Perioperative fluid optimization

Editor—We read with interest the study by Parker and colleagues,1 but are not entirely surprised by their findings given the evidence from previous work.2,3

The central feature of these previous studies was that volume status was optimized intraoperatively for the individual patient, guided by either oesophageal Doppler or central venous pressure monitoring. In effect, a Starling curve was ‘drawn’ for each patient to determine the volume status at which cardiac performance was maximized and, as a consequence, the oxygen delivery was maximized for that particular patient. Moreover, in a previous study,3 the range of additional colloid required intraoperatively varied between 200 ml and 3 litres. It is for this reason that we would not expect a fixed-volume fluid policy based on an arbitrary non-individualized protocol to yield the same benefits. Indeed, it may cause harm as this fixed volume of 500 ml may be too large for some patients, resulting in cardiac failure, whilst for others it may be too small, resulting in organ dysfunction attributable to poor tissue oxygen delivery.

Also, we do not think that the timing (i.e. preoperative rather than intraoperative) of fixed-volume colloid administration would have made any difference to outcome for this study, as suggested by Parker and colleagues in their discussion.3 The crucial aspect of fluid therapy for these patients is that it should be tailored to the individual, and a ‘one size fits all’ approach is inappropriate. It may be that patients would benefit from this fluid optimization process throughout the perioperative period and not just intraoperatively, as described by Sinclair and colleagues2 and Venn and colleagues.3

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