Reviewer’s report

Title: Right anterolateral thoracotomy: an attractive alternative to repeat sternotomy for high-risk patients undergoing reoperative mitral and tricuspid valve surgery

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Reviewer: Oliver Reuthebuch

Reviewer’s report:

The authors report upon their results in redo valve surgery via an antero-lateral approach.

- the title is somehow disturbing since only the AV valves (primarily the tricuspid valve) are addressed, not aortic or pulmonary valve. Authors should precise title accordingly.

- though the results are good, the described method is already known and there is no additional or new information for the surgical community. Beside that, nowadays there are more minimally invasive techniques described, with smaller incisions (12.6 +/- 2.3cm vs 5cm (Kiziltan, Journal of Cardiothoracic Surgery, 2015)

- why is the reconstruction rate so low (MV: 1 reconstruction vs. 4 replacements, TV 2 reconstructions vs. 19 replacements). Is that due to technical issues: view, approach of valves via ant.-lat. access?

- please comment on definition of high-risk patients:

  (2) cardioplegia wash-out via patent and not clamped bypasses during operation

  (3) define proximity of ascending aorta to sternum

  (4) how are "dense" retrosternal adhesions defined, how detected?

why did the authors include patients with severe pulmonary dysfunction (2 patients). This is known as risk factor in antero-lateral thoracotomy.

- how was cannulation of superior v. cava accomplished? Via jugular vein or two stage femoral cannula?

- describe body temperature, type of cardioplegia, type of aortic clamp

- which 2 patients had to be operated on the fibrillating heart? were it the re-re-operations? Indication?

- why is cardiothoracic ratio good to know (69%)? Are there limits?
- describe course of postoperative hemoglobin.

- why had 8/24 patients been ventilated longer than 24h? Was it due to intraoperative lung injury?

- how many surgeons were operating?

- why did 2 patients die for low output syndrome? Mean ejection fraction was preoperatively 47.5%? did these patients suffer from myocardial infarction?

- did the authors replace/repair a mitral valve in patients with previous AVR? It would be interesting for the readers to know, whether view/approach of MV is more/less convenient via ant.-lat. approach.

- what was neurological outcome like?

- how was postoperative pain addressed?

According to the above mentioned points there is a substantial lack of information that has to be meticulously addressed. However, due to the existing literature scientific impact of the paper remains low.

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An article of limited interest

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Not suitable for publication unless extensively edited

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