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Late results of aortic valve repair for isolated severe aortic regurgitation

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Abstract

Objectives: The objectives were to analyze the long-term outcomes of tricuspid aortic valve repair for isolated severe aortic regurgitation and the impact of different annuloplasty techniques. **Methods:** The study cohort consists of 127 consecutive patients who received aortic valve repair for isolated severe aortic regurgitation in the tricuspid aortic valve between 1996 and 2019 in our institution. Exclusion criteria were aorta dilatation (≥ 45 mm), connective tissue disease, active endocarditis, type A dissection, and rheumatic disease. Mean age of patients was 55.6 ± 16 years, and 80% were male. Median follow-up was 6.4 years. Time-to-event analysis was performed, as well as risk of death, reoperation, and aortic regurgitation recurrence. **Results:** Cusp repair was performed in 117 patients (92%), and annuloplasty was performed in 126 patients (99%) with Cabrol stitch (73%), reimplantation technique (19.7%), or ring annuloplasty (6.3%). There was no hospital mortality. At 10 and 14 years, overall survival was $81\% \pm 5\%$ and $71\% \pm 6\%$, respectively, and freedom from reoperation was $80\% \pm 5\%$ and $73\% \pm 6\%$, respectively. Age and left coronary cusp repair were independent predictors of reoperation. Freedom from recurrent severe aortic regurgitation ($>2+$) was $73\% \pm 5\%$ and $66\% \pm 7\%$ at 10 and 12 years, respectively. Age, left ventricular end-diastolic diameter, and patch repair were independent predictors of recurrent aortic regurgitation. Type of annuloplasty had no impact on survival or reoperation. **Conclusions:** Aortic valve repair for isolated severe aortic regurgitation in the tricuspid aortic valve is a safe procedure, and durability at 14 years is acceptable. In this study, the annuloplasty technique did not influence repair durability as was found in bicuspid aortic valve repair or aortic valve-sparing surgery. Severity of cusp pathology seems to be the main determinant of repair durability. © 2021 The American Association for Thoracic Surgery

Author Keywords

aortic annuloplasty techniques; aortic valve repair; cabrol annuloplasty; severe aortic regurgitation

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