

MEETING ABSTRACT

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Left Ventricular Mass Regression following Implantation of St. Jude Medical Trifecta Aortic Bioprosthesis

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Background/Introduction

The St. Jude Medical Trifecta aortic supra-annular bioprosthesis is regarded as the next generation in pericardial stented tissue valves. The unique design of tissue leaflets attached to the exterior of the valve stent provides unrivalled in-vivo mean gradients and haemodynamics.

Aims/Objectives

The aim of this prospective study was to evaluate mid-term left ventricular (LV) mass regression following implantation for aortic stenosis.

Method

One hundred and seventy two consecutive patients undergoing aortic valve replacement using the St. Jude Medical Trifecta valve at a single UK centre over a 48-month period were included in this study. Patients undergoing concomitant cardiac procedures were included. All implanted valves were 19, 21, 23, 25, 27 & 29 mm in size. Patients underwent both pre-operative and post-operative transthoracic echocardiography. Two-dimensional measurements of the left ventricle were used to calculate LV mass using the Devereux equation.

Results

30 patients had the adequate 2-dimensional left ventricular measurements recorded to calculate both pre- and post-operative left ventricular mass. Valve Sizes were 21 mm (n = 7), 23 mm (n = 15), 25 mm (n = 6) and 27 mm (n = 2). Overall absolute left ventricular mass regression was 18.1% ± 23.8%. Mean preoperative LV mass was 247.8g ± 102.5 g and mean postoperative LV mass was 200.7 ± 74.1g. Regression of LV Mass Index was -30.66 g/m².

Discussion/Conclusion

Utilising available 2-D Measurements in this group we observe regression of LV mass & LV Mass Index post aortic valve replacement with the Trifecta bioprosthetic valve. However, further consistent 2-D measurements are required across the cohort to establish this relationship.

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