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“Colloid twice daily” is not fluid resuscitation! Inappropriate inclusion of clinical trials in meta-analyses may distract from gaps in evidence

Accepted: 3 May 2013
Published online: 5 June 2013
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A reply to this letter can be found at:
doi:[10.1007/s00134-013-2962-4](https://doi.org/10.1007/s00134-013-2962-4).

Dear Editor,

We read with interest the recent systematic review investigating the impact of hydroxyethyl starch administration as part of initial fluid resuscitation for severe sepsis on mortality [1]. The authors claimed to have identified “prospective randomised controlled trials (RCTs) in adult patients with severe sepsis receiving 6 % tetrastarch (of potato or waxy maize origin) as part of fluid resuscitation in comparison with other non-HES fluids after randomisation in the critical care setting”. They put emphasis on “initial fluid resuscitation”, since in the concluding remarks they state that “90-day mortality were significantly higher in severe sepsis patients receiving 6 % tetrastarch 130 kDa solutions as part of *initial fluid resuscitation*” [1]. Bearing that in mind, we wonder why the authors included reference 41 in which patients were randomized to either 6 % HES 130/0.4, 250 ml every 6 h, or 20 % albumin, 100 ml every 12 h [2].

We would like to suggest more precise adherence to the inclusion criterion irrespective of a negligible effect on overall outcome. The administration of any fluid on a regular basis and in a fixed dose for more than 2 days cannot be considered as acute volume resuscitation.

However, this analysis [1] does not seem to be an exceptional case of arbitrary terminology of sepsis-related fluid resuscitation, since other analyses have focused on a comparable clinical scenario and outcome. The paper by Dolecek et al. in 2009 can be found in other systematic reviews as well [3, 4], including a recent paper on “fluid resuscitation” in this journal [5].

In summary, being more precise with the therapy under investigation in a meta-analysis and not solely focusing on the trial methodology, and assessing internal validity, may help avoid the potential for biased conclusions and thus help identify gaps in evidence. Such gaps still prevail in the acute phase of volume resuscitation in severe sepsis guided by valid parameters for the prediction of fluid responsiveness.

Conflicts of interest P.K. (LKP) is the coordinator of an investigator-initiated trial investigating acute volume resuscitation in severe sepsis and received funding from FreseniusKabi, Germany.

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