Reviewer's report

Title: Predicting outcome of rethoracotomy for suspected pericardial tamponade following cardio-thoracic surgery in the intensive care unit.

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Reviewer: Erik Korsten

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In General: Interesting paper in which retrospectively the clinical, hemodynamic and echocardiographic features that may have predicted a favorable response to rethoracotomy for suspected tamponade is analyzed. Results of the study: none of the "usual" clinical parameters - even TEE performed by an experienced echocardiographer - exists. Only a "large" positive fluid balance, absence of heparin-use and low Cardiac Index predicted a favorable hemodynamic response after rethoracotomy. This is important, because it stipulates that in any patient - in the absence of clear signs of tamponade, who are performing clinically "poorly", without a clear cause, a rethoracotomy should be considered in the early course of the post-operative period. Such patients should get "the benefit of the doubt" and a rethoracotomy should be performed. This is an old clinical whisedom, which may be forgotten due to modern technology, such as (3D) transesophageal echocardiography. I have however some, questions that need to be clarified.

Minor Essential Revisions; (1) In the abstracts, 21 patient are mentionend; Data Collection 19 and 17 were reported. Please clarify. (2) No mentioning of urine production (only in the table). Please comment on the - according to this study - limited value of monitoring urine production (which may also be an early - sometimes only - sign of tamponade). (3) Please comment on the use of heparin in the direct postoperative phase. (4) Please comment on the relative long (median duration of 3 days!) of the rethoracotomy after primary surgery. (5) Was renal replacement therapy already instituted in the two patients on renal replacement therapy ? (6) I'm not a statistical expert and the numbers are indeed low, but could a more advanced statistical procedure, like multiple variant anaysis identify more factors (such as low urine output ?). (7) Was TEE performed "liberal" and at what time (in hours) was it performed in relation to the end of surgery? The amount of PE is quit high (500 resp 800 ml); please comment. And finally: inspiratory fraction of oxygen is written with capital I: FIO2. All alveolar pressures/fractions are written in capitals; in contrast with similar values blood (PAO2 versus PaO2).

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
None