Reply to the Letter to the Editor

Reply to Yie and Yang

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We appreciate the letter by Drs Yie and Yang with regard to our article. They raised great concern about early indication of tricuspid valve replacement (TVR) [1,2]. We completely agree with the opinion that preoperative right ventricular (RV) function is a major determinant of operative mortality after TVR. Our indications of TVR are: persistent tricuspid regurgitation (TR) after trial of TV repair, previous history of TV repair, severely dilated atrium and RV with decreased RV function, severe TR after multiple redo surgery and combined tricuspid stenosis.

The threshold for TVR criteria might be lower than at other institutes. We considered TVR if the degree of residual TR is more than mild to moderate in the operation room.

Drs Yie and Yang cited the article by Shinn et al. [3] advocating TVR stating that its procedure is neither risky nor complicated. In this article, there were only 12 cases of TVR and 150 cases of TV repair. The numbers are too small to draw early conclusions.

We had only one hospital mortality due to uncontrolled sepsis in a patient with endocarditis and multiple interventricular abscesses. However, the postoperative hospital course of our TVR patients was not smooth. Some early complications included extracorporeal membrane oxygenation (ECMO) (1%), intra-aortic balloon pump (IABP) (6%), delayed sternal closure (4%) and acute renal failure (ARF) (4%). These incidences of early complications are unacceptably high compared with other valve surgeries. ECMO support was required in a patient with Ebsteins’ anomaly after prolonged attempted TV repair.

Regarding the incidence of TVR after left-side valve surgery (LSVS), the proportion of TVR after LSVS in our series is slightly lower than other reports. We did not provide more detailed information regarding combined procedures during TVR in Table 2; that might have caused our results to be misunderstood.

Among 40 patients with redo surgery, 36 patients (90%) had a history of LSVS. In this group, only nine patients (25%) had isolated TVR and 27 patients (75%) had associated procedure of 1st or 2nd AVR and/or MVR. The high incidence of concomitant redo LSVS would be related with early intervention of left-sided prosthetic valve. For example, we considered concomitant redo LSVS if the mean gradient of prosthetic valve was more than 30 mmHg. Our experience of TV surgery after LSVS has been published in another journal [4].

In terms of concomitant Maze operation, 18 patients underwent the Maze procedure and sinus rhythm was restored in 13 patients (72%). But it is difficult to say that early sinus conversion after Maze operation may decrease early mortality.

With regard to the surgical technique, we implanted a prosthetic valve on the arrested heart and preserved the subvalvular structures except the stenotic valve. A small triangular-shaped bovine pericardial patch was applied on conducted area in case of a friable leaflet tissue or a bulging of aortic prosthetic valve.

We still strongly believe that aggressive ultrafiltration may play important roles in reducing pulmonary resistance, RV afterload, myocardial oedema and early mortality. To elucidate the effect of aggressive ultrafiltration in patients with RV dysfunction, a prospective randomised study or multicentre study is needed.

References


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Letter to the Editor

A simplified surgical approach for aortic valve replacement after previous coronary artery bypass grafting using upper mini-sternotomy approach [1]

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We read with great interest the article ‘A simplified surgical approach for aortic valve replacement after previous coronary artery bypass grafting’ by Vistarini and colleagues [1].

Aortic valve replacement (AVR) following a coronary artery bypass grafting (CABG) is becoming more frequent and