Reviewer's report

Title: Hemodynamic monitoring using a single-use indwelling transesophageal echocardiography probe in unstable patients after open-heart surgery

Version: 1 Date: 20 January 2015

Reviewer: Mitchell-Heggs Laurens

Reviewer's report:

Hemodynamic monitoring using a single-use indwelling transesophageal echocardiography probe in unstable patients after open-heart surgery

Emmanuelle Begot and colleagues report the striking case of a cardiac post-operative patient whose hemodynamic support and ventilation was managed according to a new indwelling transesophageal probe for continuous monitoring. This report comes after the publication of a multicentric study on the tolerance, efficacy and feasibility of this technique in 94 intensive care ventilated patients, however without classic transesophageal echocardiography control.

The patient in this case report was diagnosed with vasoplegic shock, potent foramen ovale, and finally tamponnade due to a large left auricule hematoma. Accordingly, therapeutic interventions included vasopressors, a diminished end-expiratory pressure with inhaled nitric oxide, and surgical decompression.

Minor revisions
1. This paper is a case report, the title should read “in an unstable patient”.
2. Line 61 “without evidence of tissue hypoperfusion (lactate 4,28 mmol/L)” this seems superfluous and lactate level at 4,28 mmol/L seems elevated.
3. Line 122 should read “remains to be confirmed”.

Major compulsory revisions
1. Line 78-87: the authors describe the diagnosis of the large LA hematoma leading to a cardiac tamponnade after a first evaluation after a PEEP trial was in favour of potent foramen ovale. What was the hemodynamic situation at that time? Is there a possibility that the LA hematoma might have been present and have not been identified? The reviewer would like the authors to discuss this issue to alleviate any doubt of therapeutic delay in the surgical decompression.

Figure 2 is not all that clear as to whether RA seems enlarged in comparison to LA because of acute cor pulmonale, LA compression or simply echocardiography view. Interestingly, standard TEE was required to confirm tamponade as if the echocardiographic precision was not sufficient to lead in itself to reoperation. Could the authors discuss this point?

Level of interest: An article of limited interest
Quality of written English: Acceptable

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.