Edwards SAPIEN transcatheter heart valve in native pulmonary valve position

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### Images in cardiology

#### Edwards SAPIEN transcatheter heart valve in native pulmonary valve position

A 26-year-old woman with membranous pulmonary atresia and ventricular septal defect (VSD) had undergone valvulotomy of the pulmonary valve and closure of the VSD. She had developed progressive pulmonary valve regurgitation and right ventricular failure unresponsive to conservative treatment. The risk for surgical valve replacement was considered too high because of coexisting restrictive and obstructive pulmonary disease, due to hypoplasia of the left lung after correction of a diaphragmatic hernia and the development of scoliosis. The size of her pulmonary artery annulus (26 mm) was too large for a percutaneous pulmonary valve implantation using the Melody valve (Medtronic, Minneapolis, Minnesota, USA). Therefore, it was decided to perform a percutaneous implantation of an Edwards SAPIEN transcatheter valve (Edwards Lifesciences, Nyon, Switzerland), which has been developed for implantation in the native aortic valve annulus up to diameters of 26 mm. In the initial procedure, the native pulmonary annulus was prestencted with a 40-mm Palmaz stent (P4014 Cordis Johnson & Johnson Company, Interventional Systems, Warren, New Jersey, USA). Pulmonary angiography showed stable stent position (panel A, angiography 1). Two months later, allowing fixation of the stent, the 26-mm Edwards valve was implanted and angiography showed good valve function with trivial pulmonary valve regurgitation (panel B, angiography 2). At 6 months of follow-up, the patient’s exercise tolerance had improved considerably and echocardiographic studies still showed normal valve function. To our knowledge, this is the first case of implantation of an Edwards valve in a native pulmonary valve annulus.

**Panel A** Angiography after implantation of the Palmaz stent.

**Panel B** Angiography after Edwards SAPIEN transcatheter heart valve implantation shows a competent valve.

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