

Percutaneous edge-to-edge Repair of the Systemic AV Valve with the MitraClip System to Preserve Valve Function in Congenitally Corrected Transposition

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Objectives: Clinically significant regurgitation of the systemic AV valve (SAVVR) is a common occurrence in congenital corrected transposition (ccTGA). Percutaneous edge-to-edge repair with the MitraClip system might be a viable option to treat this problem.

Methods: We describe two female patients, aged 62 and 72 years respectively with simple ccTGA and no history of previous cardiac surgery. Both presented with severe (grade 4) SAVV on transthoracic (TTE) and transesophageal (TEE) echocardiography associated with severe dilatation of the systemic ventricle. Both were in NYHA functional class III. 3D-TEE revealed an additional prolapse of the anterior leaflet in one patient. Both underwent MitraClip (Abbott, USA) repair, after informed consent was obtained, as an alternative to surgery.

Results: Procedures were performed under general anaesthesia, with TEE guidance. Via a trans-septal approach, one MitraClip was successfully deployed by grasping the septal and anterior leaflets in each case. Post-procedural SAVVR was reduced to grade 1 in both patients, with no stenotic component. Both patients demonstrated clinical improvement, to NYHA class 1. On serial echocardiographic follow-up up to 3 months SAVVR remained at grade 1 in patient 1, and at grade 2 in patient 2.

Conclusions: Percutaneous edge-to-edge repair with the MitraClip system is a valuable, minimally invasive option to treat severe SAVVR in selected patients with ccTGA.

