P-301

Dilatable Banding of the Pulmonary Artery as An "open end" Palliation in patients with a Right systemic Ventricle.

Cools B., Eyskens B., Heying R., Louw J., Vanagt W., Rega F, Meyns B., Gewillig M.
University Hospital Leuven, Belgium

Introduction A morphologically right systemic ventricle (rSV) (post atrial switch, congenital corrected transposition (ccTGA) is prone to develop failure and progressive tricuspid regurgitation (TR). Subgroups with (sub)pulmonary stenosis do better. The aim of this study was to assess the value of (dilatable) banding as an "open end palliation" in these patients.

Patients and methods Single centre retrospective study. Twenty patients were banded : 5 late after atrial switch, age 8 years (5–12y), all fixed band. Fifteen patients with ccTGA : 6/15 had large VSD, age 2 months (1 – 7m); in 9/15 for prognostic reasons at 4.5 years (8months–15 years; dilatable band in 6). The dilatable band was established using a 2 mm synthetic cord, no knot, overlapping ends fixed by multiple vascular clips; the band can be adjusted percutaneously for somatic growth. The evolution of TR, biventricular function, gradient of the banding and need for interventions was assessed.

Results Median follow-up 6 years. The median gradient evolved from 40 mmHg early PO to 55 mmHg when last seen. In patients with TGA after Senning, TR and the rSV function did not further deteriorate.
In patients with ccTGA a significant improvement of TR and rSV function is observed. When PA banding was done for prognostic reasons, no deterioration of the TV or rSV function is seen in these patients. Till present in only one patient a balloon dilatation of the banding needed to be done due to progressive cyanosis. None of the patients in both groups needed further surgical interventions (no need for double switch, no valvular repair, no pacemaker, no transplantation) till present.

Conclusion: banding of the pulmonary artery in patients with rSV is a safe procedure with a good effect on the RV function and tricuspid regurgitation. Long term follow-up is needed but these preliminary data compare favourable to the natural history or other strategies.
Our current strategy in selected patients with rSV is to perform a dilatatable PA banding for prognostic reasons preferrably before puberty as an "open end palliation".