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Reply to Mion

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Sir: We thank Dr Mion and his colleagues for their interest in our study [1], and we appreciate that this important topic is such a matter of discussion and concern. Addressing the content of Dr Mion's letter, however, is made difficult by an unclear meaning of the word "evidence".

First, Mion et al. argue that our study "solely proves a link between hyperoncotic albumin and probability of renal replacement therapy". This is strange since our results indicate that "after adjustment on potential confounding factors and on propensity score for the use of hyperoncotic colloids, the use of artificial hyperoncotic colloids [OR: 2.48 (1.24–4.97)] and hyperoncotic albumin [OR: 5.99 (2.75–13.08)] was significantly associated with occurrence of renal event." This is not an opinion but a result. We therefore concluded, carefully selecting our wording that "this suggests that harmful effects on renal function and outcome of hyperoncotic colloids may exist." We believe this conclusion is cautious and data-driven. Other authors have written much stronger statements. The Cochrane collaborative group, which is usually considered to base their analyses on "evidence",

indicated in 2007 [2], before the VISEP study [3], that "There is no evidence from randomized controlled trials (RCTs) that resuscitation with colloids reduces the risk of death, compared to resuscitation with crystalloids, in patients with trauma, burns or following surgery. As colloids are not associated with an improvement in survival, and as they are more expensive than crystalloids, it is hard to see how their continued use in these patients can be justified outside the context of RCTs." A Canadian group [4], also supposed to work based on "evidence" recently concluded from their meta-analysis that the use of hydroxyethylstarches was significantly associated with renal replacement therapy and cautioned against the routine use of these compounds. The association between hydroxyethylstarches and renal dysfunction was also shown in another meta-analysis.

The problem of the measured oncotic pressure is complex because the molecular properties of the same compound can markedly differ in vitro and in vivo. When one compound has plasma expanding effect larger the infused volume this indicates that the in vivo molecular weight has an hyperoncotic effect. This is why the hydroxyethylstarches are classified as hyperoncotic compounds, and this is also what is expected by clinicians.

Because of the renal risk and other concerns, and because we could not find in the literature a single study showing a clinical "evidence" that colloids were beneficial for the survival of critically ill patients, we have stopped using colloids in our clinical practice. The largest study ever performed on this topic [5] (the SAFE study enrolled close to 7,000 patients) has shown that using solely crystalloids is perfectly safe. As clinicians, we would be highly interested to have a safe (and possibly inexpensive)

molecule for efficient fluid loading that results in improved patient's survival (and not only endothelial function) and welcome the development of well conducted and monitored RCTs for testing new compounds. Today, however, the problem is the complete lack of "evidence" in favour of any indication for using colloids. But again, the problem may be on the meaning of the word "evidence".

References

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