Author's response to reviews

Title: Procalcitonin as markers of sepsis and outcome in patients with Neurotrauma a prospective observational study

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Version: 3 Date: 21 July 2013

Author's response to reviews: see over
Dear Editors:

We would like to submit the enclosed manuscript entitled “Procalcitonin as markers of sepsis and outcome in patients with Neurotrauma: a prospective observational study”, which we wish to be considered for publication in “Critical Care”. No conflict of interest exits in the submission of this manuscript, and manuscript is approved by all authors for publication. I would like to declare on behalf of my co-authors that the work described was original research that has not been published previously, and not under consideration for publication elsewhere, in whole or in part. All the authors listed have approved the manuscript that is enclosed.

In this work, we investigated the diagnostic and prognostic value of serum procalcitonin (PCT) and C-reactive protein (CRP) in septic complications and outcome in patients with traumatic brain injury.

Traumatic brain injury (TBI) is one of the most important causes of disability and death in the world and the incidence of nosocomial infection accompaniments of traumatic brain injury is very high. In order to improve survival rates and reduce the incidence of nosocomial infection of TBI, it is important to understand the risk factors associated with septic complications and mortality in TBI patients so that preventative strategies can be developed.

PCT is known related to the severity and the evolution of infection and considered to be associated with a poor prognosis in patients with septicemia. In this study of original version, we examined 105 isolated trauma brain patients to test the hypothesis that serum PCT level is an important indicator for the early recognition of sepsis, high PCT concentration at admission after neurotrauma in ICU patients indicates an increased risk of septic complications.

Serum PCT and CRP were measured on days 1 (at admission) 2, 3, 5 and 7. Our results indicated that levels of initial PCT were significantly higher in patients with sepsis,
severe sepsis or septic shock compared with patients who developed systemic inflammatory response syndrome (SIRS), but not for CRP. Multivariate logistic regression analysis revealed PCT was an independent significant risk factor for sepsis. This fact suggests that increased levels of PCT during the course of hospitalization may be an important indicator for the early recognition of sepsis. In addition, high PCT concentration at admission after neurotrauma in ICU patients indicates an increased risk of septic complications.

I hope this paper is suitable for “Critical Care”. We deeply appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. If you have any queries, please don’t hesitate to contact me at the address below.

Thank you and best regards.

Yours sincerely,

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