Reviewer's report

Title: Utility of Procalcitonin (PCT) and Mid regional pro-Adrenomedullin (MR-proADM) in risk stratification of critically ill febrile patients in Emergency Department (ED). A comparison with APACHE II score.

Version: 4 Date: 8 March 2012

Reviewer: Geetika Sood

Reviewer's report:

Major revisions:
1. define how "suspicion of an infection" was defined - ER doc assessment?
2. Page 8 line 22-24 - The data do not support conclusions related to prognosis, other than hospitalization
3. page 9 line 10-13, line 21 -22 and page 10 line 11-12, The conclusions are not supported by the data presented. there is no data regarding mortality presented - the serum markers correlate to apache scores but not independently to mortality, or prognosis
4. page 9-10 lines 25 line 3 - the authors are claiming that "higher PCT" correlates to "more severe infections" by comapring the 5 groups of of clinical diagnosis and claiming sepsis is the more severe infection? If so this needs to be made a little clearer
5. page 10 line 4- 7 this study does not support this statement
6. The study is also limited by the fact that there is considerable overlap between healthy control values and patient values, not to mention non-bacterially infected controls which were not addressed.

Minor revisions:
1. page 3 line 5 - run-on sentence. would suggest period after specific and a new sentence starting with this
2. page 3 line 11 - "from the infection set up" could be stated better
3. page 3 line 12 - nevertheless should be also
4. page 3 line 14 - delete "commonly"
5. page 3 line 18 - change on more to another
6. page 3 line 20 - run on sentence - end sentence after "activity"
7. page 3 line 22 - what is bactericide activity?
8. page 4 line 1 - run on sentence - end sentence after physician
9. page 4 line 2 - should read it is crucial to make an accurate diagnosis as soon as possible and to risk stratify these patients in order to start prompt...
10. page 4 line 9 - delete "one"
11. page 4 line 11 - run on sentence - end after setting.
12. page 4 line 15 arriving at the Ed with a fever
13. page 4 line 16-19 - this is methods not introduction
14. page 8 line 5 - I don't think diriment is the right word
15 page 8 line 12-15 the study cited does not support both PCT and MR-pro-ADM. The citation needs to be moved, or the sentence needs to be clarified

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare I have no competing interests