Reviewer’s report

Title: The Ratio of CRP to Prealbumin Levels Predict Mortality in Patients with Hospital-acquired Acute Kidney Injury

Version: 1 Date: 4 February 2011

Reviewer: Matthias Girndt

Reviewer’s report:

The manuscript by Xie and coworkers addresses an interesting topic. The predictive value of inflammation as diagnosed by CRP and albumin levels in patients with acute kidney injury has not been evaluated yet. The study included 155 patients with in-hospital AKI diagnosed upon the RIFLE criteria. This is a meaningful sample size. High levels of CRP and reduced levels of albumin, prealbumin, and cholesterol are predictive for 28d mortality. The ratio of CRP/prealbumin seems to be the strongest independent predictor of mortality since this value remained predictive in multivariate models correcting for age, gender, sepsis and disease severity (SOFA score).

The results are interesting and the study is sound. However, limitations apply. My suggestions are as follows:

1. The time point of measurement of inflammatory markers is not very well defined. It is related to nephrology consultation. However, this consultation may have occurred earlier or later in the different patients. Do the authors have data on the maximum individual CRP or the lowest albumin during the course of disease? Would this approach change the results? What was the average time between ICU admission and nephrology consultation?

2. Statistical methods should be clarified. The aim of the study (primary endpoint) was 90 day mortality (p.5 last paragraph), however, the results are reported as 28 day mortality (abstract and tables). My understanding is that the study analysed 28d mortality as primary endpoint and reports extended observation in fig. 2, is this correct?

3. The role of sepsis should be clarified. More than 40% of the study population suffered from sepsis, however, septic AKI obviously did not play a role. Although this entity is difficult to diagnose, at least a comment might be helpful.

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

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

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