Reviewer's report

Title: B-type natriuretic peptide and high sensitive C-reactive protein predict 2-year All Cause Mortality in Chest Pain Patients: A Prospective Observational Study from Salta, Argentina

Version: 1 Date: 31 July 2011

Reviewer: hugo ten Cate

Reviewer's report:

In this registry study consecutive patients with a presumed ACS were enrolled and had a blood sample taken in which BNP and CRP concentrations were determined to assess the prognostic value with regard to long term outcome (death). The study was performed in an area of Argentina where the resources for optimal care are limited and a substantial fraction of patients were not treated according to current reperfusion guidelines. As it is, this provides registry of a real life situation in an underdeveloped (regarding medical technology availability) area of the world.

In the studied patients 39.5% had a peak TnT concentration exceeding 0.01 ng/mL, showing myocardial necrosis. It may be a question whether it makes much sense to test the chosen diagnostic biomarkers in TnT positive patients, since the management of such patients would have to be aimed at optimizing secondary prevention of vascular death anyway. Here, follow up samples of CRP or BNP would perhaps have given better insight in long term outcomes to identify high risk subjects to who scarce resources could be better directed to. A limitation of the TnT positive subgroup is however, that of those with STEMI less than 50% were treated with PCI, which may be one of the key determinants of successful long term outcome.

The other 60.5% of patients did not have evidence of MI (TnT negative). In fact, in this fraction of patients the predictive value of BNP and CRP may be more interesting since it may identify a proportion of patients at high risk of future CV death (in whom at the time of inclusion coronary artery disease was not yet evident). These patients may benefit from more active follow up and diagnostics towards underlying CVD (or risk factors for CVD). However, the authors suggest that in this TnT negative patients BNP and CRP did not confer any diagnostic value.

Taken together, I think the observations are of interest but the data may have to be organized differently in order to better convey the messages.

Major Recommendations

1. The Introduction is a bit awkward in its organization, describing general features of a prospective registry and discussing the selected biomarkers, while the actual questions of this study are somewhat hidden and stated only at the end of the intro.
2. I would like to see separate survival curves for BNP, CRP and the combination perhaps, regarding TnT negative and positive patients (also consistent with data presented in table 5). Besides it would be of interest to look for differences between TnT positives that did versus those that did not receive PCI in terms of biomarkers linked to survival.

3. Tables 3 and 4 are not essential.

4. The discussion repeats too many data and statistics and should be reduced in length and better focused on the main messages.

**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'