Reviewer’s report

Title: Changes in the levels of inflammatory markers after transthoracic device closure of ventricular septal defects in pediatric patients

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Reviewer: S Ram Kumar

Reviewer’s report:

The report by Huang et al compares select systemic inflammatory markers in patients undergoing transthoracic device closure of VSD. This procedure is commonly undertaken in China and the authors have utilized their center's expertise with this procedure to study inflammatory changes in this group of patients.

I have the following questions for the authors to consider -

1. The authors state in the manuscript that they use 'standard indications' for closure of VSD. However, in Table 1, mean VSD size was between 4 and 5 mm in 9kg children. These are rather small VSDs. It is not clear what the indication to close these VSDs was. Many of these will likely not demonstrate volume overload and have shunts that are well tolerated. What is the approach in the author's institution for these small VSDs?

2. Some aspects of the methodology require clarification -
   a. How do they choose the approach to close VSD - transthoracic vs. closure under CPB, and in the latter group the incision?
   b. How did they define infection? And why did they eliminate patients with post-operative pulmonary infection?
   c. How many patients received blood transfusion in the two groups?

3.
   a. Table 3 and 4 are better presented as graphs with standard error bars
   b. How many patients do they have data for at each time point for each measurement in tables 3 and 4?
   c. Table 1 refers to pulmonary hypertension. I am assuming authors mean pulmonary artery pressure. Also, is this systolic, diastolic or mean?
4. The discussion is way too wordy and unnecessarily elaborate. Much of it can be cut down.

   a. In fact, the primary discussion point in my opinion has not received enough space - and that is despite the lack of need for CPB, the inflammatory markers go up the same. Why do the authors think this is the case?

   b. The authors state that Table 2 shows that device closure is superior. In reality, it does not. The changes, although statistically significant, are clinically irrelevant.

   c. There are many scattered grammatical and syntax errors that need to be addressed.

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