Reviewer's report

Title: Perioperative application of N-terminal pro-brain natriuretic peptide in patients undergoing cardiac surgery

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Reviewer: Qiang Zhao

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Dr. Liu and her colleagues clarified the relationship of NT-proBNP and the outcomes of the cardiac surgeries, and the factors that influence the plasma level of NT-proBNP. The study is of importance to evaluate the perioperative risk and to predict the prognosis of patients undertaken cardiac surgery, including heart valve, coronary, aortic and congenital heart disease in this serial. The data was original and the study was an excellent retrospective analysis. The study found out that there were seven preoperative factors associated with the preoperative level of NT-proBNP. The results demonstrated that NT-proBNP was closely related to the ventilation time, ICU stay, and surgical mortality. There are some questions for you. First, did you analyze the NT-proBNP level in the subgroups of NYHA heart function#Is there any difference of postoperative NT-BNP level of conventional CABG and OPCAB? Second, how did you determine that the best cutoff to predict the mortality was NT-proBNP of 2773.5pg/ml with a sensitivity of 63.6% and a specificity of 80.8%?

Level of interest: An article of importance in its field

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'