Reviewer's report

**Title:** Dobutamine stress echocardiography for assessing the role of dynamic intraventricular obstruction in left ventricular ballooning syndrome.

**Version:** 1  **Date:** 26 January 2010

**Reviewer:** Rosa Sicari

**Reviewer's report:**

This is an interesting study addressing an important and quite elusive clinical condition such as LV ballooning syndrome. Authors have a long-lasting experience in both the syndrome and stress echocardiography. The results are new but there are a few issues that authors should address:

1. **Patient population:** authors should provide more information on selection criteria. Are these patients part of the Italian registry on Takotsubo syndrome? Please specify if the criteria used are the Mayo clinic ones.

2. **Patients underwent dobutamine stress echocardiography** at a mean time of 9 days from the acute event, when the recovery of function may have taken place. Please give details on how many patients normalized their function, how many showed low dose improvement and how many had a clear ischemic response (the results as reported are a little difficult to follow and could be reported in table format).

3. Authors have previously published that intraventricular gradient during dobutamine stress echocardiography occurs in perfectly normal hearts and it may be a side effect of drug infusion with no clinical significance. Please discuss.

4. The pathophysiologic mechanism of Takotsubo is still debated and authors may discuss in more detail all the possible mechanisms. One that was not taken into consideration is the occurrence of coronary spasm during dobutamine stress echocardiography or at the time of beta-blocking infusion in subjects with near-normal coronary arteries.

5. Authors should discuss the safety of dobutamine stress echocardiography in this setting.

6. It would be interesting to know if patients with a contractile reserve recovered at follow-up.

7. A significant subset of patients has an ischemic response (biphasic) in the face of normal coronary arteries. Is this only a pure hemodynamic event?

8. Authors should cite other studies that used stress echocardiography in this set of patients (Meiumoun EJE 2009; Rigo Ann Med 2009).

9. Due to the nature of the journal it would be important to have images displayed of one or more sample cases (there is no space limit)

**Level of interest:** An article of importance in its field
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'