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Clinical and haemodynamic outcomes of patients who underwent transcatheter mitral valve-in-valve replacement: one-month results

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THEME: Interventions for Valvular Disease

TOPIC(S): Mitral valve replacement and repair

AIMS

Transcatheter mitral valve-in-valve replacement is one of the emerging alternatives for degenerated valve failure and there is paucity of clinical and echocardiographic findings. Hence, the present study aimed to collect clinical and hemodynamic outcomes in patients who underwent transcatheter mitral valve-in-valve replacement for degenerated mitral bioprostheses.

METHODS AND RESULTS

The study has been designed to include approximately 15 patients. Between February 2019 and October 2019, data of 10 patients who has undergone transcatheter mitral valve-in-valve replacement for degenerated mitral bioprostheses is collected. Out of 10 enrolled patients (Mean age: 70.00 ± 10.89 years; Male: 07/10), two patients had coronary artery disease, two had previous myocardial infarction, two had undergone CABG, one patient had transient ischemic attack, one had carotid vascular disease, two patient had kidney disease, one had right bundle branch block, one patient had previous stroke and seven patient had arterial fibrillation. Pre-procedure, all patients were having moderate to severe regurgitation (six with severe regurgitation); 100% patients were in New York Heart Association class III/IV; LVEF was $54.50 \pm 6.74\%$; the mean Society of Thoracic Surgeons score was 8.72 ± 5.99 and EuroScore II was 8.15 ± 5.68 . In all the ten patients, study device was implanted via transseptal route with 100% technical and device success. Between post-procedure and 1-month follow-up LVEF ($49.40 \pm 6.83\%$ and $52.56 \pm 5.66\%$), mitral valve area (2.21 ± 0.34 cm² vs. 2.20 ± 0.28 cm²) and mean gradient (4.12 ± 2.06 mmHg vs. 4.22 ± 1.99 mmHg, $p < 0.0001$) were maintained. No all-cause mortality, no moderate/severe paravalvular leak, or need for new permanent pacemaker was reported through 1-month. However, there was one case of trivial mitral regurgitation at 1-month follow-up. Moreover, all patient were in New York Heart Association Class-I at 1-month follow-up. Note: Study is still enrolling patients, updated results will be presented during the conference.

CONCLUSIONS

From the above data of 10 patients with 1-month follow-up who underwent transcatheter mitral valve-in-valve replacement, it can be concluded that study device performed well as valve-in-valve with patients having mitral stenosis and paravalvular leak.