EARLY OUTCOMES OF MINIMALLY INVASIVE AORTIC VALVE REPLACEMENT WITH THE TRIFECTA VALVE VIA A RIGHT ANTERIOR MINITHORACOTOMY

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Background

Although the newer generation Trifecta GT valve (Abbott vascular, Santa Clara, CA) has shown excellent hemodynamic performance, contracditory studies reported early Trifecta GT valve failure. However, few data exist on the performance of the Trifecta GT valve implanted via a right anterior minithoracotomy (RAMT) approach. In this study, we report on our early single center experience with the Trifecta GT valve implanted through a RAMT approach.

Methods

We retrospectively reviewed 121 consecutive patients who underwent isolated aortic valve replacement (AVR) with the Trifecta GT bioprosthesis via a RAMT between June 2017 and December 2021 in our single center. Clinical and echocardiographic reports were evaluated during a median follow-up of 31 months post-implant. Aortic valve diseases were stenosis (91.7%), regurgitation (0.8%), and mixed valve disease (7.4%). The primary end point of the study was 30-day mortality .

Results

A total of 121 patients successfully underwent AVR with the Trifecta valve using a RAMT approach during the study period. The mean age was 72.5 ± 7.13 years , 55.4% were men. Mean aortic cross –clamp and cardiopulmonary bypass times were 76.5 ± 20.3 and 113 ±25.5 min, respectively. The mean follow-up was 30.8 ±12.9 months. 30-day mortality was 3.3 % (n=4). No moderate, or severe paravalvular leak was found perioperatively. Two patients (1.7%) needed conversion. Freedom from overall death at 1,2,3,4, and 5 years were 95%, 91.5%, 90%, 90%, and 90% respectively. Structural valve deterioration (SVD) was observed in 3 patients (2.5%) with a median time from the index surgical procedure of 43.3 months. Freedom of SVD at 1, 2, 3, 4, and 5 years, were 100%, 100%, 98.5%, 84.8%, and 84.8% respectively. Freedom of reintervention for SVD at 1, 2, 3, 4 and 5 years, were 100%, 100%, 100%, 91.7%, and 81.5 % respectively.

Conclusions

Our data demonstrate that the Trifecta bioprosthesis can be safely implanted in patients undergoing AVR via a RAMT. Although the mid-term clinical results are excellent, the echocardiographic results showed a freedom of SVD of only 84.8% at 5 years. However, these results cannot be extraoplated to long-term durability and therefore, long-term follow-up is needed .