Reviewer’s report

Title: Preoperative levels of Hemoglobin and B-Type Natriuretic Peptide are associated with postoperative morbidity in heart surgery

Version: 1 Date: 1 April 2012

Reviewer: Juan Carlos Villar

Reviewer’s report:

This study tackles an important question for the field, identifying newer or better forms to stratify the risk of adverse events among patients undergoing cardiac surgery. This manuscript has several strengths, including a sizable cohort and number of events, and the completeness of the data collection and follow up. I want to congratulate the authors for maintaining such a cohort, an unusual task for a study originating in a busy hospital in Colombia. The medical community of this field will benefit from having access to the results of this effort to pursue such an important question.

Weaknesses of the study, however, include the choice of statistical plan, and some aspects of the organization of the manuscript. In the first aspect, my recommendation would be to re-analyze the data using survival analysis and cox regression analysis in order to make a better and complete use of the whole data collection (currently the results are based on logistic regression with measures of association based on comparisons of the 5th and 1st quintile, that is 40% of the data). On the later aspect, I would recommend to organize the methods and results sections using subtitles to facilitate the reading of this important study. The reader will certainly benefit from a flowchart of the cohort inception, a separate description of the outcome measures and their hierarchies, and a separation of the results that follows the organization of the tables.

In short, I found sufficient merit and interest in the field for this study to deserve publication. Nonetheless, the work itself should improve if re-constructed in terms of the statistical analysis and itemization of the contents to convey its message and explode the richness of the data in a better way. I would be more than happy to review a new version of the manuscript, if re-submitted to the journal.

Major compulsory revisions:
- Conduct a survival analysis to this cohort
- Use a flowchart to describe the inception and representativeness of the cohort
- Use subtitles for the section of methods and results, following the tables and figures

Minor and discretionary revisions:
Differed until seeing a new version of the manuscript

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I know and I have worked with some of the authors (in issues other than those related with this manuscript)