



The article reviews the evidence on diagnosis and treatment of hypovolemia and discusses the use of balanced solutions and early goal-directed therapy (EGDT) in septic shock resuscitation” Schindler and Marx (2016).

Abstract:

PURPOSE OF REVIEW: Evidence-based fluid therapy is complicated by blurred boundaries toward other fields of therapy and the majority of trials not focusing on patient-relevant outcomes. Additionally, recent trials unsettled the faith in traditional concepts on fluid therapy. The article reviews the evidence on diagnosis and treatment of hypovolemia and discusses the use of balanced solutions and early goal-directed therapy (EGDT) in septic shock resuscitation.

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RECENT FINDINGS: Hypovolemia should be diagnosed and its treatment guided by a multifaceted approach, including medical history, physical examination, volume responsiveness, and technical parameters – dynamic indicators, volumetric indicators, sonography, and metabolic indicators. Central venous pressure and pulmonary artery occlusion pressure should be avoided. In ICU patients, balanced crystalloids should primarily

be used, because unbalanced infusions (especially saline) cause hyperchloremic acidosis which is associated with renal impairment and infections. Colloids are beneficial to restore blood volume rapidly. Hydroxyethyl starch may be harmful although the validity of the respective recent studies is limited by methodological flaws. Early aggressive fluid therapy is still beneficial in septic shock resuscitation, despite recent trials challenging the EGDT concept. Today, 10 years after Rivers, 'usual care' includes aggressive fluid resuscitation that is as effective as formal EGDT.

SUMMARY: Evidence-based fluid therapy includes a multifaceted diagnostic approach, the primary use of balanced crystalloids and early aggressive (septic) shock resuscitation.

Reference:

Schindler, A.W. and Marx, G. (2016) Evidence-based fluid management in the ICU. Current Opinion in Anaesthesiology. January 18th. .

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