

AEPC-JSPCCS-YIEP Fellow's Reports

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Hiroaki Kise

University of Yamanashi Hospital, Pediatric Department, Yamanashi, Japan

from 1st of February to 24th of March, 2017

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Dr. Duarte Martins Nagano Children's Hospital

November 2016

Report of my stay in Pediatric Cardiac Unit, Department of Women and Children's Health,
University of Padova, Italy

Hiroaki Kise

University of Yamanashi Hospital, Pediatric Department, Yamanashi, Japan

30, March 2017

My stay in Pediatric Cardiac Unit, Department of Women and Children's Health, University of Padova, was filled with a lot of excellent experiences. I stayed at Padova for 8 weeks. In Japan, I'm working at University of Yamanashi hospital as a pediatric cardiologist. In my country, heart transplantation (HTX) for pediatric patients is quite rare due to very small number of donor. In our institute, so far we have tried a variety of bridging therapies for children with dilated cardiomyopathy (DCM) as follow; partial left ventriculectomy, plasma exchange and various medication therapies. However, the effect of those couldn't last much longer and most of them couldn't reach HTX. Based on these background, I have been interested in bridging therapies for DCM and close assessment of cardiac function. In Padova, HTXs for pediatric patients are performed, while pediatric cardiologists assess cardiac function very closely and accurately. Clinical trial of new bridging therapy for DCM, pulmonary artery banding, is now going. These accurate assessment and new bridging therapy are really impressed for me. I strongly hope this therapy should become a novel bridging therapy for children waiting for HTX in the future.

And my great interest have focused on catheter intervention. In European countries, there are various kinds of devices which are not available in Japan yet; covered stent, Melody valve, large diameter high pressure balloon catheter, etc. Fortunately, I could see most of them in Padova. These experiences were really meaningful and helpful for me.

Padova is very beautiful city, so I enjoyed sightseeing almost every weekends during my stay in Padova. If I have to choose one thing I regret, it was language barrier. My stay

of two months is too short to learn Italian language. If I could speak Italian fluently, I would have joined their discussion with more passion.

Finally, I really appreciate all kindness of Prof. Milanesi, Dr. Nicola, Dr. Biagio, Dr. Elena and all staffs in Padova.



Report of my experience at Hôpital Necker-Enfants maladies
Satoshi Matsuo, MD.
Miyagi Children' s Hospital Department of cardiovascular surgery

I had an opportunity to have a wonderful experience for 6 weeks from 13th February to 24th March thanks to AEPC and JSPCCS. I visited Hôpital Necker-Enfants maladies in Paris.

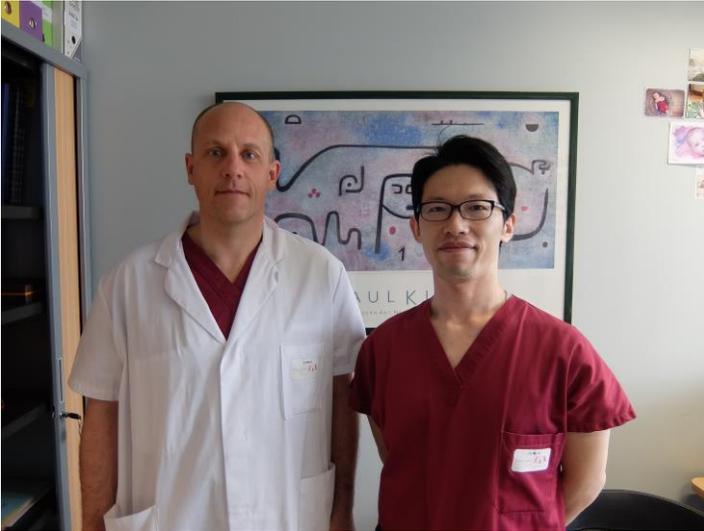
When I visited the hospital at the first day, I was very surprised that quantity of the operation was very large. There are 2 operation rooms; four surgeries were performed in everyday. For example, Arterial switch operation is performed in the morning, and then truncus arterioles repair is performed in the afternoon. So the operations are very fast and the quality is excellent. I can hardly imagine such an excellent operation when I was in Japan. And also, there are a lot of kinds of surgery as the characteristics of this hospital. To my surprise, an arterial switch operation is performed in almost every week. I also could see the surgery which I have never seen in Japan such as modified Konno, Brom, release of fibrous aortic stenosis, and so on. In addition, this institution puts work into the treatment for heart failure. Unfortunately I couldn' t see a ventricular assist device, but I had an opportunity to see a case of heart transplant.

I could take participate in the operation as a first assistant by a lucky chance, and I could feel the excellence of operations directly by doing as a first assistant. I had a valuable experience during the program.

When it was decided to go to Paris by exchange program, I was worried about concerning the language because I cannot speak French. So I couldn' t understand the operation conference completely. But medical staff was very kind. They taught me the content of the conference in English. And they let me know the details and pitfalls of the operations during the surgery as well. So I could almost understand the surgery.

There are many sightseeing spots in Paris. I had free time in every weekend. Especially I enjoyed a lot of museums. I feel Paris is one of the most attractive places in the world.

When I finished the exchange program, I felt time went by so fast, but it was a fulfilling 6 weeks. However, to speak frankly, I can deepen my understanding for the disease and the operation if I can speak French. I would like to visit again and participate in training for longer time than this time, if possible. Finally I greatly appreciate AEPC and JSPCCS to have a wonderful experience in Paris for 6 weeks. I thank all staffs in Miyagi Children' s Hospital to give me such a great opportunity.



My experiences in Birmingham Children's Hospital

Shuichiro Yoshida, MD

Chukyo Children's Heart Center, Nagoya, Japan

It was a great four weeks for me to spend time with the pediatric cardiology team in Birmingham Children's Hospital. In the UK, there are only 10 facilities that can perform cardiac surgery for children. Birmingham Children's Hospital is one of the largest hospitals. The departments of pediatric cardiology and cardiac surgery have 50 cardiac and PICU beds. They perform 500 to 600 cardiac surgery and cardiac catheter examination procedures per year. The number of ablation procedures is 60-80 cases per year, and the number of device implantations is 20 cases per year. There are a total of 20 doctors (10 consultant doctors and 10 registrars) just in the pediatric cardiology department alone. I was planning to study mainly the arrhythmia treatment in the UK. Dr. Vinay, who is in charge of the arrhythmia treatment in Birmingham Children's Hospital, taught me through many cases.

They start with the ICU ward rounds at 8 AM every morning. The PICU, pediatric cardiology, and surgery doctors discuss the treatment. After the rounds, a cardiac surgery (JCC) conference and educational lectures are held. The JCC is held twice a week. The discussions are very active and are given on such cases as inpatient, cardiac catheter, and second opinion cases. As an overall trend, I feel that there are many more left sided diseases, including HLHS as compared to Japan. There were some differences from Japan, such as the Fontan operative timing (at about 4 years old) and fewer shunt cases, etc. I was surprised that the Qp/Qs, Rp, and ventricular volume were not calculated as part of the catheter examination results (were not required during the conference). Therefore, it was very interesting.

In the catheter room, a lot of catheter intervention procedures are held everyday. For example, in a PA/IVS cases, I saw a stent placed in the ductus arteriosus after the PTPV was performed. That case was discharged without any surgical operation. Therefore, I felt that the role of catheter intervention is greater than that in Japan. Treatment for patent ductus arteriosus is also performed using devices that are not approved in Japan, and I learned which device to select.

Regarding ablation, it is not much different from Japan. I observed a case of a septal accessory pathway using the cryoablation catheter approved in Japan last year. I have never used that catheter, and therefore I thought that experience would be very useful.

I had the opportunity to visit two different hospitals. One was Glenfield Hospital in Leicester and the other was Queen Elizabeth Hospital in Birmingham. At Glenfield Hospital, there were

fewer staff members than Birmingham Children's Hospital, and complex heart surgeries were not performed.

Due to the absence of an arrhythmia specialist, Dr. Vinay goes to Glenfield Hospital to perform ablation procedures and the outpatient clinic for arrhythmias. In the arrhythmia clinic, the cases are similar to those in Japan, such as long QT syndrome, supraventricular tachycardia, atrial tachycardia, ventricular tachycardia, etc. It seemed that the antiarrhythmic drug therapy was not much different from that in Japan.

At Queen Elizabeth Hospital, I visited the inheritance clinic. Parents and siblings of children with long QT syndrome are diagnosed at Birmingham Children's Hospital, and undergo a genetic test at that hospital. Not only the cardiac doctors, but also the counselors and genetic specialists cooperated to deal with the genetic outcome and future treatment options. Family screening of young sudden death cases is actively performed.

I also participated in the British Pediatric Arrhythmia Group (BPAG) Meeting 2017 in Birmingham. Almost all of the British pediatric arrhythmia doctors participated in that meeting. I had a chance to give a 20-minute lecture about electrophysiology services in Japan and a case report on a twin AV node related tachycardia. The medical systems in the UK and Japan are quite different, but the themes discussed regarding ablation, inherited arrhythmias, and device therapy seemed to be very similar. As a feature of that meeting, they discussed cases in which a diagnosis had not yet been confirmed regardless of the elapsed time. The discussion was very active and various opinions came out from the participants and it was very useful for me.

I learned a lot about arrhythmia treatment and intervention in that program. Also, the doctors and co-medical staff members were very friendly and warmly welcomed me. I especially thank Dr. Vinay very much. I greatly appreciate the people who gave me such an opportunity. I am looking forward to the next opportunity to visit Birmingham Children's Hospital in the future.





Report AEPC/JSPCCS Exchange programme for junior members

AEPC Junior: Duarte Saraiva Martins, from Hospital de Santa Cruz, Lisbon, Portugal
Hosting Institution: Nagano Children's Hospital, Matsumoto, Japan

As soon as I heard about this programme, I knew I had to apply. An opportunity to fly to the other side of the world and live and work among those colleagues we would otherwise never meet, to learn their small tricks and maybe share some of ours. To be able to take part in such an improbable exchange of knowledge and acquaintances, and, of course, to be able to immerse myself in a culture as rich as Japan's immediately fascinated me.

I was welcomed to Nagano Children's Hospital, in Matsumoto, for the month of November 2016. It is a big paediatric hospital servicing tertiary level care to children of all the Nagano region. The Paediatric Cardiology department is led by Prof. Satoshi Yasukochi who is also the President of JSPCCS and a renowned interventionist.

I followed the team the cathlab at every opportunity, taking note of the small details that were made differently. For instance, we have now adopted their technique of manipulating the long sheath for delivery of ASD closure device "underwater" to avoid systemic air embolism.

I was impressed by how hardworking and versatile the staff were (total of 4 staff cardiologists that were all able to cover all fields of paediatric cardiology except ablation techniques, and 4 residents) and moved by their dedication to providing excellent quality care in an organized and patient-oriented fashion with such limited human resources (at least for my standards). This motivated me to be more comprehensive in my training and take my first steps in areas of paediatric cardiology I had not yet tackled, namely fetal echo. I performed my first complete foetal echocardiography in Nagano children's hospital!

I also seized the opportunity to perform a small research project, namely I studied the differences between adult and paediatric population in the morphological and functional changes taking place in the heart following percutaneous ASD closure. I did this by processing 3D and strain echo data from about 80 examinations.

There were of course some challenges, and I would sometimes feel the language barrier. However, this was – if not completely resolved – greatly attenuated by the relentless translating effort of Dr. Kohta Takei. Being assigned as my advocate for the duration of the stay, his kind and welcoming ways soon turned him into a friend.

Finally, I was lucky enough to travel a bit around Japan during the weekends (even attending a JSPCCS intervention meeting in Tokyo in one of them) and marvel at the beauty of the country dressed in autumn colours and delight at the range of gastronomic experiences. All in all, a great experience that I definitely recommend any junior member.

