Normal saline solution and lactated Ringer’s solution were associated with similar 24-hour recovery scores and 7-day health care use in stable ED patients. These results supplement those of recent trials by informing fluid choice for stable ED patients” Friederich et al (2018).

Abstract:

Study objective: The purpose of this study is to test the hypothesis that balanced crystalloids improve quality of recovery more than normal saline solution (0.9% sodium chloride) in stable emergency department (ED) patients. Secondary outcomes measured differences in health care use.

Methods: A single-site, participant- and evaluator-blinded, 2-arm parallel allocation (1:1), comparative effectiveness, randomized controlled trial allocated adults receiving intravenous fluids in the ED before discharge to receive 2 L of lactated Ringer’s solution or normal saline solution. The primary outcome was symptom scores measured by the validated Quality of Recovery–40 instrument (scores 40 to 200) 24 hours after enrollment. Secondary outcomes included subsequent health care use and medication compliance.

Results: Participants (N=157) were enrolled and follow-up was analyzed for 94 (follow-up rate of 60%) with intention-to-treat methodology. There was no difference in postenrollment
Quality of Recovery–40 scores between normal saline solution and lactated Ringer’s solution groups (mean difference 2.4; 95% confidence interval [CI] –6.8 to 11.6). Although preenrollment scores were higher in the lactated Ringer’s solution group (mean difference 10.5; 95% CI 1.9 to 19.0), adjusting for presurvey imbalances did not change the primary outcome (adjusted difference –3.9; 95% CI –12.9 to 5.2). There were no differences in return to ED (mean difference 7.5%; 95% CI –8.7% to 23.8%), prescriptions filled (mean difference 22.2%; 95% CI –3.3% to 47.6%), or seeking care from another provider (mean difference –2.0%; 95% CI –19.9% to 15.9%) at 7 days.

Conclusion: Normal saline solution and lactated Ringer’s solution were associated with similar 24-hour recovery scores and 7-day health care use in stable ED patients. These results supplement those of recent trials by informing fluid choice for stable ED patients.

Reference:


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