Reviewer's report

Title: Hypothermia predicts mortality in critically ill elderly patients with sepsis

Version: 2 Date: 18 January 2010

Reviewer: Ariane Boumendil

Reviewer's report:

The paper is considerably improved and authors have taken into account many of my previous comments. In particular, they did compare predictors of mortality in young and older patients, showing that lower temperature predicts death only in elderly patients. However, I still have a few comments.

Major compulsory revision:

1/ Authors compare crude mortality rate and conclude (first sentence of the discussion) that the mortality is higher in elderly patients.

I wrote in my preceeding review that they should present a comparison of adjusted mortality, thus authors report mortality predicted by severity scores in both age group. Test exists to compare adjusted mortality [or SMR (observed mortality / predicted mortality)] in two groups.

2/ Authors still compare crude length of ICU stay (LOS) and also conclude in the first sentence of the discussion that LOS is not different in older patients. Considering the fact that severity is higher in older patients, (adjusted) LOS might be lower in older patients. I read in authors’ reply that they were not sure on how to compare adjusted LOS ( !) : you might try a cox model (explaining LOS, censoring = death) using age groups and a severity score as covariates. Otherwise you should at least discuss the result (as I just did above).

Minor essential revision:

Discussion

« Despite the higher mortality in elderly patients they did not have a significantly higher incidence of co-morbidities that could account for this increase in mortality. »

Isn’t the increase mortality due to higher initial severity ?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I declare that I have no competing interests