Author’s response to reviews

Title: ECHOCARDIOGRAPHIC EVALUATION OF NON-SURGICALLY TREATED MILD-TO-MODERATE MITRAL DYSFUNCTION IN PATIENTS UNDERGOING AORTIC VALVE REPLACEMENT

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Author’s response to reviews:

Dear Editors-in-Chief:

Prof Vipin Zamvar, Royal Infirmary of Edinburgh, UK

Prof David Taggart, John Radcliffe Hospital, UK

Thank you for reviewing the manuscript entitled "ECHOCARDIOGRAPHIC EVALUATION OF NON-SURGICALLY TREATED MILD-TO-MODERATE MITRAL DYSFUNCTION IN PATIENTS UNDERGOING AORTIC VALVE REPLACEMENT". We would like to express our deep appreciations to the reviewers for truly insightful reviews of our manuscript. We have carefully reviewed the comments and criticisms and constructed our reply accordingly as best we can. Thank you very much.

Followings are our responses to the questions and comments from the reviewer.

Sung-Ho Jung, M.D
Point-to-Point Responses to the First Reviewer’s Comments

1. Considering that the total number of patients with mitral dysfunction was 560 of which 292 did not have MV procedure, this means that 268 did have repair or replacement among the total group of patients. It seems to me that it would be most relevant to compare the groups with and without MV procedure. Did the authors or some other authors maybe do that in another article? In that case the whole concept of the article seems questionable, or at least the authors would have to refer to any previous publications related to these patients. At the very least the authors would have to explain why half the patients got mitral valve procedures and half not. This may be individual surgeon preference, different time periods or other factors. The results of the approach used in this study, are quite positive, with very little mitral valve surgery in the follow up period, except for rheumatic patients. But I find it essential to know at least a little about the 268 patients who had MV surgery. Otherwise the readers may draw the wrong conclusions.

Response: Thanks for your careful review and the comments. We totally agree that for patients with mild to moderate mitral disease at the time of aortic valve replacement, the comparison between mitral valve replacement and conservative management is very interesting and important issue to be elucidated. Unfortunately, we have not covered the subject yet. As you can see from our title “echocardiographic evaluation of non-surgically treated mild-to-moderate mitral dysfunction in patients undergoing aortic valve replacement”, from the beginning, this paper was not intended to show which strategies are superior, the purpose of this study was to examine the natural course of the mild to moderate mitral valve disease and to identify the risk factors involved in the progression of the mitral disease, especially, considering organic mitral pathology.

However, I would like to say a few things to reduce the confusion of the reader. First, whether or not to perform mitral valve surgery was determined by individual surgeon preference. Second, in 2014, we published one article: mitral valve repair versus replacement for moderate-to-severe mitral regurgitation in patients undergoing concomitant aortic valve replacement. Although the severity and diagnosis of patients is different, I think we can get some information in the paper. Double valve replacement shows similar outcomes to the conservative group in terms of survival and freedom from valve-related event.
Response: We have added the comment in the revised manuscripts (highlighted with RED FONT).

-Changes

‘Materials and methods-Patients’

Whether or not to perform mitral valve surgery was determined by individual surgeon preference.

2. Fig 1 is impossible to understand at least to me. 229 patients are listed as mild and 58 as moderate MR preop. So some patients are lacking on the preop side. More seriously, the postoperative result is the same in both groups:

Of the 58 patients with moderate MR preop 206 have normal to trivial postop. This is obviously not possible. Maybe it should be 41 as is indicated on the line between the two boxes, but this figure is obviously not correct. Also in the upper part of the figure the number of postop results does not fit the preop number of patients.

Response: We made a big mistake. We have changed the figure in the revised manuscripts (highlighted with RED FONT).

-Changes

Figure 1

Point-to-Point Responses to the First Reviewer’s Comments

The following article presents the echocardiographic evaluation of non surgically treated mild-to-moderate mitral valve dysfunction in patients who underwent aortic valve replacement. Results show that 85% of patients had a valve related event free survival after surgery in the first five years. Rheumatic etiology of mitral valve disease seemed to be an independent predictor of late mitral dysfunction. This manuscript has many important findings, however there are also many raised concerns regarding the results.

1. The whole population of the study was 590 patients. By which criterias did tha authors do mitral valve surgery at the same time with aortic valve replacement or used conservatice therapy for mitral valve dysfunction?

Response: We have added the comment in the revised manuscripts (highlighted with RED FONT).
-Changes

‘Materials and methods-Patients’

Whether or not to perform mitral valve surgery was determined by individual surgeon preference.

2. Was there any difference in the two groups in atrial fibrillation?

Response: Preoperative atrial fibrillation was already mentioned in the Table 2 (highlighted with yellow background). This factor did not emerge as significant risk factor of mitral valve dysfunction even in univariate analysis (P=0.945)

3. Is there any difference in survival and complications after primary double valve surgery and redo mitral valve surgery (conservative therapy group)?

Response: Thank you for the important comments. The same issue was raised in the first question from the first reviewer. The answer for this question was given above.

4. In the future will you do double valve surgery in patients with rheumatic pathology?

Response: We think that in patient with rheumatic pathology, we should consider simultaneous MV surgery at the time of AVR