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제56차 추계학술대회

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Long-term Outcomes of Surgical Repair for Adult Partial Atrioventricular Septal Defect

Purpose

- While Partial atrioventricular septal defect (PAVSD) is commonly diagnosed and treated in childhood, a significant number of patients present for surgery in adulthood, due to late diagnosis.

- This study aimed to evaluate the surgical outcomes of adult patients with partial atrioventricular septal defect (PAVSD), focusing on long-term survival, the need for reoperation, and complications such as pacemaker implantation and heart failure readmission.

Methods

- A retrospective analysis was conducted on 114 adult patients who underwent surgical repair for PAVSD.
- Baseline characteristics, including age, sex, and preoperative echocardiographic parameters, were recorded.
- The operative techniques included Primum ASD closure, left atrioventricular valve (LAVV) repair, and suture annuloplasty among others.

- The primary outcome of this study was long-term survival, while secondary outcomes included the incidence of reoperation, pacemaker insertion, and readmission for heart failure.

- Survival rates were estimated using the Kaplan-Meier method, while competing risk analysis was employed to assess the cumulative incidence of reoperation and other events, accounting for death as a competing risk.

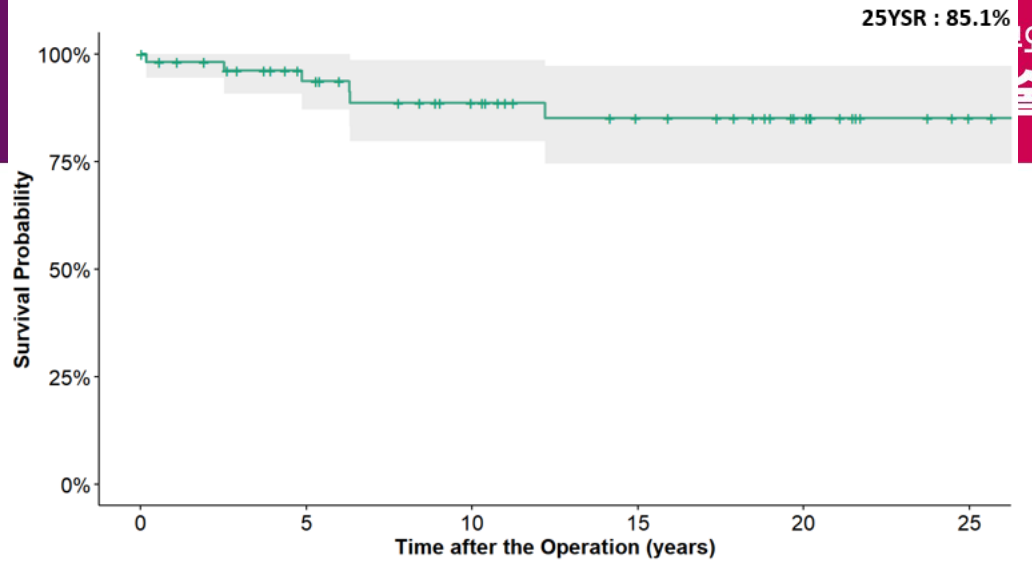
Results

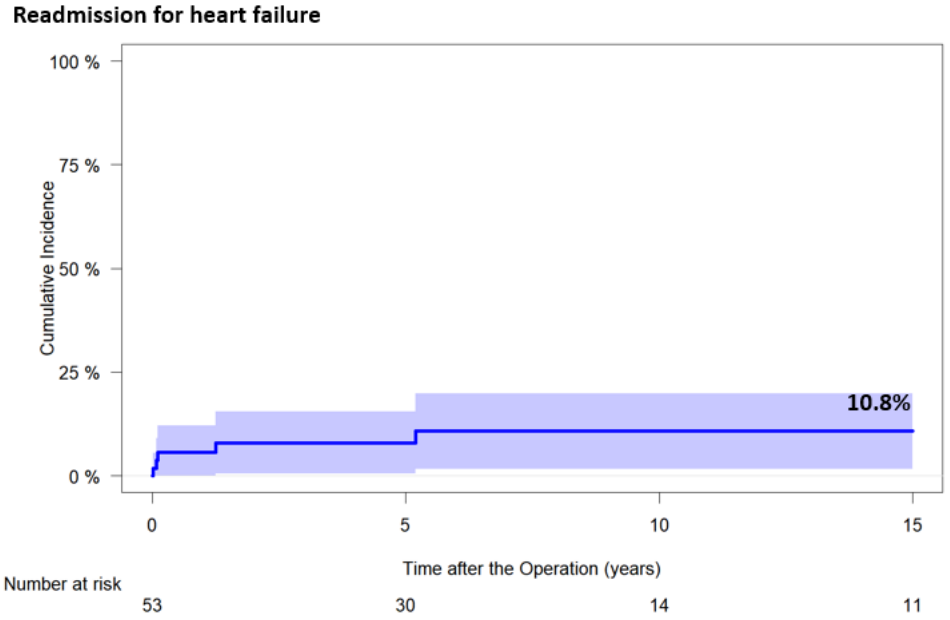
- The study cohort had a mean age of 41.4 ± 15.0 years, with 35.9% male. Most patients (83.0%) were in NYHA functional class II preoperatively, with an average left ventricular ejection fraction of 60.2% ± 11.8%.

- The surgical interventions primarily involved Primum ASD closure (96.2%) and LAVV repair (84.9%). Only one patient underwent fenestrated ASD closure due to pulmonary hypertension.

- Kaplan-Meier analysis revealed a 25-year survival rate of 85.1%. The cumulative incidence of reoperation was 8.2%, while 2.3% required pacemaker implantation, and 10.8% of patients were readmitted for heart failure, as determined by competing risk analysis.

Variable	N = 114
Age, years	41.4 ± 15.0
Male sex, n (%)	19 (35.9%)
Comorbidities	
Down syndrome	1 (1.9%)
NYHA functional class	
1	44 (83.0%)
2	7 (13.2%)
3	2 (3.8%)
Any arrythmia	4 (7.6%)
Preoperative echography	
LV ejection fraction, %	60.2 ± 11.8
LV end-diastolic dimension, mm	41.2 ± 6.6
LV end-systolic dimension, mm	26.8 ± 5.1
TAPSE, mm	26.9 ± 6.9
LA volume index, ml/m^2	44.7 ± 19.6
LAdiameter, mm	38.2 ± 7.0
RA diameter, mm	43.7 ± 7.6
RV systolic pressure, mmHG	40.8 ± 11.6
Operative characteristics	
Primum ASD closure	51 (96.2%)
Secundum ASD closure	15 (28.3%)
ASD fenestration	1 (1.9%)
Left atrioventricular valve repair	
Cleft closure	45 (84.9%)
Suture annuloplasty	30 (56.6%)
Right atrioventricular valve repair	
DeVega annuloplasty	10 (18.9%)
Kay annuloplasty	18 (33.8%)
Concomitant CABG	1 (1.9%)
Concomitant PPM insertion	3 (5.7%)





Conclusion

- Surgical repair of PAVSD in adults is associated with excellent long-term survival and a relatively low incidence of reoperation and serious complications.

- The findings support surgical intervention as an effective treatment strategy for adult PAVSD, highlighting the need for tailored surgical approaches and ongoing postoperative monitoring to manage potential long-term complications such as heart failure and arrhythmias.