

Repair of Partial Atrioventricular Septal Defect: Age and Outcomes

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Purpose: We evaluated the outcomes of patients with partial atrioventricular septal defect (PAVSD) and analyzed the effect of age on outcomes.

Methods: Between 1990 and 2014, 88 children underwent PAVSD repair by pericardial ASD patch with routine left atrioventricular (AV) valve zone of apposition closure. We divided the patients into four age quartiles of 22 patients each: (I = 0–0.75 years, II = 0.75–1.5 years, III = 1.5–3.5 years, and IV = > 3.5 years). These quartiles were evaluated univariately for their association with the following time-to-event outcomes: survival, freedom from left AV valve regurgitation, and freedom from reoperation using log-rank analysis.

Results: Median age at surgery was 1.62 years. There were no operative deaths. There were 14 reoperations with no statistically significant difference in frequency of reoperation between the four age quartiles ($p = 0.094$). The most common reoperation was repair of left ventricular outflow tract obstruction (6 patients [I = 4, II = 2]). Left AV valve regurgitation repair was required in 3 patients (I = 1, II = 1, III = 0, IV = 1). Two patients required pacemaker placement, one each in quartiles II and IV. Median time to latest echocardiography was 1.3 years (IQR: 0.01 – 7.7 years); 74 patients (65%) had \leq mild left AV valve regurgitation, 8 (7%) had mild-to-moderate, 5 (4%) had moderate, and 1 (0.8%) had severe. Age at repair had no significant association with long-term AV valve insufficiency.

Conclusions: Results of PAVSD repair at a median age of 1.6 years are excellent. Operating at this earlier age is not statistically associated with increased mortality, reoperation, or left AV valve regurgitation.