**AORTIC VALVE REPLACEMENT IN SINGLE CORONARY ARTERY**

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*Background***.** Isolated single coronary artery (SCA) is a rare congenital heart defect (incidence <0.05%). Surgical and transcatheter aortic valve replacement (SAVR and TAVR, respectively) in patients with SCA may present technical challenges. *Methods/results***.** We identified 22 reported cases of SAVR (n=15) or TAVR (n=7) in adults with SCA between 1995-2016 (age 72±12 years, 50% women, presenting complaints: 3 angina, 2 dizziness/syncope, 9 dyspnea). Valves were predominantly tricuspid (65%) and stenotic (91%). All patients with bicuspid valves (n=7), obstructive coronary artery disease (n=3), interarterial course of anomalous coronary artery (n=2) and less than severe stenosis (n=2) underwent SAVR. Coronary angiography (100%), echocardiography (100%), cardiac computed tomography (68%) and cardiac magnetic resonance imaging (5%) were used as diagnostic modalities. Most (86%) cases could be classified based on most recent classification1 (LCC =7; IA=1, IB2=2, 1B4=1); (RCC=15; IIA=2, IIB1=1,IIB2=3,IIB4=3, IID1=1, IID3=1. Single coronary ostium was located in right coronary cusp in 6 and in left coronary cusp in 1 out of 7 SCA patients who underwent TAVR (classification: IIB2=2, IIB4=3, 1B4=1). The valves used in TAVR were: 3 Edward Sapiens, 2 Medtronic Core valve, 1 Lotus valve; sizes 23 -29 mm (transfemoral approach in 3). Distance from aortic annulus to coronary ostium was 12-15.4 mm. Aortic valve replacement was successful in 21 and associated with complication (coronary compression) in 1(5%).

*Conclusion***.** SAVR and TAVR are feasible and associated with excellent outcomes in carefully selected patients with various forms of SCA. 1 Shirani J., Roberts WC. JACC 1993; 21:137.