Citrate 4% lock solution is equally effective as heparin in maintaining catheter patency in dialysis patients. It may have a favorable effect on prevention of catheter-related infection due to its additional antiseptic properties as compared to heparin” Abdel Azim et al (2018).

Abstract:

BACKGROUND: Limited reports are available on the role of 4% citrate as a locking solution for temporary dialysis catheters. Hence, the aim of this study is to investigate the role of 4% citrate vs. heparin 5,000 µ/mL as a catheter-locking solution in a randomized controlled trial.

MATERIALS AND METHODS: The trial was conducted in Egypt where the use of non-tunneled temporary catheters is prevalent compared to tunneled long-term catheters. The efficacy of catheter-locking solutions was compared regarding observation of rate of catheter dysfunction, low-flow pump, fever as a sign of central-line blood-stream infection (CLBSI), catheter-site infection, thrombosis, local bleeding, and systemic bleeding in each group of the study.

RESULTS: Each group consisted of 105 patients. The number of patients who developed CLBSI in the citrate group was 11 (10.5%) compared to 23 (21.9%) in the heparin group (p < 0.025). The number of patients who developed catheter dysfunction in the citrate group was
Sodium citrate versus heparin as IV locking solution for central venous catheters

similar to those in the heparin group. The incidence of catheter-site infection, thrombosis, and local bleeding in the citrate group was similar to that in the heparin group. CONCLUSION: Citrate 4% lock solution is equally effective as heparin in maintaining catheter patency in dialysis patients. It may have a favorable effect on prevention of catheter-related infection due to its additional antiseptic properties as compared to heparin. Citrate-based locking solutions are a promising alternative to unfractionated heparin as a locking solution for dialysis catheters.

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