

Complete correction of truncus arteriosus communis with or without conduit: 10 years experience

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Introduction: Truncus arteriosus communis (TAC) is corrected either by conduit implantation or by direct anastomosis between right ventricle (RV) and pulmonary artery (PA). The aim of our single-centre whole-country study was to evaluate long-term results of our patients after complete correction of TAC.

Methods: Between 2002-2015, 33 patients underwent two-ventricle repair at our center. At the time of surgery median age was 16 days (5-447); median weight 3.1 kg (2.4-9.7). Thirty patients were followed up for median 6.7 years (1 – 14 years).

Postoperative clinical and echocardiographic data within last 10 years was analysed retrospectively comparing patients of Group I (conduit) (n=7) versus Group II (non-conduit) (n=26).

Results: Occurrence of moderate-to-severe proximal stenosis of RV-PA anastomosis/ conduit was not significantly different between the groups: 28.6% vs 19.2% (p=0.59). Proximal stenosis of RV-PA anastomosis did not require re-intervention in our patients; conduit stenosis required catheter dilation in one patient and conduit replacement in 2 patients.

Distal (pulmonary branch) stenosis was observed more frequently (n=9), but without statistically significant difference between the groups: 42.8% vs 23.1% (p=0.29). All the patients underwent catheter balloon dilation (3 patients in Group I and 6 in Group II), followed by reoperation in 3 patients. In our patients severe pulmonary regurgitation was statistically less frequent in Group I than in Group II: 14.3% vs 69.2% (p=0.008). Due to severe RV dilation 3 patients (Group II) required late conduit implantation.

Difference in freedom from any re-intervention between Group I and Group II was statistically not significant at 5th year 65.4% vs 77.8% (p=0.20); was significant at 10th year 42.8% vs 63.1% (p=0.01).

Medians of time of the first re-intervention were: 2.5 (Group I) vs 5.5 months (Group II) (p=0.67) after complete correction.

Conclusion: Time to first re-intervention within couple of months after surgery, due to pulmonary branch stenosis, was comparable in both groups.

From long-term (10-year) perspective the conduit means higher risk of repeated interventions for the patients (due to conduit stenosis). On the other hand severe pulmonary regurgitation in RV-AP direct anastomosis will later expectedly lead to additional re-interventions due to RV dilation.