

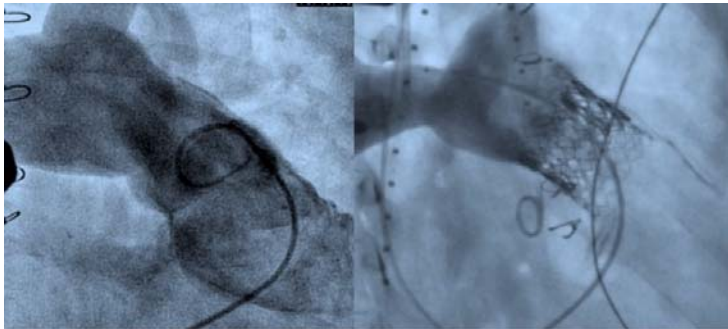
**Percutaneous pulmonary valve replacement in the extraordinarily large pulmonary artery:
Working at the technical limit.**

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Introduction: Percutaneous valve replacement in the extraordinary large native or patched right ventricular outflow tract and pulmonary artery remains a critical issue in interventional cardiology.

Case history: We report about a 32 years old female with corrected Tetralogy of Fallot by VSD closure and transannular patch plastic who was lost in follow-up. At the 27th week of gestation the patient presented with critical right heart failure due to severe pulmonary regurgitation and right heart volume overload. Under clinical monitoring pregnancy was continued until the 32nd week of gestation, delivery by caesarean section. After delivery progression of right ventricular dilation combined with left ventricular compression. Development of a progressive postcapillary pulmonary hypertension due to left ventricular diastolic filling disturbance. Surgical pulmonary valve replacement was negated due to severe biventricular failure and high mortality risk.

Angiography showed a severe pulmonary regurgitation and enlarged pulmonary artery (figure). The minimal diameter of the landing zone for PVR was 26mm x 26mm over a length of 10mm with dilation of up to 32mm before and after. After preenting by two Andrastents crimped on 30x40mm Numed Z-med II balloon 29mm Edwards Sapien XT valve was be implanted transfemorally. Overdilation of the XT valve by 1ml extra fluid in the inflator was used for better hold in the extraordinarily large pulmonary artery. Despite the overdilation Edwards Sapien XT valve function was excellent without regurgitation or stenosis.



Conclusions: In individual cases a percutaneous valve implantation is possible even in an extraordinarily large and patched outflow tract. The critical limitation of this procedure is made by the diameter of available valves and balloons.