

## Physician - Valvular Diseases and Surgery

[MSB-33]

### Postoperative Early- to Mid-Term Results of the Ozaki Procedure Applied to Aortic Valve Pathologies

Tayfun Özdem, Furkan Burak Akyol, Cahit Murat Balaman, Tuna Demirkiran, Yiğit Tokgöz, Emre Kubat, Cengiz Bolcal, Vedat Yıldırım, Murat Kadan, Kubilay Karabacak

Gülhane Training and Research Hospital, Ankara, Türkiye

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Doi: 10.5606/e-cvsi.2024.msb-33

E-mail: muratbalamanmd@gmail.com

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**Objective:** This study aimed to evaluate our early- to mid-term results with the aortic valve neocuspidization technique (Ozaki procedure) in aortic valve pathologies.

**METHOD:** This study retrospectively examined the data of 243 patients (172 males, 71 females; mean age:  $53.11 \pm 18.3$  years; range, 17 to 82 years) who underwent the Ozaki procedure between February 2019 and August 2024.

**Results:** The primary pathology was aortic insufficiency in 52 (21.3%) patients and aortic stenosis in 201 (82.7%) patients. The aortic valve morphology was trileaflet in 196 (80.6%) patients, bileaflet in 44 (18.1%) patients, unicuspid in two (0.8%) patients, and quadricuspid in one (0.4%) patient. Additional cardiac surgical procedures were performed on 99 (40.7%) patients. Preoperative echocardiographic findings in patients with aortic stenosis showed a peak gradient of  $91.39 \pm 33.1$  mmHg and a mean gradient of  $54.9 \pm 18.3$  mmHg. The mean cross-clamp time was  $110.2 \pm 35.6$  min, while the cardiopulmonary bypass time was  $141.2 \pm 39.6$  min. Postoperative echocardiographic findings showed significant improvement in peak and mean gradients at six months ( $18.3 \pm 6.2$  and  $8.9 \pm 2.4$  mmHg) and one ( $15.6 \pm 5.7$  and  $8.7 \pm 3.5$  mmHg), two ( $14.2 \pm 4.7$  and  $7.7 \pm 2.5$  mmHg), three ( $13.69 \pm 3.8$  and  $6.4 \pm 3.7$  mmHg), and four ( $12.4 \pm 3.8$  and  $6.3 \pm 2.4$  mmHg) years.

**Conclusion:** Aortic valve neocuspidization is a viable technique for all aortic pathologies. It offers advantages such as achieving good hemodynamics postoperatively, avoiding anticoagulant medications, and allowing additional surgical procedures.

**Keywords:** Aortic valve surgery, aortic valve repair, autologous pericardium, Ozaki procedure.