Reviewer's report

Title: Relationship between B-type natriuretic peptide levels and echocardiographic indices of left ventricular filling pressures in post-cardiac surgery patients

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Reviewer: Quirino Ciampi

Reviewer's report:

The authors described the relationship between postoperative BNP levels and left ventricular filling pressures evaluated by echocardiography in 124 post-cardiac surgery patients. They demonstrated that elevated LV filling pressures (E/E') was the major determinant in BNP release in this clinical setting.

The paper is very interesting and well and clearly written.

However, there are some suggestions:

1. The authors should include in the Methods section a more precise characterization of the study population, presented in the first paragraph of Results section.

2. There were differences between different type of surgery and BNP levels? Particularly, the definition of valvular surgery is too general: authors should indicate the type of valvular surgery (i.e. aortic valve replacement) and the relationship with BNP levels and diastolic functions.

3. There were differences in cardiac surgery with and without cardioplegic arrest and in the time of cardioplegic arrest and BNP levels? (reference #10)

4. The authors did not report data about LV mass, LV hypertrophy, LV end-diastolic and end-systolic diameters and volumes and the relationship with BNP levels. These parameters should include in the multivariable linear regression for BNP (table 3).

5. The authors should explain what are the clinical implications of BNP levels evaluated 8±5 days after cardiac surgery. Are the higher BNP levels associated to higher in-hospital complication after cardiac surgery or longer hospitalization time?

6. In the table 2 the authors should indicate the values of BNP for all groups with male and female gender, with and without renal failure, diabetes mellitus and CABG.

7. In the figures 1 and 2 the X and Y axes should start from 0.

Level of interest: An article of limited interest

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests