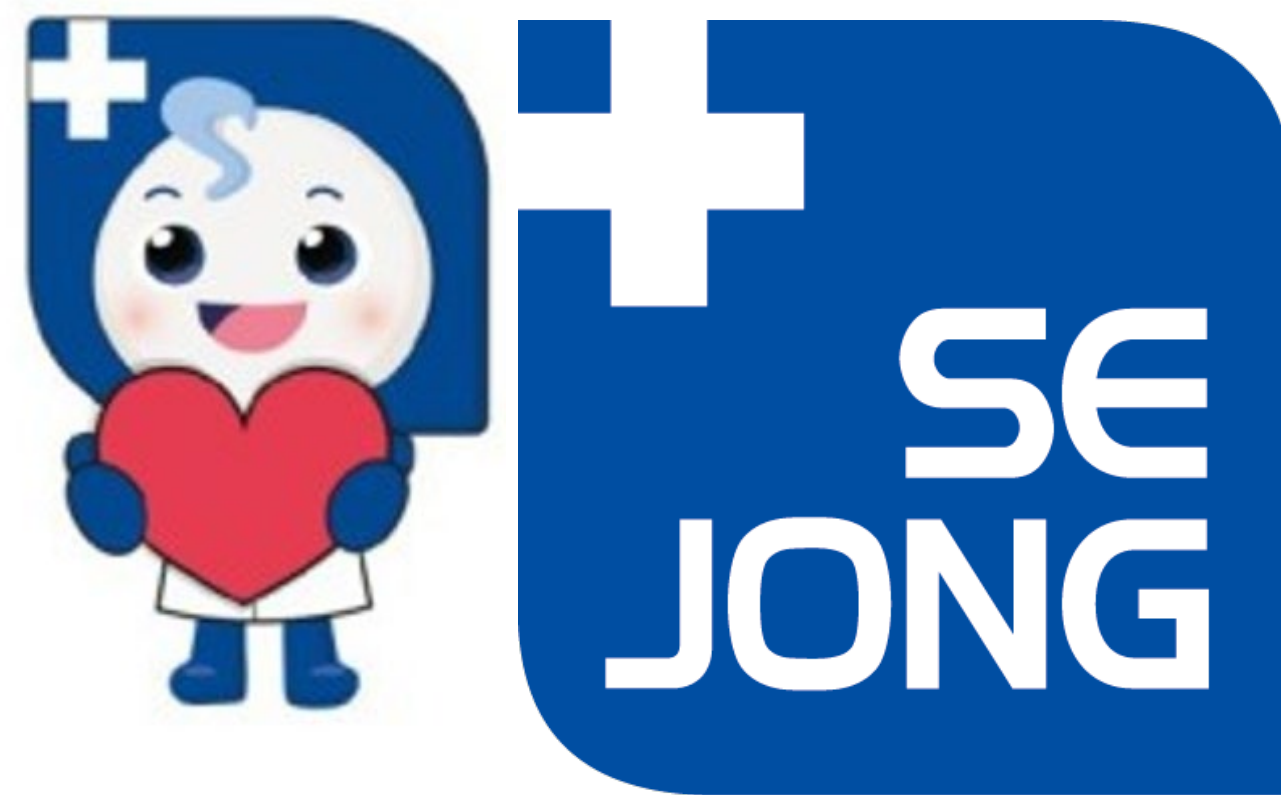




Peri-areolar Approach For Minimally Invasive Septal Defect Repair : Early Experience



Background

The sub-mammary incision is currently the standard approach for minimally invasive cardiac surgery through right thoracotomy.

The peri-areolar incision, a technique established in plastic surgery, is now being introduced for minimally invasive repair of acquired cardiac disease.

We present our early experience with the peri-areolar incision for minimally invasive repair of various septal defects in adult patients.

Method

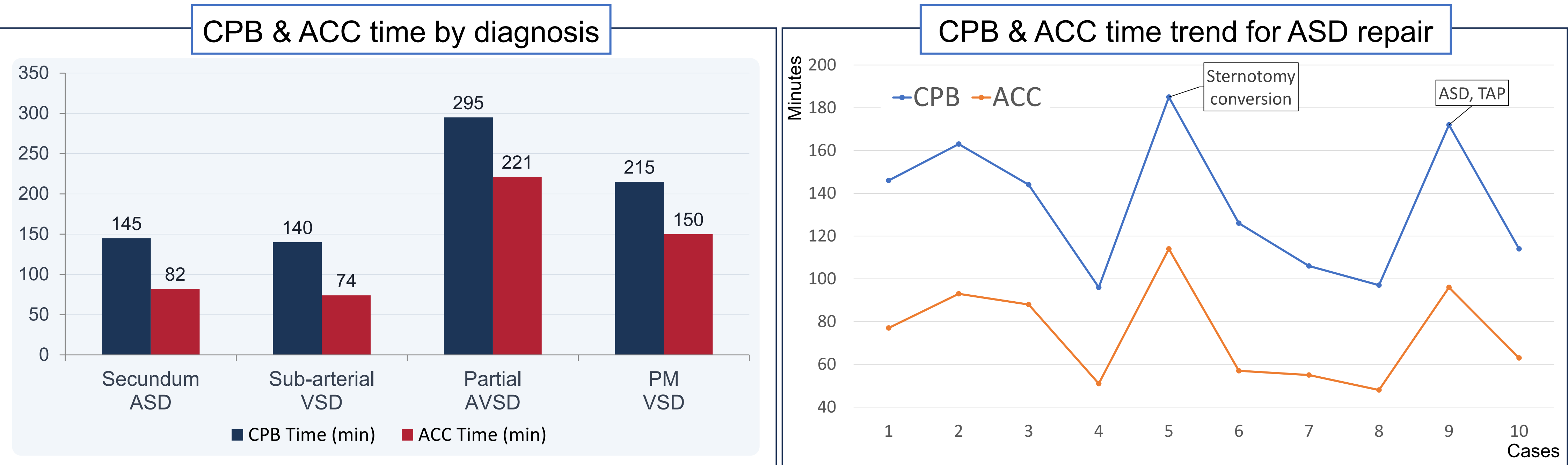
Between 2022 and 2025, **24 adult patients** underwent minimally invasive septal defect repair via a peri-areolar incision.

Total patients	24
Sex	Male : Female = 6 : 18
Age (years, median)	31.7 (18.3 – 66.0)
Body weight (kg, median)	59.2 (42.9 – 114.1)
Diagnosis	Right-sided approach ASD (n=10) Partial AVSD (n=2) PM type VSD (n=2) SA type VSD (n=10) Left-sided approach
Concomitant procedures	Tricuspid annuloplasty (n=1) Mitral cleft repair (n=2) DCRV relief (n=2)

Peripheral cannulation was used for cardiopulmonary bypass.

Results

- Median cardiopulmonary bypass (CPB) time : 151.0 minutes (range 96–295)
- Median aortic cross-clamp (ACC) time : 79.5 minutes (range 48–221)
- Sternotomy conversion : 1 case due to right coronary artery injury



- All patients were extubated within 6 hours after operation
- All patients were transferred to the general ward the next day
- Median hospital stay : 6 days
- No mortality

Morbidity	n	Status
Unilateral vocal cord palsy	1	Fully resolved
Sensory changes in thigh	2	Fully resolved
Femoral lymphocele	1	Fully resolved

ASD : atrial septal defect, VSD : ventricular septal defect, AVSD : atrioventricular septal defect, PM type : peri-membranous type, SA type : sub-arterial type, DCRV : double-chamber right ventricle

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The author has no financial conflicts of interest to disclose.

Conclusion

- ✓ The peri-areolar approach is a safe and reliable technique for minimally invasive repair of septal defects.
- ✓ Provides superior cosmetic results compared to the sub-mammary incision
- ✓ Maintains the advantages of the minimally invasive approach (no sternotomy, reduced pain, rapid recovery)

