

Reinterventions After Repair of Tetralogy of Fallot

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BACKGROUND:

Early results of repair of tetralogy of Fallot (TOF) were excellent. However, with long term follow up they may need repeated reinterventions

OBJECTIVE:

To highlight the indications for reinterventions after TOF repair and how to decrease its incidence.

METHODS:

A retrospective review of all cases of TOF repaired between 1985 to 2013 in our institution. A total of 557 patients were included. Patients were classified into two groups; Group 1: who required transannular patch (TAP) and Group 2: who had pulmonary valve sparing (PVS). The two groups were compared as regards to the need to reoperation or interventions after repair.

RESULTS:

Reinterventions or reoperations were done for one third (35.7%) of our all cohort with higher rate of reinterventions on TAP group 41.6% vs 16.4% in PVS; $p < 0.001$) with shorter freedom time ($p < 0.001$). Cause for intervention in our series were: Reintervention for severe pulmonary regurgitation (PR) was 11.5% with 14% on TAP group versus 2.5% on PVS with significant difference $p < 0.001$. Reintervention for right ventricular out flow obstruction (RVOTO) was 10.8% with 11.7%

on TAP group versus 7.40% on PVS group with no significant difference $P = 0.118$. Reintervention for LPA stenosis was 18% with 21.6% on TAP group versus 5% on PVS group with significant difference $P < 0.001$. Reintervention for RPA stenosis was 8.1% with 10.1% on TAP group versus 0.80% on PVS group with significant difference $p < 0.001$. Reinterventions for tricuspid regurgitation (TR) was 5.7% with 6.2% on TAP group versus 4.1% on PVS group with no significant difference $p = 0.269$. Reintervention for VSD was 2% with 1.80% on TAP group versus 2.50% on the PVS with no significant difference $p = 0.440$. Reintervention for endocarditis was 0.5% with 0.5% on TAP group and 0.8% on the PVS group with no significant difference $p = 0.521$. Reintervention for arrhythmia was 1.4% with 1.6% on TAP group versus 0.8% on the PVS group with no significant difference $p = 0.453$. Late heart block managed by pace maker was 0.9% with 0.9% on the TAP group versus 0.8% on the PVS group. with no significant difference $p = 0.702$

CONCLUSION:

Most common indications for reinterventions in our series were PR, RVOTO and pulmonary artery branch stenosis. PVS has a protective effect on long term RV geometry and function with a lower rate reinterventions.

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