Transcatheter aortic valve replacement in patients with aortic stenosis and reduced left ventricular ejection fraction – single-center experience

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Introduction: Patients with severe aortic stenosis and reduced left ventricular ejection fraction have worse prognosis and higher risk of adverse events. Transcatheter aortic valve replacement has become an alternative method, especially in high-risk patients[1].

Methods and Results: In Magdalena Clinic, over a period of 10 years, 152 transcatheter aortic valve replacement interventions were performed, of which 44 patients (29.1%) had reduced left ventricular ejection fraction (LVEF < 50%). Mean age was 75 years (52-89), most were men (77.3%), with average ejection fraction of the left ventricle 33%. The aim of this retrospective analysis was to examine changes in ejection fraction during 1 year follow-up and 1-year mortality after TAVR procedure in patients with reduced ejection fraction. Patients were stratified according to baseline value of LVEF (40-49% *vs* <40%). Clinical end point was improvement in LVEF during follow-up and primary outcome was all-cause mortality at 1 year. Patients in both group showed significant increase in LVEF during 1 year follow-up (64.7% in LVEF 40-49%, 51.9% in LVEF <40%). 1 year mortality was 5.9% (1 patient) in the group with 40-49% baseline LVEF, and 18.5 % (5 patients) in the group with <40% baseline LVEF. 1 patient died (3.7%) in the group with <40% baseline LVEF during the procedure.

Conclusion: Mortality post-TAVR was higher in patients with more severely reduced ejection fraction, but TAVR was associated with significant increase in LVEF in both groups.

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LITERATURE

1. Maes F, Lerakis S, Barbosa Ribeiro H, Gilard M, Cavalcante JL, Makkar R, et al. Outcomes From Transcatheter Aortic Valve Replacement in Patients With Low-Flow, Low-Gradient Aortic Stenosis and Left Ventricular Ejection Fraction Less Than 30%: A Substudy From the TOPAS-TAVI Registry. JAMA Cardiol. 2019 Jan 1;4(1):64-70. https://doi.org/10.1001/jamacardio.2018.4320