

Outcome after primary repair of Tetralogy of Fallot (TOF) – A single center retrospective analysis of long-term results in 176 patients

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Objectives: The aim of our study was to analyze predictors for early and late mortality, need for re-intervention or re-surgery after TOF repair depending on the surgical strategy for primary repair (rTOF).

Methods: All patients, who underwent rTOF in our center between April 1999 and January 2016 (n=176) were included. 104 male and 72 female patients were assessed (0-4 months, n=51; 4-8 months, n=77; 8-12 months, n=24; >1 year, n=24). Mean body weight was 6.6 (2.5-70) in males and 6.4 (2.9-56) kilograms in females. The surgical strategy was transannular patch (TAP) (n=80), valve-sparing double-patch technique (BiPatch) (n=92) or graft implantation (n=4), The Surgical approach was either transatrial (n=10) or transventricular (n=166). Patients with initial palliation by shunt were excluded. The protocol was approved by our ethics committee.

Results: The need for re-surgery was not influenced by the surgical technique. During the observation period of 120 months 81.3% of the cohort did not need re-surgery (77.5% in TAP-group, 75% after graft implantation and 84.8% after BiPatch repair). Overall survival after rTOF was 97.7%. The need of re-surgery was not influenced by the complexity of the patients (Aristotle Complexity Score). We also found no significant influence of neither age nor sex, body weight or height. Indications for surgical re-intervention were more than moderate pulmonary regurgitation (TAP n=45, BiPatch n=26) or stenosis (TAP n=3, BiPatch n=136). In terms of the neurological outcome there was no significant difference between patients who had underwent TAP or bi-patch repair.

Conclusions: In our cohort we found no significant difference in respect to the outcome and need of re-intervention in TOF patients depending on surgical technique, age, body weight, gender or complexity.