Total correction of Truncus arteriosus: Conduit versus conduitless reconstruction of the right ventricular outflow tract

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Objective  
Retrospective analysis of repair of truncus arteriosus with focus on the right ventricular outflow tract repair strategy

Methods  
14 patients undergoing truncus repair (2005–11) were analyzed. Median age was 24 (0-64 months). Based on surgeon’s preference, 6 underwent RVOT reconstruction with a Contegra while 8 underwent conduitless RVOT reconstruction with a 3 patch technique and a monocusp (PTFE 4 and Contegra monocusp 4). Moderate to severe truncal valve regurgitation necessitated reconstruction in 6 patients. 2 patients had repair of interrupted arch and 2 reimplantation of arteria lusoria. Median follow-up was 40(3–80] months.

Results  
There was no mortality. 1/14 had severe truncal valve regurgitation at follow-up. 1 patient receiving a 12 mm Contegra needed revision with downsizing to 8 mm Contegra (bicupidized) due to technical error. 2/6 patients in conduit group needed intervention for distal RVOT/branch PA obstruction at a median fup of 41 months against 1/8 in the conduitless group at 37 months. 2/6 conduits had moderate pulmonary regurgitation, while all conduitless repairs had moderate-severe pulmonary regurgitation. Median intubation duration was 6 and 4 days respectively.

Conclusions  
Contemporary results of truncus arteriosus continue to improve despite the complexity of repairs involved. Conduitless RVOT reconstruction with a potentially growing posterior wall is an evolving option, with the objective of delaying the first reoperation. However, it needs long term follow-up to draw any conclusions.