

On Pump Beating Heart Minimally Invasive Tricuspid Valve Repair In The Redo Setting: Feasible/Safe?

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INTRODUCTION

- Tricuspid regurgitation is a common residual, or a new lesion occurring at various intervals after the first surgery due to natural progression, mitral disease evolution, infective endocarditis, pacemaker leads etc.
- Given the prior functional cardiac compromise, possible flowing CAB grafts and dilated RA/RV in the redo setting, present significant challenges towards safe reentry and cardiac function preservation during the redo surgery.
- We present outcomes from 3 patients who underwent minimally invasive tricuspid valve repair in redo setting.

METHODS

- With regular endotracheal intubation, these patients are placed in supine position. Anterolateral thoracotomy is done. Femorofemoral cannulation is achieved. Venous cannula is advanced into the SVC.
- The lung is freed from pericardium, but the pericardium doesn't have to be separated from the RA. RA is opened with 2 drop in suckers which are positioned into the coronary sinus and near the svc orifice.
- The TV repair is carried out in routine fashion albeit with long instruments. Options to improve exposure include lowering the flows intermittently and fibrillating the heart.

RESULTS

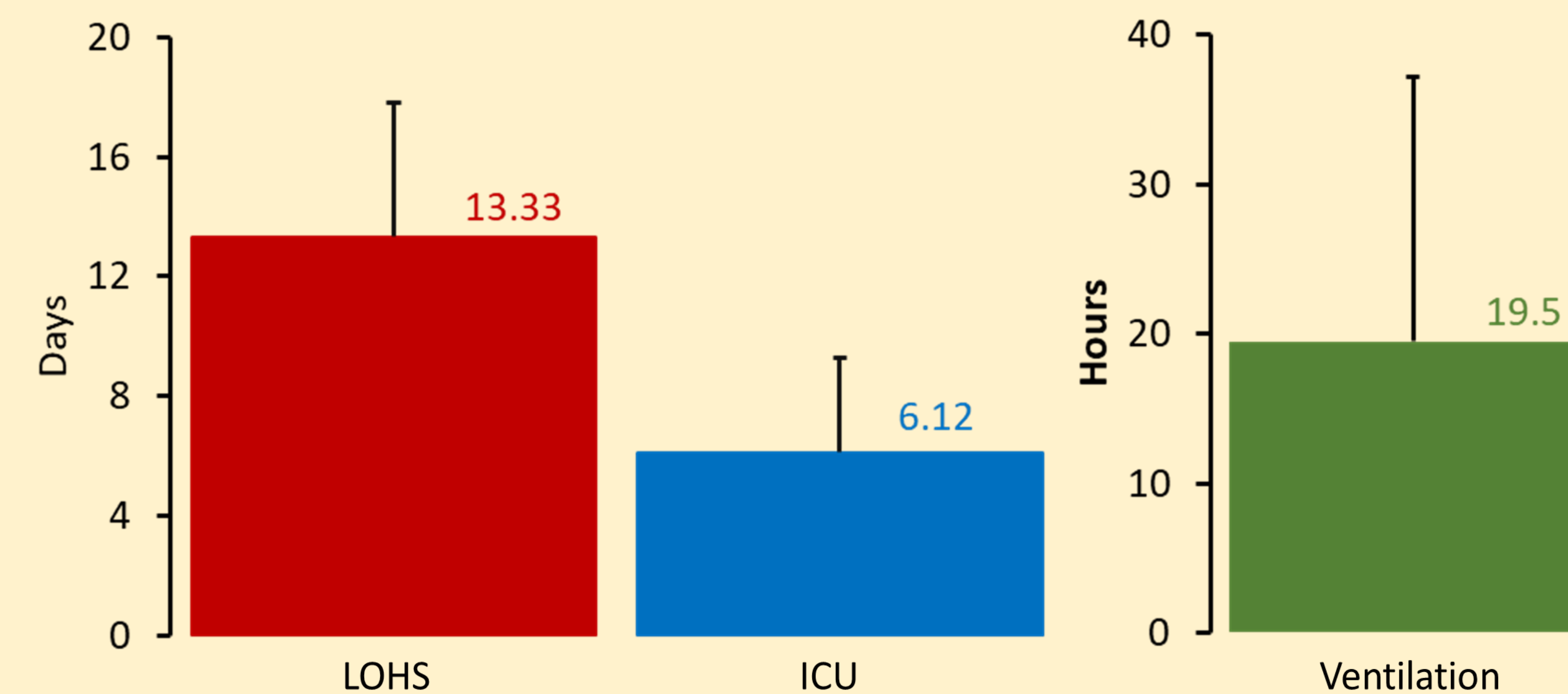


Figure depicts the mean length of hospital and ICU stay, and ventilation time for the 3 patients who underwent minimally invasive tricuspid valve repair in redo setting. Error bars are SD.

Table represents the post-operative outcomes for the 3 patients who underwent minimally invasive tricuspid valve repair in redo setting.

Characteristics	Patient1	Patient2	Patient3	Frequency (%)
Mortality	Alive	Alive	Alive	0
Renal failure	No	No	Dialysis	1(33.3)
Liver disfunction	No	No	No	0
Pulmonary complication	No	No	No	0
Pneumonia	No	No	No	0
Bleeding	No	No	No	0
Blood Transfused	Yes	Yes	Yes	3(100)
Stroke	No	No	No	0
Sepsis	No	No	No	0
GI problem	No	No	No	0
AFib	No	No	No	0
Heparin induced Thrombocytopenia	Yes	No	No	1(33.3)

- There was no 30-day mortality.
- There was no post-operative bleeding, stroke, pulmonary complication, sepsis, GI bleeding, or atrial fibrillation in any of these three patients.
- One patient needed hemodialysis post-operatively.
- All 3 patients required blood transfusion.

CONCLUSION

- TV Repair in a redo setting can safely be accomplished in a minimally invasive manner without jeopardizing the coronary conduits or causing dysfunction or risking strokes due to cross clamping of the aorta.
- Intuitively, the recovery is quick, complications are few, however the lack of a control group precludes a head-to-head comparison.

DISCLOSURE

The authors do not have any conflicts of interest to disclose.

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