

Pediatric Cardiac Center

(Seoul National University Hospital)

1. Introduction

The Pediatric Cardiac Center at Seoul National University Children's Hospital is a premier provider of care for patients with congenital and acquired cardiac conditions, based on a myriad of experience and techniques over the past sixty years.

Our team, including pediatric cardiologists, pediatric cardiothoracic surgeons, pediatric radiologists, pediatric cardiothoracic anesthesiologists and cardiac pathologists, provide comprehensive multidisciplinary treatment.

To accurately diagnose and determine the best course of treatment, we use the most up-to-date 3D echocardiography, cardiac MRI and cardiac CT; for the convenience of our patients, we provide one stop service at our out-patient clinic. Annually, we provide around 600 cardiothoracic surgeries with an average mortality rate of only 1.4% which is by far the best patient outcome worldwide. We also have the top record of successful heart surgery for the smallest premature baby of 1.25kg body weight in Korea. Pediatric cardiologists provide around 350 cardiac catheterizations and other non-operative treatment modalities per year. Nonsurgical treatment of congenital cardiac septal defect and valve disease has been performed successfully. Furthermore, treatment outcome of radiofrequency catheter ablation, ICD and pacemaker insertion for pediatric arrhythmia places us in the top tier in the world. We also have an adult congenital heart disease clinic and provide multidisciplinary approach for the best comprehensive care with adult cardiologists and cardiac surgeons. The medical team of The Pediatric Cardiac Center participates in actively treating those in need abroad, both by visiting the locals and inviting them to Korea. We have thus far diagnosed and treated patients from China, Egypt, Uzbekistan, Cambodia, Vietnam, Mongolia, Iraq and the Philippines; the number of foreign patients to whom we gave new lives to through operative care is around 460. Moreover, The Pediatric Cardiac Center at Seoul National University Children's Hospital is the center where most foreign doctors want to visit and have a chance to be trained at.

On the research aspect, our team works to discover the pathogenesis and treatment methods for congenital heart diseases through both basic and clinical research. We have already published a report on the operative method and post operative care in one of the most recognized journals and we publish around ten SCI papers per year. Furthermore, as

the main participant of the Xenotransplantation Research Center, a national research project, we are dedicated to developing prosthetic valves from animal organs.

As presented above, The Pediatric Cardiac Center is one of the most accomplished in the nation, with a comprehensive joint treatment team, and world standard treatment outcomes.

We have thus far treated numerous foreign patients, and based on our experience, we strive to become the leading center in all aspects of treatment, service, education and research.

2. Fellowship program and educational contents

- Objective :

- To acquire basic knowledge as a cardiology specialist
- To experience echocardiography, cardiac catheterization, and surgical correction for diverse congenital heart diseases
- To raise capacity as a good consultant pediatric cardiologist and cardiac surgeon

- Duties :

- Participation in the daily regular ward rounds including ICU
- Participation in the daily procedures such as echocardiography and cardiac catheterization
- Observation of non-invasive tests such as cardiopulmonary exercise test
- Participation in conferences
 1. pediatric grand round : every Tuesday, 1 PM
 2. Journal Review : every Wednesday, 8 AM
 3. Problem case conference : every Friday, 8AM
- Participation in lectures on congenital heart disease
 - : echocardiography (4th floor of children's hospital): everyday
 - : cardiac catheterization (3rd floor of main hospital) – Monday, Thursday
 - : cardiology consultation
- To observe and participate in routine consultations in the cardiology division
 - : conference
- pediatric cardiology conference
 1. Pediatric cardiac center conference with cardiac surgeons
 - : every Tuesday, 4 PM, 5th floor of children's hospital, meeting room
 2. EKG conference : every Tuesday, 8 AM
 - : 4th floor of children's hospital, echocardiographic room
 3. Echocardiography conference : every Friday, 12: 30 MD
 - : 4th floor of children's hospital, echocardiographic room

- Lectures
 - : Overview of congenital heart disease
 - : The basics of echocardiography
 - : The basics of cardiac catheterization
 - : Pulmonary hypertension associated congenital heart disease
 - : Arrhythmia in congenital heart disease
 - : etc.

- Curriculum

- **4 weeks' program**

- ① Echocardiography (EchoCG)
 - Observation of about 100 echocardiograms per week.
 - In-depth discussion about various echocardiographic features in congenital heart disease
- ② cardiac catheterization (Cath)
 - Observation of about 7-8 cardiac catheterizations per week.
 - In-depth discussion about cardiac catheterizations and interventions in congenital heart disease
- ③ Post-op care
 - 5 days of ward rounds including intensive care unit
 - In-depth discussion about post-op care in congenital heart disease
- ④ Observation in the operation room (OR) for heart surgery
- ⑤ Conferences, every week
 - multidisciplinary pediatric cardiac conference
 - echocardiographic conference
 - electrocardiographic conference
 - pediatric grand round