CRITICAL CARE

LETTER

Concerns about renal safety of HES 130

Christian J Wiedermann*[1] and Michael Joannidis[2]

See related research by Boussekey *et al.*, http://ccforum.com/content/14/2/R40

In a meta-analysis of 34 randomized trials evaluating hydroxyethyl starch (HES) 130/0.4 in 9,587 patients and a meta-analysis evaluating HES 130/0.42 in 804 patients, HES 130 was shown to increase mortality and the need for renal replacement therapy (RRT) [1]. In the largest included trial of the meta-analysis, the Crystalloid versus Hydroxyethyl Starch Trial (CHEST) with 7,000 ICU patients [2], HES 130/0.4 increased the need for RRT despite a low average daily dose of only 526 ml. The meta-analysis also included RRT data from the CRYSTMAS trial that had not been reported in the original publication of that trial but were later published in a letter to *Critical Care* [3] and also incorporated in revised US Prescribing Information for HES 130/0.4 [4].

Some authors have nevertheless recently sought to defend the renal safety of HES 130/0.4 [5], in part by citing the absence of significant signs indicating renal dysfunction in a retrospective study by Boussekey and colleagues [6]. In their study of 363 ICU patients, HES 130/0.4 was administered to 168 patients at the low mean cumulative dose of 763 ml over the first 48 hours [6]. No significant difference in acute kidney injury was detected using the RIFLE criteria. However, Boussekey and colleagues neglected to report their RRT data. Those data should be reported now, so that they may inform the ongoing debate about the renal safety of HES 130/0.4.

Authors' response

Nicolas Boussekey and Olivier Leroy

We have several remarks concerning the letter by Wiedermann and Joannidis. First, our goal was not to defend HES. We use isotonic saline quasi exclusively for volume loading in our unit, and we wanted to know whether HES prescribed in very limited quantity could also affect renal function. Second, RRT data were reported in our article in Table 3 (number of patients hemofiltered and duration of hemofiltration) [6]. The differences between the patients with or without HES were not significant. Anyway, our cohort was too small to correctly study this parameter. Moreover, to evaluate renal function, we used the RIFLE classification, which has proved to be a good and reproducible marker of renal failure [7-9]. We think using the RIFLE classification was more accurate than RRT initiation, an indication which could be physician dependent.

Abbreviations
HES, hydroxyethyl starch; RIFLE, Risk, Injury, Failure, Loss, End-stage kidney disease; RRT, renal replacement therapy.

Competing interests
CJW received fees for speaking and travel cost reimbursement from CSL Behring, Baxter, Kedrion, and PPTA. MJ received speaker's honoraria from Baxter, Fresenius, Gambro, Orion Pharma, CLS Behring, and Braun. The remaining authors declare that they have no competing interests.

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Published: 1 August 2013

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doi:10.1186/cc12805
Cite this article as: Wiedermann CJ, Joannidis M: **Concerns about renal safety of HES 130.** *Critical Care* 2013, **17:**444.