

## Physician - Valvular Diseases and Surgery

[MSB-66]

### Does Balloon Dilatation Increase the Need for A Permanent Pacemaker in Sutureless Aortic Valve Replacement?

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**Objective:** This study aimed to present the results of balloon dilatation in sutureless valves considering the temporary and permanent need for a pacemaker.

**Methods:** Thirty-eight patients (27 females, 11 males; mean age:  $69.42 \pm 4.85$  years; range, 61 to 82 years) who underwent surgical aortic valve replacement with a sutureless aortic valve bioprosthesis between January 2019 and June 2024 and received balloon dilation at 4 atm (standard atmosphere) pressure for 30 sec during the procedure were retrospectively evaluated. Demographic data, preoperative and postoperative echocardiographic data, and postoperative follow-up data of the patients were collected.

**Results:** On preoperative echocardiographic evaluation, the mean aortic root diameter was  $20.99 \pm 2.24$  mm, the ejection fraction was  $59.29 \pm 9.57\%$ , and the mean preoperative aortic valve gradient was  $38.08 \pm 7.31$  mmHg. Isolated aortic valve replacement was performed in 22 (57.9%) patients, concomitant coronary bypass was performed in 14 (36.8%) patients, and ascending aorta replacement was performed in two (5.3%) patients. A small valve was inserted in six patients, a medium valve in 13 patients, a large valve in 17 patients, and an extra-large valve in two patients. The mean postoperative aortic valve gradient was  $11.52 \pm 3.36$  mmHg. After surgery, three (7.9%) patients were transferred to the intensive care unit with temporary pacemakers. Permanent pacemaker implantation was required in three (7.9%) patients due to complete atrioventricular block.

**Conclusion:** Although the clinical results with sutureless aortic bioprostheses are satisfactory, the use of balloon dilatation increases the need for permanent pacemakers.

**Keywords:** Aortic, balloon, pacemaker, sutureless.

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