

Physician - Valvular Diseases and Surgery

[MSB-30]

Clinical Outcomes of Bicuspid Aortic Valve Pathologies Treated with Tricuspidization Using the Ozaki Procedure

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Objective: This study aimed to share early- and mid-term results in patients with bicuspid aortic valve (BAV) disease who underwent tricuspidization with the Ozaki procedure.

METHOD: The data of 44 patients (32 males, 12 females; mean age: 51.47 ± 15.18 years) diagnosed with BAV who underwent tricuspidization with the aortic valve neocuspidization technique between February 2019 and July 2024 were retrospectively analyzed.

Results: Additional surgical procedures were performed on 21 (47.72%) patients with BAV morphology. Echocardiographic measurements showed a significant reduction in preoperative peak and mean aortic valve pressures at one and 12 months. In patients who underwent simultaneous surgical procedures, the mean aortic cross-clamp time was 111 ± 29.7 min, and the mean cardiopulmonary bypass time was 153 ± 43.9 min. For isolated BAV defects, the mean aortic cross-clamp and cardiopulmonary bypass times were 89.9 ± 19.5 and respectively. During the follow-up period, no patient required mechanical aortic valve replacement. One patient required pacemaker implantation on the seventh postoperative day due to the development of a third-degree atrioventricular block. In one patient, an ischemic cerebrovascular event occurred in the early postoperative period.

Discussion: Although aortic valve neocuspidization requires experience, the application of standardized procedures allows for successful outcomes in BAV defects through the tricuspidization procedure. The tricuspidization procedure provides a more physiological structure and excellent hemodynamic performance of the aortic valve.

Keywords: Autologous pericardium, bicuspid aortic valve, Ozaki procedure, tricuspidization.

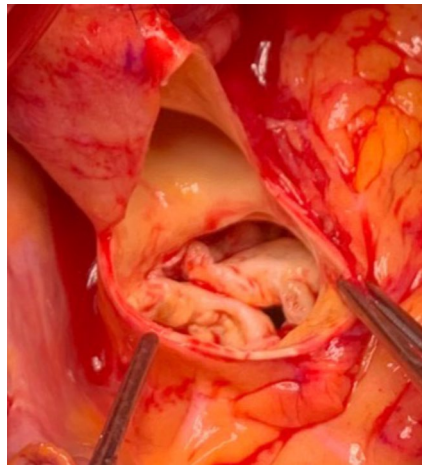


Figure 1. An image of aortic stenosis due to bicuspid aortic valve.



Figure 2. An image of a resected aortic valve.



Figure 3. An image of tricuspidization using the Ozaki procedure.

References

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