

**Implantation of the transcatheter heart valve for pulmonary position in native large right ventricular outflow tract with severe pulmonary regurgitation**

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**Introduction:** Transcatheter Pulmonary Valve Replacement (tPVR) into right ventricular to pulmonary artery conduits is being increasingly performed in many centers. There are few options for patients with native and large right ventricular outflow tracts (RVOT). An option for these patients is off label use of Edwards valve. We aimed to review the outcomes for the SAPIEN-XT and S3 valves for pulmonary position in patients with large and native RVOT. Between November 2014 and November 2017, 42 procedures were performed. Among them 32(76%) had native RVOT. **Method:** We evaluated; drop in blood pressure, clear waist, balloon stability and residual leak to the PA after contrast injection into the RV during a 30-mm TyShak balloon inflated across the RVOT. If there were no contraindications tPVR procedure was initiated. Andra XXL stents with Z-Med-II balloons preferred for pre-stenting. If RVOT is very large we prefer to wait 6-8 weeks after presenting procedure before tPVR procedure. **Results:** Thirty-two patients underwent RVOT stenting before tPVR. Four of them are still waiting for valvulation. Procedure was unsuccessful in 2 of them. Median age and weight of the remaining patients were 19 (12-46 years) and 54 (33-89) kg, respectively. Primary underlying diagnosis was tetralogy of Fallot (n=20/26). Stenting was performed simultaneously with tPVR in 5 (19%) cases whereas pre-stenting was performed 6 to 14 weeks earlier in 21 patients. Before tPVR median antero-posterior and lateral sizes of the stents were 27(23-30) mm and 28(24-31) mm, respectively. Valve sizes were XT-26 mm (n=4), XT-29 mm (n=18) and S3-29mm (n= 4). In 16 patients additional volume (median 2.5ml (1-4 ml)) was added to the valves' balloon for stabilization. One of the patients underwent hybrid procedure due to the occlusion of the both femoral and jugular veins. **Complications:** One patient had moderate tricuspid regurgitation related with the procedure. There were no deaths during a median follow-up of 9 (1-34) months. Valve function was preserved in all patients during follow-up. **Conclusion:** The Edwards SAPIEN-XT and S3 valves may be an alternative for patients with native and large RVOT.