

## P-170

### **In operated fallot is RV end-diastolic volume > 170 ml/m2 a valid cut-off for indication to pulmonary valve replacement ?**

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Introduction: Patients with Tetralogy of Fallot (TOF) repaired by means of a transannular patch, suffer of pulmonary regurgitation leading to right ventricle (RV) dilatation. Several groups have recently demonstrated that if these pts are re-operated for pulmonary valve implant (PVR) since indexed RV end-diastolic volume (RVdVol) exceeds 170 mL/m<sup>2</sup>, the RV volumes do not decrease to normal values. However the beneficial hemodynamic effects of PVR still have to be weighted against the need for re-operation for valve failure. Moreover in TOF to aim to a "normal" RV previously "violated" by means of an infundibulectomy and other surgical procedures is a simple surrogate but probably unfit for them.

Aim: to compare the clinical outcome and instrumental data of two matched repaired TOF population, differing by RVdVol ( $\geq 170$  ml/m<sup>2</sup> vs  $< 170$  ml/m<sup>2</sup>).

Methods: From our database we identified 27 TOF >15 y.o. with transannular patch as primary repair, not yet re-operated for PVR and with RVdVol  $\geq 170$  ml/m<sup>2</sup>. This group of pts (group 1) has been matched for sex, age and age at repair against 32 TOF with the same characteristic above mentioned, but with RVdVol  $< 170$  ml/m<sup>2</sup> (group 2). All of them were evaluated by cardiacMR, echocardiography, cardiopulmonary exercise test. Clinical adverse outcomes were also recorded.

Results: Only pulmonary regurgitation fraction resulted significantly different between group 1 and 2 ( $47 \pm 11\%$  vs.  $37 \pm 10\%$  respectively  $p < 0.01$ ). Conversely other parameters resulted not significantly different: Vo<sub>2</sub>/kg/min  $24 \pm 7$  ml/Kg/min vs.  $23.5 \pm 6$  respectively, RVEF  $50.5 \pm 7.2\%$  vs.  $52 \pm 6.4\%$  respectively. Eleven pts (19%), 5 from Group 1 (18%) and 6 from Group 2 (19%) experienced adverse events: 2 sustained ventricular tachycardia, 8 major atrial arrhythmias, 1 worsening in NYHA functional class. RVdVol  $\geq 170$  ml/m<sup>2</sup> was not associated to adverse event (O.R. 1.1 95% CI: 0.298 to 4.105).

#### Conclusion:

From our data, the two groups didn't differed in term of adverse event and/or instrumental finding of RV dysfunction. We believe that in TOF the RVdVol and the timing of PVR should be evaluated in combinations with several other clinical and instrumental parameters.