods. However, the incidence of CVC-BSI with coagulase-negative staphylococcus or CVC-related thrombosis was not reduced by TSC locking.

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).

Guide for intravenous chemotherapy and associated vascular access devices from Macmillan. CancerUK IV chemotherapy information.



