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Long-term outcomes of the arterial switch operation in a population-based follow-up.

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OBJECTIVES: To evaluate long-term outcomes of the arterial switch operation (ASO) for transposition of great arteries (TGA) in Finnish nationwide follow-up.

METHODS: All patients who underwent ASO in Finland between years 2004 and 2014 were included in this retrospective study. Overall 148 were operated, 81 (55 %) with simple TGA, 50 (34 %) TGA and ventricular septal defect (VSD) and 17 (11 %) Taussig-Bing anomaly. 129 (88 %) patients underwent balloon atrial septostomy prior to ASO.

RESULTS: Total of 35 (24 %) patients had prenatal diagnosis. The mean age at the time of the ASO was 10.1 ± 8.6 days. Thirty-one patients (20.9 %) underwent 60 reinterventions (19 reoperations and 41 cardiac catheterizations) during the follow-up, most commonly due to pulmonary artery stenosis (53 %), and coarctation of the aorta (13 %). One patient underwent heart transplantation at 10 months of age due to severe heart failure and left ventricular dilatation. Longer perfusion time (p=.008), and abnormal coronary anatomy (n=34, p=.000) were associated with increased risk for reintervention. Overall survival rate after ASO was 96.6 %. The early mortality (within 30 days or before hospital discharge) was 2.7 % (n=4) and late 0.7 % (n=1).

CONCLUSIONS: Long-term survival after ASO is excellent. The most common reason for reintervention after ASO is pulmonary artery stenosis.