Peer Review File
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Reviewer A

The authors summarized their result of minimally invasive mitral valve surgery. It was interesting but the manuscript lacked scientific value. The manuscript was just summary of their result. Although they compare it with literature, the impact of their result was not interesting.

Reply: Thank you very much for your comment. With regard to further planned analysis of our series comparing gender related differences in outcomes, we first aimed to report the outcomes of our total cohort with this work. Therefore, this study "only" analyzes the repair technique related outcomes of our series to make it public in the literature.
Changes in the text: none

Reviewer B

I am proud of reviewing the manuscript for Journal of Thoracic Disease in which the authors described midterm outcomes of minimally invasive mitral valve surgery, focusing on 'respect or resect'. I congratulate excellent freedom from re-intervention and recurrent significant mitral regurgitation. The authors divided into 3 groups including Resection group, Chordae group, and Both groups.

1. Firstly, I have to say that the number of cases were confusing. Although the authors described that a total of 278 consecutive elective patients underwent video-assisted MIV through a right lateral mini-thoracotomy, they performed 53 cases of mitral valve replacement. The authors should describe total cases as mitral valve plasty alone.

Comment: thank you very much for your comment. We are very sorry that we caused confusion and therefore we try to avoid it this with our revisions: in the abstract, we made it clear, that from the 278 patient, we included 165 patients, which were eligible to be part of the three repair groups: respect (82), resect (66) and both (17). The remaining patients received other techniques (replacement, cleft closure, sliding plasty, commissuroplasty or cleft closure only: this information can be found in Table 3). With regard to our small cohort, we aimed to report the entire cohort along with the patients divided into the three repair groups in order to give an idea of the outcomes of the total series. That is the reason why we do not only report the outcomes of the 165 patients and would like to give a view of the entire cohort.
Changes in the text: Abstract: Line 32, Lines 42-45, Lines 156-160, Lines 167-168,

Lines 173-174, Line 191, Line 202,

2. Secondly, the details of mitral valve plasty were also confusing. Although 225 cases were mitral valve plasty, the authors described 86 cases of resection group, 66 cases of chordae group, and 17 cases of Both group in Table 1. And they also described 99 cases of leaflet resection, 83 cases of neo-chordae, and 17 cases of combined resection and neo-chordae in Line 179-180. These all were confusing. They should define 3 groups more correctly.

Comment: thank you very much for the comment. There are 82 patients in the resect groups, 66 in the chordae group and 17 in the both group. When you add this up, it results in a total of 99 resections, 83 chordae, if you add "both" to the "resection" and "chordae" group (82+17=99 and 66+17=83).
Changes in the text: none

3. Thirdly, more details of techniques for repairing mitral valve are required. The authors should describe their strategies for resection of pathological leaflets, chordal replacement, or both.

Comment: thank you very much for your comment. We have already described it in the Methods section before (but only shortly) and now phrased it out in more detail.
Changes in the text: see Lines 129-139

4. I also have to say the authors' cohort was low volume.

Comment: thank you very much for the comment. We are a well-known low-volume MIV center with experienced surgeons and we mention this limitation in our "limiations" and in the "conclusion" section.
Changes in the text: none

5. Therefore, I do not find anything new and informative to the readers of Journal of Thoracic Surgery. In my view, this manuscript should be submitted elsewhere.

Comment: Thank you very much for the comment. With regard to further analysis of our series comparing gender related differences in outcomes, we first aimed to analyze the outcomes of our total cohort and make it public. Therefore, this study "only" analyzes the repair technique related outcomes to make it public in the literature.
Changes in the text: none

Reviewer C

Thank you for asking me to review this paper, I think respecting the mitral valve tissue is very important and should always be considered when dealing with mitral valve.
Can the authors clarify the exact positions of DMV? P2? P3? A3/P3? what was the strategy of repair / resect or leave? how was the decision made, is there a particular

algorithm the authors have followed?

Reply: Thank you very much for your comment. We have already described the strategy of repair/resect or leave in the Methods section before (but only shortly) and now phrased it out in more detail with the hope to make it more understandable to the reader.

Changes in the text: see Lines 129-139

Since our degenerative MVI cohort includes only 8 functional mitral pathology patients which understandably do not belong to either of the three repair groups, we did not mention the repair-technique in detail because it just consisted of a ring implant.

Furthermore, can they elaborate on surgeon experience? were all same experience or some of them had steep learning experience?

Reply: Thank you very much for your comment. We have already mention that before (but only shortly in line 247) and now phrased it out in more detail with the hope to make it more understandable to the reader.

Changes in the text: Lines 163/64, 248/49, 260/61