



COMPARISON OF PORT ACCESS TO STERNOTOMY IN REDO TRICUSPID VALVE SURGERY :SINGLE CENTER OUTCOMES

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INTRODUCTION

Tricuspid valve (TV) surgery is generally not complex but poses a high surgical risk due to common comorbidities in patients. Reoperations, in particular, are often complicated by right heart dysfunction, further increasing the risk. This study aims to compare the outcomes of tricuspid valve reoperations performed via median sternotomy and minimally invasive port access techniques.

Operative , peri/postoperative data	Redo port access procedure	Redo sternotomy procedure	P-value
Previous cardiac surgery , n(%)			
Mitral valve surgery	15(12,5%)	30(25%)	
Tricuspid valve surgery	27(22,5%)	35(29,1%)	
Aortic valve surgery	2(1,66%)	2(1,66%)	
Coronary artery bypass surgery	2(1,66%)	4(3,33%)	
Atrial septal defect surgery	1(0,833%)	2(1,66%)	
CPB Time (minutes) ,mean ± SD	155±1,6	168±2,7	0.12
Aortic cross clamping time (min) ,mean ± SD	72±2,6	78±3,8	0.14
Total drainage amount(ml), mean ± SD	1050±560.30	1550±805.20	0.032(p<0.05)
Reoperation for bleeding ,n(%)	2(1,66%)	3(2,5%)	0.15
Neurological event ,n(%)	1(0,833%)	2(1,66%)	0.25
Wound infection ,n(%)	1(0,833%)	2(1,66%)	0.25
In-hospital stay (day) ,mean ± SD	7±2.6	10±1.8	0.014(p<0.05)
30-days mortality ,n(%)	2(1,66%)	3(3,33%)	0.12

METHODS/RESULTS

We retrospectively analyzed 120 patients who underwent tricuspid valve reoperations between March 2011 and September 2024. Of these, 47 had minithoracotomy and 73 had sternotomy. Previous surgeries included valve procedures, coronary bypass, and atrial septal defect repairs. The mean age was 63.2 years, with an 11.6-month follow-up. Minithoracotomy patients had significantly lower drainage (1050 ml vs. 1550 ml) and shorter hospital stays (7 vs. 10 days, $p < 0.05$), while other outcomes were similar.

CONCLUSION

In redo tricuspid valve surgery, the port-access minimally invasive approach is a favorable and feasible alternative to the traditional sternotomy method. It may offer advantages such as less drainage and shorter hospital stays and may improve clinical outcomes.