The purpose of the CLOCK Trial was to evaluate two catheter lock solutions on reduction of PF incidence” Luiz et al (2016).

Abstract:

Introduction: Poor blood flow rate (PF) is highly prevalent among CKD 5D patients with long-term central venous catheters. Heparin catheter lock solutions are commonly used to maintain catheter patency, however the incidence of PF remains high. The purpose of the CLOCK Trial was to evaluate two catheter lock solutions on reduction of PF incidence.

Methods: Seventy-five CKD 5D patients on high-efficiency hemodialysis at the Integrated Centre of Nephrology (Guarulhos, Brazil) were randomized 1:1:1 to receive a lock solution combining minocycline 3 mg/mL with the anticoagulant/chelation agent EDTA 30 mg/mL (M-EDTA) or heparin 1000 IU/mL (H) or trisodium citrate 30% (TSC) vs. H for 15 weeks. A total of 68 patients completed the trial in which both investigators and patients were blinded to treatment allocation. The primary end-point was the occurrence of hydraulic resistance and secondary safety end-point was adverse drug reactions related to the lock solutions.

Findings: At the beginning of the trial, 7 patients were excluded from this trial due to their
poor catheter care. The incidence of hydraulic resistance was significantly higher among patients on H (18/23) compared to TSC (4/22) and M-EDTA (2/23) lock solutions, (P < 0.001).

Discussion: The CLOCK Trial suggests TSC and M-EDTA may preserve catheter patency better than H. TSC may be a better option due to the lack of association with long-term antimicrobial resistance.

Reference:
Luiz, M.V., Sacavone, C. and Tzanno, C. (2016) The CLOCK trial, a double-blinded randomized controlled trial: Trisodium citrate 30% and minocycline 3 mg/mL plus EDTA 30 mg/mL are effective and safe for catheter patency maintenance among CKD 5D patients on hemodialysis. Hemodialysis International. September 26th. .


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