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## Surgical treatment of aortic stenosis in patients with low ejection fraction

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### Abstract

A retrospective study of the results of surgical treatment of severe aortic valve stenosis with a low left ventricular ejection fraction was conducted. The study included 38 patients with left ventricular systolic dysfunction (LVSD = 40%) and the maximum transvalvular gradient of 40 mm Hg against the aortic stenosis of various etiology. Patients underwent examination of changes in functional cardiac parameters after the aortic valve replacement under cardiopulmonary bypass. All patients underwent echocardiography that included an integrated 2D and Doppler examination of the heart prior to surgery and 3 months after surgery. A high risk of surgery was expected, according to Euroscore II, nearly 4 to 5%, the average score was  $5.8 \pm 2.4$ . The main high-risk factors were low cardiac output, pulmonary hypertension and a heart failure class. Hospital mortality was 0%. The result was the improvement in left ventricular ejection fraction by 10% ( $p=0.003$ ), and the beginning of the reverse cardiac remodeling. Patients with low LVSD and severe aortic stenosis have a potential clinical effect after surgery with the possible absence of mortality. Surgical treatment of patients with severe aortic stenosis with low left ventricular ejection fraction has shown good results in contrast to the proposed stratification of the surgery risk.

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### Keywords

A severe aortic stenosis, Aortic valve replacement, Low left ventricular ejection fraction