FLUID DEBATE IN THORACIC ANESTHESIA

Prof. Tamer Osama

Fluid therapy is one of the most controversial topics in perioperative management. There is continuing debate with regard to the quantity and the type of fluid resuscitation during elective major surgery. However, there are increasing reports of perioperative excessive intravascular volume leading to increased postoperative morbidity and mortality. Recent evidence suggests that judicious perioperative fluid therapy improves outcome after major elective thoracic surgery. The observed benefits may not be solely attributable to crystalloid restriction but also to the use of colloids instead.

Acute lung injury (ALI) is the cause of significant morbidity and mortality after thoracic surgery. While ALI may be caused by a variety of underlying medical (ARDS, congestive heartfailure) and surgical (air leak, bronchopleural fistula) problems some cases cannot be traced to specific etiologies. These cases have been associated with pneumonectomy (“postpneumonectomy pulmonary edema”), “larger amounts of intraoperative fluid administration and “high” postoperative urinary output. Other risk factors noted have been the type of resection, (pneumonectomy more frequently than lobe resection), the side of surgery (right more often than left), administration of fresh frozen plasma, high intraoperative airway pressure during one lung ventilation, mediastinal lymphatic drainage, postoperative mediastinal position, serum cytokines, oxygen toxicity, preoperative alcohol abuse and poor postoperative pain control.