

The aim of this study was to compare the effectiveness of 30 % trisodium citrate (TSC30 %) with heparin as CVC lock solutions in preventing catheter-related bloodstream infections (CRBSI) and dysfunction in hemodialysis patients” Correa Barcellos et al (2016).

Abstract:

BACKGROUND: Central venous catheters (CVC) are the only option when hemodialysis is needed for patients without definitive vascular access. However, CVC is associated with complications, such as infection, thrombosis, and dysfunction, leading to higher mortality and expenditures. The aim of this study was to compare the effectiveness of 30 % trisodium citrate (TSC30 %) with heparin as CVC lock solutions in preventing catheter-related bloodstream infections (CRBSI) and dysfunction in hemodialysis patients.

METHODS: Randomized, double-blind controlled trial comparing the event-free survival of non-tunneled CVC locked with heparin or TSC30 % in adult hemodialysis patients.

RESULTS: The study included 464 catheters, 233 in heparin group, and 231 in TSC30 % group. The CRBSI-free survival of TSC30 % group was significantly shorter than that of heparin group. When stratified by insertion site, heparin was better than TSC30 % only in subclavian CVC. The dysfunction-free survival was not different between groups in the main analysis, but there is also a shorter survival among subclavian CVC locked with TSC30 % in stratified analysis.

CONCLUSION: There was no difference on CRBSI-free or dysfunction-free survival between jugular vein CVC locked with heparin or 30 % citrate. However, subclavian CVC locked with 30 % citrate presented shorter event-free survival. This difference may be related to anatomical and positional effects, CVC design, and hydraulic aspects of the lock solution.

GOV IDENTIFIER: NCT02563041.

Reference:

Correa Barcellos, F., Pereira Nunes, B., Jorge Valle, L., Lopes, T., Orlando, B., Scherer, C., Nunes, M., Araújo Duarte, G. and Böhlke, M. (2016) Comparative effectiveness of 30 % trisodium citrate and heparin lock solution in preventing infection and dysfunction of



hemodialysis catheters: a randomized controlled trial (CITRIM trial). Infection. August 29th.

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