PACU LITERATURE REVIEW

REFERENCE

Meyhoff TS, Hjortrup PB, Wetterslev J, et al. Restriction of intravenous fluid in icu patients with septic shock. *N Engl J Med.* 2022;386(26):2459-2470.

PMID: 3 35709019

SUMMARY

Among adult patients in the ICU, intravenous fluid restriction did not result in fewer deaths at 90 days than standard IV fluid therapy.

BACKGROUND

- Septic shock is a leading cause of death worldwide, and improvements in care are warranted. Owing to insufficient evidence, no recommendation is currently given with regard to the use of restrictive of liberal fluid strategies in patients who still have signs of hypoperfusion after initial resuscitation measures.

STUDY OBJECTIVE

- To determine if a restricted fluid strategy had an impact on mortality in patients with septic shock

STUDY DESIGN

- Stratified, parallel-group, open label, randomized clinical trial in 31 ICUs in eight countries

STUDY INTERVENTION & COMPARISON

- Restrictive* IV fluid group vs standard IV fluid group
  *Fluids only allowed in cases of hypoperfusion, documented fluid loss, dehydration, or to a minimum of 1L per day

RESULTS

- **Primary Outcome**
  - Death occurred in 42.3% of patients in the restrictive group vs 42.1% in the standard group (-0.1 percentage points, p=0.96)
- **Secondary Outcomes**
  - No difference in major adverse events (29.4% vs 30.8%) or numbers of days alive without life support or days alive and out of the hospital at 90 days
  - No heterogeneity in the primary outcome based on respiratory support, AKI, lactate, body weight, or receipt of 30mL/kg bolus prior to randomization

ADDITIONAL READINGS

- Corl KA, Prodromou M, Merchant RC, et al. The Restrictive IV Fluid Trial in Severe Sepsis and Septic Shock (RIFTS): A Randomized Pilot Study *Crit Care Med.* 2019;47(7):951-959.
- Boyd JH, Forbes J, Nakada T aki, Walley KR, Russell JA. Fluid resuscitation in septic shock: a positive fluid balance and elevated central venous pressure are associated with increased mortality. *Crit Care Med*. 2011;39(2):259-265.
- Meyhoff TS, Møller MH, Hjortrup PB, Cronhjort M, Perner A, Wetterslev J. Lower vs higher fluid volumes during initial management of sepsis: a systematic review with meta-analysis and trial sequential analysis. *Chest*. 2020;157(6):1478-1496.