



PERCUTANEOUS SELF EXPANDING PULMONARY VALVE IMPLANTATION IN UNFAVORABLE PULMONARY BRANCH ANATOMY

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Female, 35 y.o. Down's Syndrome patient with Tetralogy of Fallot plus left pulmonary artery stenosis

At 2 y.o. underwent corrective surgery transannular patch and left pulmonary branch patch ampliation. At 32yo NYHA FC II -III because of left pulmonary artery origen critical stenosis : Left pulmonary branch angioplasty with stent implantation. One year later NYHA FC II-III dyspnea because of severe pulmonary regurgitation.

Images evaluation have shown severe pulmonary valve regurgitationwith PV: 27mm. PV-Stent distance 22mm

- On Cardiac Catheterization: Severe pulmonary regurgitation with mild RV and PAP elevation but RVP1.3 UW
- PV Balloon sizing: 23mm

Prior stenting of a pulmonary branch can cause significant difficulty in advance the valve delivery system into the stent lumen. Valve size and length selection to implant was based on the minimum diameter of the pulmonary valve annulus on the sizing. The valve lenght was selected to cover but not exceed the left pulmonary branch stent.

The valve size implanted was 25-20 mm.

CONCLUSIONS:

Self-expanding percutaneous Pulmonary valve has become a good option in those native dilated right outflow tracts, but with favorable pulmonary anatomy.

Our experience reproduces the encouraging initial results of implanting this valve in patients with no favorable anatomy, expanding the scope of percutaneous valve implantation in this group.

Further long-term studies are needed to bring more information on different issues like durability, migration and fractures.

