Although it is a monocentric retrospective study, we suggest that positive cumulative fluid balance is one of the major factors that can predict the clinical outcome of critically ill patients during their ICU stay and after their discharge from the ICU” Brotfain et al (2016).

Abstract:

Introduction: Sepsis and septic shock continue to be syndromes that carry a high mortality rate worldwide. Early aggressive fluid and vasopressor support have resulted in significant improvement in patient outcomes. The prognostic clinical significance of a positive fluid balance in septic ICU patients remains underterminable.

Methods: We collected data from 297 septic patients hospitalized in our general and medical ICUs (GICU and MICU) at Soroka Medical Center between January 2005 and June 2011 and divided the four study groups into the following four fluid balances: group 1, patients with FBD less than 10 L; group 2, patients with FBD 10–20 L; group 3, patients with FBD 20–30 L; and group 4, patients with FBD in excess of 30 L.

Results: The ICU and in-hospital mortality rate was also significantly higher in groups 2–4 as
compared to group 1 (P < .001 for both ICU and in-hospital mortality, see Table 2). The positive cumulative fluid balance on discharge from ICU (FBD) was found to be an independent predictor of ICU mortality (OR 1.04, 95%CI 1.02–1.06, P < .001, Table 3) and in-hospital mortality (OR 1.06, 95%CI 1.03–1.08, P < .001, Table 5) and also to constitute a risk factor for new organ system dysfunction at hospital discharge (OR 1.01; 95%CI 1.01–1.013; P < .001, Table 6) in critically ill patients with severe sepsis/septic shock.

Conclusions: Although it is a monocentric retrospective study, we suggest that positive cumulative fluid balance is one of the major factors that can predict the clinical outcome of critically ill patients during their ICU stay and after their discharge from the ICU.

Reference:

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