

**O13-6**

### **Sparing the pulmonary valve during RVOT stenting in Fallot – is it worth the effort?**

*Rehman R., Mehta C., Stickley J., Bhole V., Chaudhari M., Dhillon R., Stumper O.  
The Heart Unit, Birmingham Children's Hospital, Birmingham, UK*

Introduction:

Stenting of the RVOT is a safe and effective technique in the initial palliation of selected patients with Fallot type lesions.

Stenting of the RVOT increases pulsatile forward flow of systemic venous blood to the PAs. This results in a greater rise in systemic oxygen saturations and promotes better pulmonary arterial growth compared to BT Shunt palliation.

There is debate as to whether the pulmonary valve should be crossed or spared during RVOT stenting. Conceptually, not crossing the PV should have many advantages: potential for the pulmonary valve to grow, avoidance of free regurgitation and potential of later repair without transannular patch.

Objective:

To assess the outcomes of stenting the right ventricular outflow tract (RVOT) in patients with Tetralogy of Fallot whilst sparing the pulmonary valve.

Methods:

Retrospective, non-randomised, single centre review of patients with Tetralogy of Fallot/AVSD Fallot who underwent RVOT stenting between 2008-2017 and came forward for delayed complete repair. Pulmonary valve growth was assessed by serial echocardiography.

Results:

58 patients were studied. Stents were placed crossing the valve in 28 patients and sparing the valve in 30 patients (52%).

There was significant growth of the PV after valve sparing RVOT stent [ $p < 0.01$  ; two tailed t-test].

Valve preserving Fallot repair was achieved in 4 cases ( 13%) of cases after valve sparing stent. There was no difference in the rate of transannular repair between the 2 groups. There was a lower need for conduit repair in the valve sparing stent group (23 % vs 40%) [ $p < 0.03$ ]

Conclusions:

Initial palliation of Fallot is required in about 20% of cases. Stenting the RVOT compares favourably to BT shunt. Stenting the RVOT in Fallot lesions without crossing the pulmonary valve promotes growth of the PV annulus and thereby facilitating valve sparing corrective surgery at a later stage. This approach should be favoured in cases with hypoplastic pulmonary arteries, anomalous coronary arteries or those with associated cardiac lesions or syndromes.