CRITICAL CARE

LETTER

Timing of renal replacement therapy: is it when or how much?

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See related research by Leite *et al.*, http://ccforum.com/content/17/2/R62

Leite and colleagues addressed the importance of early initiation of renal replacement therapy (RRT) in decreasing mortality and ICU length of stay in patients with Acute Kidney Injury Network stage 3 [1]; however, we have a few concerns regarding the study.

The impact of fluid balance on morbidity and mortality in patients with septic shock, especially with acute kidney injury, cannot be understated [2]. This impact can affect ventilator-free days and the length of ICU stay. The authors did not show their first 6-hour and 24-hour fluid balances.

Whether the reported improvement was due to the timing of initiation of RRT, the dose, or misrepresentation of the study population is an unanswered question. Were improvements seen in morbidity and mortality simply because more volume was removed because of early initiation of RRT or because patients with more severe disease were not represented in the study?

The overall in-hospital mortality in this study was 72%, which is extremely high. In previous prospective studies, the overall mortality rate was just 46% [3]. Were there other variables in management that were not addressed, such as the time from admission to antibiotic treatment, adequate fluid resuscitation, or initiation vasopressor treatment, which may have led to the high mortality in this population [4]?

Authors' response

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We appreciate the interest of Dr Mahadeshwar and colleagues in our paper. First, regarding the impact of fluid balance in mortality, we consider this was one limitation of our study as stated in the Discussion section: 'Another limitation is the lack of data on fluid balance, making it especially difficult to explore reasons for reduced mechanical ventilation time in early RRT patients' [1].

Regarding the mortality of our patients, the 46% mortality rate cited by Mahadeshwar and colleagues refers to the mortality among septic patients having or not having acute kidney injury. In our paper, only patients requiring RRT were included and the majority of patients had sepsis. Chou and colleagues disclosed a similar mortality rate in septic patients needing RRT [5].

References
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