

The catheterization and angiographic variations of coronaries in patients with Tetralogy of Fallot

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Background:

Tetralogy of Fallot (TOF) is the most common form of cyanotic congenital heart disease and the catheterization and angiography still considered (in most centers) as essential preoperative diagnostic step. The prevalence of anomalous coronary artery in tetralogy of Fallot (TOF), has been reported as being up to 9%. These anomalies are not always detectable intraoperatively, particularly when they are covered by epicardial fat, pericardial-epicardial adhesions or by overlying myocardium.

Objective:

To determine coronary artery anomalies in tetralogy of Fallot in children as seen on angiography.

Place and Duration of Study:

The Children hospital & Institute of Child health, Lahore, Pakistan from January 2006 to December 2012.

Methodology:

This is retrospective descriptive study. Children under 6 months to 16 years of age with echocardiographic diagnosis of tetralogy of Fallot were included in the study. All patients had pre-operative cardiac catheterization and angiography. Coronary arteries were studied with a non-selective aortic root angiogram in standard 45 (LAO) left anterior oblique & 20 cranial and 30 (RAO) right oblique views. The frequency of a normal and an anomalous coronary was determined by analyzing in SSPS-19.

Results:

Of the 662 patients, 65.4% were male and 34.6% were female .The mean age was 69(\pm 43.14) months. Six hundred and twenty five (94.4%) had a normal coronary anatomy while 37 (5.6%) patients had anomalous coronary arteries. Among the patients with coronary anomalies, the commonest was a single origin coronary artery in 19 (2.9%) cases. Seventeen patients (2.6%) had coanal branch crossing right ventricular outflow track (RVOT) anteriorly and one (0.2%) had coanal branch crossing RVOT posteriorly.

Conclusion:

Coronary artery anomalies were detected in 5.6% of the cases with tetralogy of Fallot. Single origin coronary artery anomaly was the commonest anomaly.

Key words:

Coronary anomaly. Angiography. Aortogram. Right coronary artery. Left coronary artery. Tetralogy of fallot. Single origin coronary artery.