Endovascular treatment of severe aortic stenosis in high and intermediate surgical risks patients

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Aims. To evaluate the safety and efficacy of transcatheter aortic valve replacement with CoreValve bioprothesis in patients with severe aortic stenosis in high and intermediate surgical risk.

Methods and results. Data was prospectively collected from 81 patients with severe aortic stenosis, who underwent CoreValve implantation in one centre. After risk stratification 38 patients (46.9%) were at high risk (STS score >8%). In 43 cases (53.1%) patients were at intermediate STS score (STS score >3 and <8%), but due to different coexisting characteristics patients were not candidates for surgery. Technical success was achieved in all cases. All-cause hospital mortality was 6.2% (5 cases) generally, without statistical difference between two groups (10.5% in high risk group, 4 patients; 2.3% in intermediate group, 1 patient). In two patients post-operation period was complicated by stroke (1 minor stroke, 1 major stroke; 2.5±1.7% of cases); in one case acute myocardial infarction developed 6 hours post CoreValve implantation (1.2%); in one case acute renal failure developed, leading to death of the patient. No significant differences in cerebrovascular accidents and myocardial infarction between the different risk groups were observed throughout hospital period. During three years 56 patients (72±5,0%) were available for follow up. Two patients died during follow-up: one patient died due to cancer progression (23 months after the implantation), one due to progression of chronic kidney insufficiency (18 months after implantation). No cerebrovascular or cardiac accidents were observed during follow up period.

Conclusion. In selected patients with intermediate surgical risk TAVR procedure with the use of CoreValve system have good clinical outcomes in hospitalisation period and long-term follow-up.

Keywords: Severe aortic stenosis, self-expanding valve, STS score risk evaluation.