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Surgical repair of atrioventricular septal defect. 10 years experience

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INTRODUCTION

The alterations in endocardial cushion and atrioventricular septation are defects characterized by varying degrees of incomplete development of the septal tissue surrounding the atrioventricular valves. Since the first successful repair of complete atrioventricular septal defect (AVSD) the treatment of this malformation has improved. Nowadays, 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 surgical outcome in a single center during the last 10 years.

METHODS

Data of 97 consecutive patients who underwent surgical correction of AVSD between May 2003 and October 2013 at our institution were collected retrospectively. The primary endpoints in the study were in-hospital and late mortality and early and late reoperation. Other endpoints analyzed simultaneously included complications after repair: 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.

RESULTS

The in-hospital mortality was 3.1% (3 patients) compared with late mortality of 7.1% (7 patients). Three patients (3.1%) required an early reoperation due to severe AVV regurgitation (2) and severe residual VSD (1). Six patients (6.2%) required a late reoperation due to severe AVV regurgitation (5) and SAS (1). 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 significant improvement in operative mortality, postoperative mitral regurgitation remained a concern during long-term follow-up.