ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E776
JACC March 27, 2012
Volume 59, Issue 13

Congenital Cardiology Solutions

ANNULOPLASTY AT ATRIOVENTRICULAR CANAL REPAIR IMPROVES LATE LEFT ATRIOVENTRICULAR VALVE FUNCTION

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Sunday, March 25, 2012, 9:30 a.m.-10:30 a.m.

Session Title: Congential Cardiology Solutions: Therapy
Abstract Category: 28. Congenital Cardiology Solutions: Therapy
Presentation Number: 1139-301

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Background: Annuloplasty at common atrioventricular canal (CAVC) repair has been used to improve left atrioventricular valve (LAVV) function. This report reviews our experience in annuloplasty at CAVC repair.

Methods: The demographic, procedural and outcome data were obtained for all children who underwent biventricular repair for complete CAVC from 2001 to 2011.

Results: 219 patients were included. This was a heterogeneous group of complex diseases, with 22 with heterotaxy, 37 tetralogy of Fallot or double outlet right ventricle, and 56 unbalanced CAVC. The cleft was closed completely in 192 patients (88%). 65 patients had annuloplasty (39 commissural, 32 posterior). There were 5 early deaths (2.3%). At discharge, 4 patients (1.9%) had more than mild regurgitation and no patients had significant inflow gradients. During a follow-up of 2.7±2.1 years, there were 6 late deaths (2.8%) and 16 patients (7.3%) required LAVV reoperation. Two of 65 patients (3.1%) with annuloplasty required reoperation, compared to 14 of 148 without annuloplasty (9.5%, p=0.16). In propensity matched analysis, annuloplasty was significantly protective of ≥ moderate LAVV regurgitation (OR 0.19, p = 0.008) and non-significantly of reoperation (OR 0.28, p=0.099). The propensity score matching was supported by similar findings in 1:1 case-control matched analysis.

Conclusions: LAVV function after CAVC repair continues to decline over time. Annuloplasty stabilizes LAVV function significantly and tends to reduce reoperations.