

SURGICAL REPAIR OF ATRIOVENTRICULAR SEPTAL DEFECT. 10 YEARS EXPERIENCE

Pérez-Andreu J., Pérez-Negueruela C., Mayol J., Carretero J., Diaz S., Prada F., Caffarena-Calvar J.M.
Pediatric Cardiac Surgery. Barcelona Children's Hospital. Barcelona, Spain

INTRODUCTION

Atrioventricular septal defect (AVSD) repair can be performed with excellent midterm outcomes but late morbidity and the need for reoperation complicate the long-term results. The purpose of this study was to evaluate the surgical outcome of the AVSD in a single institution during the last 10 years (2003-2013) and to identify the risk factors associated with poor outcome.

METHODS

Data of 102 consecutive patients who underwent surgical correction for AVSD between May 2003 and October 2013 at our institution were retrospectively collected.

Primary endpoints: in-hospital and late mortality and early and late reoperation.

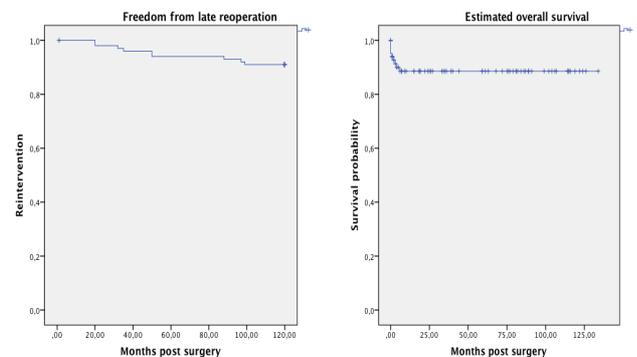
Secondary endpoints: left atrioventricular valve (LAVV) regurgitation, subvalvular aortic stenosis (SAS), residual VSD, LAVV replacement, permanent pacemaker implantation and infectious complications.

The association of these data with the presence of Down syndrome, preceding pulmonary artery banding (PAB), weight less than 5 kg, age less than 6 months and type complete AVSD was simultaneously analyzed.

Patients	
Age (m)	15.8(1-168)
Age <6months	29/102
Sex(male/female)	46/56
Weight (kg)	7.8(2-47)
Weigh <5kg	38/102
Down syndrome	50/102
Ventricle dominance	
Balanced	80/102
Right dominance	18/102
Left dominance	4/102
Type of AVSD	
c-AVSD	70/102
p-AVSD	18/102
i-AVSD	14/102
Previous PAB	20/102

RESULTS

The in-hospital mortality was 3% (n=3) compared with late mortality of 7% (n=7). Three patients required an early reoperation due to severe AVV regurgitation (n=2) and severe residual VSD (n=1). Six patients (6%) required a late reoperation due to severe AVV regurgitation (n=5) and SAS (n=1). Down patients had tendency for shorter cross-clamping duration ($p=0.007$). The estimated overall survival for all patients was 89.7% at 10 years. The estimated overall survival for patients with previous PAB was 65% at 10 years ($p=0.001$). The estimated freedom from late reoperation for all hospital survivors without an early reoperation was 93.8% at 10 years.



CONCLUSIONS

AVSD can be carried out with good long-term results. Correction in patients weighing less than 5 kg and younger than 6 months is safe and beneficial. Palliative procedures previous to a definitive repair are no longer recommended unless other associated abnormalities make primary repair extremely a higher risk operation. Despite significative improvement in operative mortality, postoperative mitral regurgitation remained a concern during long-term follow-up.