12. EFFICACY OF INTERVENTIONAL TREATMENT IN AORTIC STENOSIS PATIENTS WITH INTERMEDIATE AND HIGH RISK

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Introduction. Valvular heart disease is a leading cause of cardiovascular morbidity and mortality worldwide. It is a condition that reduces blood flow through the aortic orifice due to incomplete opening of the aortic valve during systole, with the most common causes being calcific (degenerative), bicuspid aortic valve, and rheumatic.

Aim of study. Stratification of surgical risk and studying the paraclinical characteristics and complications in patients with aortic valve stenosis to assess the quality of life of post-procedural patients.

Methods and materials. The study included 90 patients with aortic valve stenosis, post-TAVI, selected between 2019 and 2023 from the Institute of Cardiology. The patient cohort was divided into: high-risk patients (EuroSCORE II ≥8) (n=8), intermediate-risk patients (EuroSCORE II = 4-8) (n=32), and low-risk patients (EuroSCORE II ≤4) (n=50). Our aim was to assess echocardiographic data and post-procedural complications for intermediate and high-risk patients.

Results. The mean age of the patients in the study was 77.1±4.3 years, with known presence of two or more comorbidities: hypertension (n=84), obesity (n=40), diabetes mellitus (n=32), atrial fibrillation (n=26), and dyslipidemia (n=39). The mean pre-procedural values of maximum pressure gradient and mean pressure gradient were 88.32 mmHg and 54.80 mmHg, respectively, with a mean velocity across the aortic valve of 4.69 m/s. After TAVI procedure, there was a significant decrease in mean pressure gradient, with the mean value being 12.26 mmHg for intermediate-risk patients and 12.085 for high-risk patients. We observed a decrease in transaortic velocity and a non-significant increase in ejection fraction. Post-procedural heart failure showed a significant decrease, manifested by NYHA class II (n=71) and only III (n=19). Among the possible complications post-TAVI, in the high-risk patient group, mild regurgitations (n=5), moderate regurgitation (n=2); valve embolization (n=1), severe bleeding (n=1), AV block gr. I (n=1), AV block gr. III (n=1), atrial arrhythmias (n=1), vascular complications (n=1), permanent pacemaker (n=1) were developed. In the intermediate-risk patient group, noted complications were: mild aortic regurgitations (n=16), moderate aortic regurgitation (n=2); severe bleeding (n=1), AV block gr. I (n=1), AV block gr. III (n=1), left bundle branch block (n=1), bradyarrhythmias (n=1), atrial arrhythmias (n=1), ventricular arrhythmias (n=1), vascular complications (n=1), permanent pacemaker (n=2), and procedure-related death (n=2).

Conclusion. Current research evidence has highlighted the improvement in hemodynamics in both the intermediate and high-risk patient groups, as evidenced by Gpmed, systolic, and diastolic function of the left ventricle, suggesting a favorable long-term prognosis for this category of patients. These findings underline the benefits of TAVI intervention and support its use aiming to improve the quality of life of patients with aortic valve stenosis.