Fluid Stewardship References

Special Guest: Anthony Hawkins, PharmD, BCCCP

General/Background Readings

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Hoste EA, et al. Four phases of intravenous fluid therapy: a conceptual model. *Br J Anaesth* 2014; 113(5): 740-747. https://www.ncbi.nlm.nih.gov/pubmed/25204700

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Jean-Louis V. Fluid management in the critically ill. *Kidney International* 2019; 96(1): 52-57. https://www.ncbi.nlm.nih.gov/pubmed/30926137

Marik PE. Fluid responsiveness and the six guiding principles of fluid resuscitation. *Crit Care Med* 2016; 44(10): 1920-1922. https://www.ncbi.nlm.nih.gov/pubmed/26571187

Studies Discussed During the Episode

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Leisman DE, et al. Predictors, prevalence, and outcomes of early crystalloid responsiveness among initially hypotensive patients with sepsis and septic shock. *Crit Care Med* 2018; 46(2): 189-198. https://www.ncbi.nlm.nih.gov/pubmed/29112081

Magee CA, et al. Insidious harm of medication diluents as a contributor to cumulative volume and hyperchloremia: a prospective, open-label, sequential period pilot study. *Crit Care Med* 2018; 46(8): 1217-1223. https://www.ncbi.nlm.nih.gov/pubmed/29727367

Toupin F, et al. Assessment of fluid responsiveness with end-tidal carbon dioxide using a simplified passive leg raising maneuver: a prospective observational study. *Can J Anaesth* 2016; 63(9): 1033-1041. https://www.ncbi.nlm.nih.gov/pubmed/27307176

Additional/Future Studies

Crystalloid Liberal or Vasopressors Early Resuscitation in Sepsis (CLOVERS)
https://clinicaltrials.gov/ct2/show/NCT03434028

Role of active deresuscitation after resuscitation-2 (RADAR-2)
https://clinicaltrials.gov/ct2/show/NCT03512392

Furosemide and albumin for diuresis of edema: a pilot randomized controlled trial (FADE)
https://clinicaltrials.gov/ct2/show/NCT02055872

Tonicity of perioperative maintenance solutions (TOPMAST-1) https://clinicaltrials.gov/ct2/show/NCT03080831

Metabolism of isotonic versus hypotonic maintenance solutions in fasting healthy adults (MIHMoSA) https://clinicaltrials.gov/ct2/show/NCT02822898

Cori KA, 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. https://www.ncbi.nlm.nih.gov/pubmed/30985449