OUTCOMES AFTER REPAIR OF PARTIAL AND TRANSITIONAL ATRIOVENTRICULAR SEPTAL DEFECTS

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 10:00 a.m.-10:45 a.m.

Session Title: Congenital Cardiology Solutions: Surgical Outcomes
Abstract Category: 13. Congenital Cardiology Solutions: Pediatric
Presentation Number: 1118-122

Authors: Jessica Bowman, Harold Burkhart, Adele Goodloe, Joseph Dearani, Sabrina Phillips, Benjamin Eidem, Frank Cetta, Mayo Clinic, Rochester, MN, USA

Background: Surgical repair of partial atrioventricular septal defects (AVSD) has been successful for over 60 years. Recent data from the Pediatric Heart Network (PHN) show that 31% of patients had moderate/severe left atrioventricular valve regurgitation (LAVVR) at 6 month postoperative. In contrast, previous reports, including data published by our institution, found that only 9% of patients developed more than moderate LAVVR postoperative. Our objective was to determine the long-term outcomes after repair of partial AVSD in the current era and compare those to the PHN data and the earlier experience at our institution.

Methods: Clinical records were reviewed for all patients with partial (including transitional) AVSD who had biventricular repair between 5/1999 and 6/2011 at our institution. Kaplan-Meier method was used to determine survival and potential risk factors were evaluated using Cox proportional hazards models.

Results: Seventy-three patients had repair of partial AVSD during the study time frame. Nineteen (26%) had Down syndrome. Median age at surgery was 9.5 years. Survival at 1-year was 95.1%. Median follow-up was 2.3 years (IQR, 0.3-5.3). At five years postoperative, survival-free of reoperation was 80.1%. Nine patients (12%) required reoperation. Reasons for reoperation included: LAVVR (n=6), LAVV stenosis (n=1), residual ASD (n=1), and relief of LVOTO (n=1). Seven patients (5 within 2 years) developed more than moderate LAVVR with a cumulative incidence of 10.8% by 2 years. None of the patients with Down Syndrome have developed greater than moderate LAVVR. Patient age at surgery (p=0.14) and severity of preop LAVVR (p=0.39) were not identified as statistically significant risk factors for postop LAVVR.

Conclusions: Morbidity and mortality following surgical repair for partial AVSD remain low. The most common reason for reoperation is LAVVR. 10.8% of patients developed more than moderate LAVVR by 2 years postop. These data are in contrast to the PHN data, and our cohort had a longer follow-up period. Additionally, the rate of development of LAVVR was similar in our current cohort when compared to the earlier cohort.