

Early and Late Outcomes of Total Correction of Tetralogy of Fallot; A single center experience

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Introduction

Tetralogy of Fallot (TOF) is the most common form of cyanotic congenital heart disease. It carries a very high mortality if left untreated. The 10-year survival in patients untreated is 24% only.

The purpose of this study was to analyze the factors affecting morbidity and mortality and follow-up results in postoperative period in TOF patients.

Methods

We retrospectively investigated 476 consecutive patients who were diagnosed with tetralogy of Fallot (TOF) and underwent a surgical intervention from 2002 to 2017. Data were obtained from hospital records, clinical records, echocardiographic, operative and catheterization reports and referring physician notes. We investigated the following clinical characteristics before and after surgery: gender; age at the time of surgery; follow-up period.

Results

Mean age at the time of diagnosis was 4.9 ± 28 months and 26.1 ± 34.3 months at the time of operation. Mean weight at the time of operation 11.2 ± 5.6 kg (4.6 – 70 kg). The most common presenting symptoms were physical examination of the murmur in 317 patients, cyanosis in 139 patients. Sixty one patients had initial palliative operations. A transannular patch was inserted in 258 (60 %) patients. Mean postoperative intensive care unit stay was 4.5 ± 6.6 days, mean hospital stay was 9.6 ± 8.2 days. The mean follow-up period was 4.4 ± 4.4 years (1 months – 17 years). On postoperative echocardiography 72 patients had severe pulmonary regurgitation, pulmonary gradient was 19.1 ± 10 mmHg (2 – 65 mmHg). Postoperative pulmonary valve insufficiency and residual pulmonary stenosis grade did not affect intensive care unit and hospital stay. Use of a permanent pacemaker was required in 8 (1.7 %) patients. Fifteen patients died in the early period and the operative mortality was 3%. In the follow-up period, pulmonary valve replacement was performed in 33 patients and aortic valve replacement was performed in 3 patients. Late death from cardiac causes occurred one patient.

Conclusion

Total correction of TOF can be performed with a very low mortality rate. However, the postoperative re-operation or re-intervention rates remain relatively high. So it is important for patients to follow them for many years.