Late Sequels after Cavopulmonary Anastomosis in Complex Congenital Heart Disease: Thailand Experience

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Rationale

The survival rate of children with congenital heart disease (CHD) has been improved. Cavopulmonary anastomosis (CPA) become a standard procedure in patients particularly with single ventricle physiology. These children have been survived with the sequels impact of CPA.

Objective

The purpose of study is to evaluate late complications in these patients.

Method

Patients underwent CPA at least 5 years, regularly followed at our institute, were recruited. Medical records had been reviewed. Clinical parameters, Laboratory test, cardiovascular parameter and hepatic evaluation had been obtained during Jan-Oct 2017.

Results

Parameter N=30
Gender, male:female 2:1
Age (yr.), mean (range) 14.80 (7-33)
Body mass (BMI) (range) 1.32 (0.8-1.94)
NYCA classification I-II 28 (93.33%)
Dextrocardia 9 (30.00%)
Abdominal inversus/ambiguous 9 (30.00%)
Dominant RV morphology 4 (13.30%)
Asplenia/polysplenia 5 (16.67%)

Dysrythmia 16.7%
Sinus node dysfunction (PPM) 10%
Protein losing enteropathy 6.7%
Hepatic nodule 3.33%
Thrombocytopenia 10.0%
Thrombo embolism 16.7%
Increase hepatic stiffness >12.5 Kpa 19 (63.33%)
AST/ALT >1.5 4 (12.50%)
Aspatate-aminotransferase to platelet ratio index (APRI) >0.7 4 (12.50%)
Thrombocytopenia 3 (10.00%)
Protein losing enteropathy 2 (6.67%)
Hepatic nodule 1 (3.33%)

Conclusion

Long term follow up of Fontan and inferior-Glenn patients revealed majority were in functional class I and II. However, major concerns regarding systemic venous hypertension and hepatic squeals. Further regularly systematic follow-up is required evaluations for early hepatic fibrosis detection and management.