Physician - Valvular Diseases and Surgery

[MSB-25]

Mid-Term Results of Ozaki Procedure: Azerbaijan Experience

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Turk Gogus Kalp Dama *2024;32(Suppl 2):MSB-25*

Doi: 10.5606/tgkdc.dergisi.2024.msb-25
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Received: *September 09, 2024* - ***Accepted:*** *September 29, 2024*

Objective: This study aimed to report the outcomes of the Ozaki procedure, which involves reconstructing aortic valve leaflets with autologous pericardium, performed in a clinic in Azerbaijan.

Methods: This retrospective study analyzed 40 patients who underwent aortic valve reconstruction between August 2018 and June 2023. Patients were divided into two groups: Group A (mean age: 63 years) followed the traditional Ozaki technique, while Group B (mean age: 65 years) received an additional commissural reinforcement, a modification proposed by our team.

Results: Presenting symptoms were aortic stenosis or a combination of aortic stenosis and aortic regurgitation. Preoperative echocardiography showed peak and mean pressure gradients of 84±34.6 and 50.5±23 mmHg, respectively. Cardiopulmonary bypass and aortic cross-clamp times averaged 142 and 115 min for Group A and 144 and 107 min for Group B. There were no in-hospital mortalities or pacemaker implantations. No significant increases in aortic gradients were noted, and no reoperations were required. Four patients in Group A developed mild aortic regurgitation during follow-up, while in Group B, aortic regurgitation remained minimal or absent. The median follow-up periods were 64 months for Group A and 28 months for Group B. The study demonstrated 100% freedom from major adverse valve-related events during the follow-up.

Conclusion: Since its introduction, aortic valve neocuspidization has gained popularity. Mid-term results from the Ozaki procedure showed favorable outcomes in terms of mortality, valve gradients, and freedom from adverse valve-related events. While some studies have reported a slight increase in valve regurgitation following the Ozaki procedure, our novel additional commissural reinforcement technique provided a reduction in aortic valve regurgitation during follow-up. Further studies are needed to assess long-term results.

Keywords: Aortic valve, aortic valve disease.

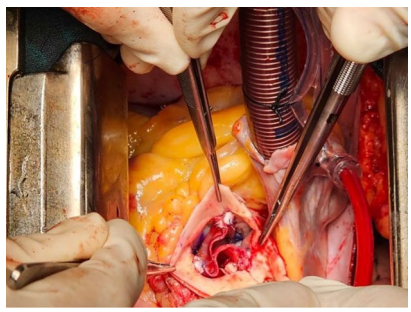

Figure 1. Image of the reconstructed valve with additional commissural reinforcement.

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