Reviewer's report

**Title:** Surgical management of Ventricular septal rupture complicating acute myocardial infarction

**Version:** 1  **Date:** 29 November 2014

**Reviewer:** Tomohiro Tsunekawa

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The manuscript is a retrospective review of early clinical outcome after the infarction-exclusion technique for post infarction ventricular septal defect. Forty-seven consecutive patients who underwent the infarction-exclusion technique between 1995 and 2013 (18 years) were included in the study. They reported 36.2% of operative mortality. They commented the result was quite compatible to previously reported studies [reference 4,8,9,10]. They also analyzed the risk factor of poor outcome by comparing the preoperative characteristics between survivors and non-survivors. According to their multivariate analysis, the low preoperative ejection fraction and post-operative need of renal replacement therapy were identified as the independent risk factors of early operative mortality.

The manuscript was very well written, described, and logically straight forward. The methods are appropriate, and the details are sufficiently provided.

The early outcomes of surgical repair for the post infarction ventricular septal defect were already reported in many studies, as the authors referred in their manuscript, and to be honest, I could not find any new findings in the current report.

The manuscript must be revised before the final decision.

**Major compulsory revisions,**

Throughout the manuscript, what I was surprised the most was the significant improvement of the early mortality rate in the last 8 years. The authors must comment on why the early mortality improved in the recent years. Is it due to the patient selection, technical improvement, or improvement of perioperative care? The authors only described the anterior-septal infarction exclusion technique. Didn’t they have posterior post infarction VSD? If they did have, did the location of the VSD have any impact on the results? Posterior post infarction VSD must be more surgically challenging in our personal experience.

The advantages of delayed elective (or at least urgent) surgery is generally accepted. However, in the clinical situation, it is usually difficult to delay the surgery because of the patients’ poor hemodynamic condition. How do the authors make a decision to delay the surgery? What is the definition of “hemodynamically stabilized”? The authors must describe how they made
decision to rush into the emergent surgery or delay it?

Discretionary revisions
Readers must be interested in the long-term outcome of the patients who survived the post infarction VSD. If the authors also report the long-term outcome, the manuscript will be more report worthy.

The contribution to the development of the surgical management of post infarction VSD by Dr Tirone David and Dr Masashi Komeda should be respected. Their reports published in Circulation in 1990’s should be referred.

**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'