CRITICAL CARE

LETTER

Procalcitonin-guided therapy in severe sepsis and septic shock

Wan-Jie Gu and Jing-Chen Liu*

See related research by Schlattmann *et al.*, http://ccforum.com/content/17/6/R291

We read with interest the recent systematic review of procalcitonin-guided therapy in intensive care unit patients with severe sepsis and septic shock [1]. We congratulate and applaud their important work, but several important issues should be noted.

First, the authors failed to include a relevant randomized controlled trial in their meta-analysis [2], although it apparently met their inclusion criteria. A statistical significance may be more likely to be revealed by adding this trial to their meta-analysis. Second, it was noteworthy that all of these eligible studies were conducted in Europe, as acknowledged by the authors, which should be taken as an important limitation. Third, the authors found that procalcitonin-guided therapy may have no beneficial effect on mortality. One possible explanation is that mortality may be closely related to other factors, such as age, illness severity, the presence of comorbidity, and so on [3].

Authors' response

Peter Schlattmann and Frank M Brunkhorst

We appreciate the comments of Drs Gu and Liu. Unfortunately, we were not able to consider the results of the randomized controlled trial from Deliberato and colleagues [2] in our meta-analysis since we limited our research to 14 June 2013. However, we referred to the study in the PRISMA flow diagram as ongoing (ClinicalTrials.gov trial NCT01494675).

The authors found in 81 randomized patients with severe sepsis that median antibiotic duration was 9 days in the procalcitonin group (n = 20) versus 13 days in the non-procalcitonin group (n = 31), $P = 0.008$. This goes along with the results of our meta-analysis.

We agree that more studies outside Europe should be performed and mortality reasons in severe sepsis are multifactorial. As we concluded in our review, however, a reduction of antibiotic treatment duration according to procalcitonin guidance seems to be safe, without increasing 28-day and in-hospital mortality rates.

* Correspondence: jingchenliu1964@sina.cn
Department of Anaesthesiology, the First Affiliated Hospital, Guangxi Medical University, 22 Shuangyong Road, Nanning 530021, Guangxi, China

Competing interests
The authors declare that they have no competing interests.

Published: 03 May 2014

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10.1186/cc13856
Cite this article as: Gu and Liu: Procalcitonin-guided therapy in severe sepsis and septic shock. *Critical Care* 2014, 18:427