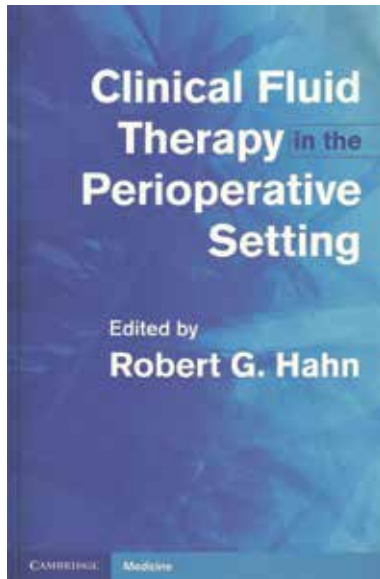


## BOOK REVIEW

## Clinical fluid therapy in the perioperative setting

Edited by Robert Hahn



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Given that both hypoperfusion of organs as well as fluid overloading greatly affect a patient's postoperative course, careful titration of fluids is mandatory. However, due to a lack of scientific data, controversies about the amount, type and goal of fluid therapy remain. In this book of 21 chapters, which are all narrative reviews, some of these issues are discussed.

A rule of thumb is given as to how much fluid should be infused in several types of surgery, including orthopedic, gastrointestinal and vascular surgery. Open surgery requires a larger amount than laparoscopic procedures. Most research in major abdominal surgery has focused on restrictive vs. liberal fluid therapy. The summary of results seems to favour a more restrictive approach.

Several meta-analyses are discussed on the choice of crystalloids or colloids as the preferred type of fluid for the perioperative patient. It is noted that dextran reduces haemostatic potential and starches can induce anaphylactic reactions. Otherwise, no definite directions as to which type of fluid should be used is given. Of note, the literature discussed in this book does not include recent trials which have compared starches with crystalloids in several patient populations, which mostly show a higher mortality in patients resuscitated with starches.

The goal of fluid infusion is to maintain 'adequate tissue perfusion', but how this goal should be reached is not clear. Goal directed therapy can include non-invasive analysis of arterial or pulse oximetry wave forms or invasive monitoring of cardiac output with a pulmonary artery catheter or echocardiography. Using these techniques to guide the amount of fluids seems to reduce morbidity in high risk surgical patients, but their implementation is still a challenge.

Several other patient conditions are also discussed in this book. For example, it is noted that the tolerance to acute haemodilution due to blood loss is high. Although the choice of resuscitation fluids is also not clear in this setting, it is generally agreed that blood transfusion can often be avoided. This does not hold true for uncontrolled haemorrhage, in which fluids contribute to further haemodilution. In this case, blood products may be a reasonable alternative.

Besides suggestions for clinical practice perioperatively, the book provides background information on the principles of cardiac output measurements as well on the physiology of body fluid compartments and fluid compositions, which are of interest to any doctor who prescribes fluid therapy to patients.

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