Long term outcome of cyanotic newborns with complete atrioventricular septal defect combined with tetralogy of Fallot requiring a staged repair is not worse than primary repair


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Objectives: Primary repair is the preferred strategy for surgical treatment of complete atrioventricular septal defect combined with tetralogy of Fallot (CAVSD-TOF). However, in cyanotic newborns, a staged procedure may be required. Long term outcome of these patients was compared to primary repair.

Methods: Data of 56 patients with CAVSD-TOF who underwent surgery between 1974 and 2013 were reviewed. Endpoints of the study were mortality and reoperation. The patients were divided into group A: staged repair, and group B: primary repair. Indication for a staged repair was mostly a cyanosis in neonates.

Results: Group A, and B comprised 31, and 25 patients, respectively. In group A, 8 patients died before reaching complete repair, and 3 are currently awaiting repair. The patients in group A were younger at time of initial surgery (p=0.02), and exhibited more often cyanosis (21 vs. 5 patients, p=0.003) compared to group B. Survival at 10 years following initial surgery was 76.4±8.2% in group A, and 87.1±7.0% in group B (p=0.3). The freedom from reoperation for regurgitation of the atrioventricular valve (AVVR) at 10 years following repair was 82±9.4% in group A, and 77±9.0% in group B (p=0.5). Moderate or more AVVR prior to repair was the only risk factor for reoperation (p=0.01).

Conclusions: Cyanotic neonates who require an urgent treatment exhibit a similar long-term outcome after a staged repair compared to patients after primary repair.