

Physician - Minimal Invasive, TAVI, Robotic Cardiac Surgery

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Comparison of Outcomes in Patients Undergoing Mitral Valve Surgery and Cryoablation with Sternotomy and Thoracotomy

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Objective: This study aimed to show the differences in the results of cryoablation simultaneously applied with the operation to convert atrial fibrillation (AF) to sinus rhythm in patients with AF who underwent mitral valve surgery and the differences in the thoracotomy and sternotomy groups.

Methods: A total of 62 patients who underwent mitral valve surgery in a single center between 2017 and 2023 were included in the study. The patients were divided into two groups: the sternotomy group and the thoracotomy group. Patient data in the study were obtained by file scanning and current patient records. In the study, the preoperative demographic characteristics, the medications, additional diseases, echocardiographic findings, mitral valve pathologies, laboratory values, AF types of the patients, data related to the operation, intensive care unit and hospital stays, and data on postoperative early- and mid-term complications were recorded.

Results: The length of hospital stay, the age at surgery, and the preoperative left atrium diameter and alanine transaminase value were found to be higher in the sternotomy group. The preoperative albumin value was higher in the thoracotomy group compared to the sternotomy group. In addition, a tricuspid ring was more frequently applied in the sternotomy group. The cardiopulmonary bypass period was significantly longer in the thoracotomy group. The rate of respiratory failure and pericardial effusion development were significantly higher in the sternotomy group. No significant difference was found in terms of postoperative rhythms, laboratory values, and other complications in both groups.

Conclusions: Cryoablation is an effective method in correcting existing AF to sinus rhythm. In patients who undergo cryoablation simultaneously with mitral valve surgery, thoracotomy produces more positive results than sternotomy.

Keywords: Atrial fibrillation, cryoablation, mitral valve, sternotomy, thoracotomy, minimal invasive mitral surgery.