Nature Reviews Cardiology | Published online 13 Apr 2017; doi:10.1038/nrcardio.2017.59

VALVULAR DISEASE

Transcatheter repair of severe tricuspid regurgitation

Severe tricuspid regurgitation (TR) is associated with high morbidity, and therapeutic strategies for symptomatic patients are limited. In a new study published in *Circulation*, Nickenig *et al.* show that treatment of TR using the MitraClip system (Abbott Vascular, USA) is both safe and feasible in preselected patients.

In total, 64 patients (mean age 76.6 ± 9.6 years) with symptomatic, moderate-to-severe TR who were not candidates for surgery were treated with transcatheter edge-to-edge repair using the MitraClip system. Functional TR was the most frequent aetiology (88%), followed by degenerative (8%) or mixed (4%) aetiologies.

The MitraClip device was successfully implanted in 97% of patients, who were followed up for a mean duration of 14 ± 18 days. TR-defining parameters measured on echocardiography, such as effective regurgitant orifice area and regurgitant volume, were significantly reduced postprocedure. Compared with 93% of patients in NYHA class III and IV at baseline, only 63% of patients remained in NYHA class III and none in NYHA class IV after the intervention. Exercise capacity (measured by 6-min walking test) significantly improved 30 days after the procedure. Importantly, no intraprocedural deaths, serious adverse events, or cases of device migration were reported.

"TR was reduced but not diminished to trace or zero regurgitation in the majority of patients in our current study," the investigators point out. "A combination of different approaches such as interventional annuloplasty and edge-to-edge repair may lead to superior procedural results and pronounced clinical benefit in patients with functional TR." Given that anatomical and echocardiographical feasibility criteria were not well-defined in this study, additional research is required to determine the optimal patient cohort.

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ORIGINAL ARTICLE Nickenig, G. *et al.* Transcatheter treatment of severe tricuspid regurgitation with the edge-to-edge: MitraClip technique. *Circulation* http://dx.doi.org/10.1161/CIRCULATIONAHA.116.024848 (2017)