We welcome you to the 10th Asia Pacific Heart Rhythm Society Scientific Session in Yokohama!

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It is my great pleasure and honor to hold the 10th Asia Pacific Heart Rhythm Society Scientific Session (APHRS 2017) in September 14–17, 2017, at Yokohama, Japan. This is a milestone session since the first APHRS Scientific Session held at Singapore in 2008, and I would like to congratulate all members, contributors, and guests on the successful growth of the APHRS for the last 10 years.

The APHRS was founded in 2008 with its goal to establish infrastructure for basic and clinical researches in the cardiac electrophysiology and arrhythmia fields of Asia-Pacific countries, to provide systematic educational opportunities for young researchers and clinicians wanting to specialize in this field, and to promote multinational researches. In the last 10 years, there has been impressive evolution and innovation in the fields of cardiac electrophysiology and arrhythmia management. With these robust developments, the science of cardiac arrhythmias in the APHRS countries has greatly improved. Further, many novel findings and information have been generated by APHRS members and published worldwide.

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As a result, the APHRS Annual Scientific Session is highly evaluated and will continue to develop in the future.

The 10th APHRS Scientific Session is held in conjunction with the Annual Meeting of the Japanese Heart Rhythm Society 2017 (JHRS) (Congress President: Prof. Kenzo Hirao, Tokyo Medical and Dental University). The scientific sessions cover all of the recent advances in cardiac arrhythmias, electrophysiology and electrocardiology. We have 92 invited symposiums, 11 general symposiums and 8 allied medical professional sessions. More than 1300 abstracts were submitted from not only APHRS countries but United States and Europe and are discussed during the sessions. I am sure that by attending the joint scientific sessions of APHRS and JHRS 2017, all participants will be impressed and satisfied with the level of science in the APHRS region. I and the scientific session committee members would give all of the participants a warm welcome to Yokohama facing the beautiful Tokyo Bay area. Let’s enjoy the scientific sessions under the title “Advancing Together in Heart Rhythm”.
It is a great pleasure for us to welcome you to the 10th Asia Pacific Heart Rhythm Society (APHRS) Scientific Session in Yokohama, Japan in 2017. Since being founded in 2008, APHRS has promoted education and advocacy for cardiac arrhythmia professionals, adopting the recent innovations in research and clinical practice for better patient treatment, with our APHRS members from more than 20 countries. Nowadays, APHRS has been recognized internationally and collaborated with other international societies including Heart Rhythm Society and European Heart Rhythm Association.

The Annual Scientific Session of APHRS provides medical professionals the valuable opportunity for sharing the latest knowledge and information. The 9th APHRS Scientific Session in 2016 at Seoul was successfully managed under the leadership of Dr. Young-Hoon Kim. This year’s APHRS scientific session, APHRS2017, from September 14th to 17th at Yokohama, Japan, is a joint congress with the Annual Meeting of the Japanese Heart Rhythm Society, JHRS2017 (President: Kenzo Hirao, M.D. Prof.), offering a tremendous experience to participants in an unprecedented scale. We have scheduled of 92 invited symposiums, 11 general symposiums and 8 allied medical professional sessions. The members of APHRS and the physicians in the United States and European countries have submitted 1300 abstracts, which will be presented and discussed during the sessions.

The slogan of APHRS2017 is “Advancing Together in Heart Rhythm”, while that of JHRS2017 is “Shaping Together the Brilliant Future of JHRS”, both aiming to gather a wide range of professional expertise and skills toward a shared vision for an advanced arrhythmia treatment in global scale. We welcome all the participants, and sincerely hope the meeting will contribute to the further advance in knowledge and improvement in patient care.
The APHRS Summit 2017: Shanghai

Prof. Shu Zhang

The APHRS Summit 2017 was held in Shanghai from 7-8 April. This is another important Asia Pacific arrhythmia regional meeting held in China since APHRS Annual Scientific Session in 2009.

In this year’s summit, 27 members of APHRS Board of Trustees and Country Representatives participated in this two-day board meetings to summarize the works done and discuss the future plan of the society.

As the previous year’s meeting, the APHRS Summit 2017 also included an arrhythmia symposium which was focusing on the up-to-date arrhythmic management in AF monitoring and ablation, VT/VF prevention and device therapy. More than two hundred audiences attended the symposium and three thousand more shared the presentation through the live webcast.

In addition, we also had the first HRS@China Summit with the theme of “Contemporary Management of Arrhythmias” in conjunction with the APHRS Summit 2017. HRS President Dr. Michael Gold, Past Presidents Dr. Doug Packer and Dr. Bruce Wilkoff, and President-elect Dr. George Van Hare gave their splendid lectures at the meeting.
My APHRS Fellowship Experience

Dr. Doni Friadi

I first heard about Prof. Young-Hoon Kim and Korea University Anam Hospital Electrophysiology Center (KUMC EP Center) when I was training for basic electrophysiology and cardiac device implant under Dr. Muhammad Munawar. My friend Dr. Muhammad Iqbal who had been trained as KUMC EP Fellows, also encouraged me to apply there. After finishing my basic training, I spent some time in Ningbo 1st Hospital China. The time spent was invaluable and I saw more than one hundred EP procedures in a month there. This experience drove me to advance my understanding about cardiac electrophysiology.

I started my training at Korea University Anam Hospital in March 2017. The hospital is located on top of a small beautiful hill. Every morning, climbing the steep hill will strengthen your resolution to study EP while having adequate exercise to keep your heart healthy. William Yeats once said “Education is not filling a bucket, but lighting a fire” and that is what Korea University Anam Hospital has done for me. With mantra as a research driven hospital, I am continually awed and inspired by my colleagues and beloved mentors who “think big” and outside the box!

Our center is at the forefront of cardiac electrophysiology field and as a tertiary referral center in Korea with 2 EP labs, fellows here will have in depth exposure and hands on experience with high volume of complex cases referred from multiple hospitals around the country. A typical day will start at 7 in the morning, and the day will last as long as it takes to get the best result for each case. In some lucky days you could end up catching the last subway at 12 midnight.

Barely 5 months into my fellowship training here, the experience has been really amazing and I have already accumulated significant experience in the multiple facets of ablation procedure: from using and interpreting wide array of pacing maneuver technique, doing transeptal puncture to interpretation of 3D mapping, cardiac MRI and ICE. I also had the opportunity to involve in many cardiac device implantation cases.

Having closely involved with many Atrial Fibrillation ablation, it really opened my eyes on how Atrial Fibrillation as a multifactorial arrhythmia is such a huge burden for the future society. This is especially for persistent atrial fibrillation patients as the best strategy for these population is still elusive.
Learning directly from Prof. Young-Hoon Kim has been a very precious and humbling experience for me. He will take you from patient management strategy, tips on best mapping and ablation strategy, even to the most basic such as what anatomy involved. There’s one particular case that left a deep impression on me. As we were doing ablation on an inherited cardiac arrhythmia patient with the history of frequent proper ICD shock recorded, with every interesting phenomenon happening in such highly complex case, he would still find the time to teach his fellows.

Several weeks after this procedure, I heard a big news in my country about a sudden cardiac death case involving a young talented physician rumored to be related with inherited cardiac arrhythmia disease. This experience has motivated me to continuously read and grow professionally.

The program here is set up in such a way that there is a perfect balance between working in the EP lab and academic education. I also attended many cardiac electrophysiology workshops and congresses held regularly by the Korean Heart Rhythm Society. This is a very valuable experience for me to learn from the local and international experts.

The attending electrophysiologist here also have other special interest in fields like inherited cardiac arrhythmia disease and cardiac device. Hence, the wealth of knowledge here is incredible. They are also extremely committed to their fellow education and that really shown with their active participation in our journal and morning case conferences. We usually have multiple ongoing clinical trials, and you will have many chances to do clinical research with excellent support and motivation from all the attending electrophysiologists.

The working culture at the EP lab is of collegiality and professionalism. The people I have the privilege of learning with here – my peers – are so incredibly special to me, they really helped me a lot and bring true sense of camaraderie and family. The nurses and EP techs all have excellent knowledge. All of them work in collaboration to really bring forth the highest degree of patient safety and care, and as foreign fellow, you will feel very good support from everyone.

The city of Seoul has been an unexpected surprise for me. It is a very awesome place to live. The people here are very nice, with top-notch public transportation you will not realized you lived in outer parts of Seoul, away from the down/mid-town hotspots.

The city has great museums, historical places (like the Gyeongbokgung Palace), coffee shops and restaurants. You will fall in love with Samgye-tang (Ginseng Chicken Soup) or delicious cold noodles. You will also learned about many different types of kimchi or how to count 1 to 20 in Korean language (this will come in handy since we regularly used duo decapolar and large lasso catheter in our ablation).

I truly believe one of KUMC Anam Hospital Cardiac Electrophysiology Program greatest assets is its director Prof. Young Hoon Kim. He is incredibly genuine and dedicated towards his fellows training. He make it clear without pretense that our education are his priority. For all of these reasons, I feel very fortunate to be trained here.

One important tips I can give for my colleagues aspiring to be EP fellows, before deciding which center to apply, you should ask former trainees about how the training environment in that center. I also have the good fortune of meeting Prof Young-Hoon Kim in APHRS 2016, so investing your time to attend APHRS meeting is absolutely beneficial.

Finally, I want to give my deepest appreciation to APHRS who has given me this incredible opportunity. I truly believe at the end of the day the true mission of this fellowship program is to give a better arrhythmia treatment for all patients in Asia Pacific region.
Third State Hospital EP Center: The First EP Center in Mongolia

Dr. Saruul Tseveendee

Mongolia is an Asian country, neighboring from north side with Russia, from south with China, from west with Kazakhstan. The total territory is 1.564 million square kilometers. The population of Mongolia was estimated to be 3.082 million, as of 1st January 2017. The population density is very low, 1.97 people per square kilometer.

WHO highlighted that heart disease and stroke are accountable for more than one-third of all death in Mongolia. Further, according to the WHO 2014, coronary heart death in Mongolia reached 22.4 percent of total death. The second cause of death is stroke. Stroke death by 2014 in Mongolia reached 2973 or 16.87 percent of total death. The age adjusted death rate is 196.83 per 100,000 of population. But still there is no clear data suggesting of arrhythmic heart disease and heart failure distribution along Mongolian population.

Until 2012, Mongolia didn’t have any specialized health service of arrhythmic heart disease. The first pacemaker implantation and patient follow-up started only in 2013. Since then, over 400 pacemakers have been implanted.

In February 2016, the first national EP center was established in Mongolia, at the Third State Hospital. The EP center is carried out by one electrophysiologist who is trained in South Korea under the supervision of Prof. Young-Hoon Kim. Later, two more doctors had a short term training in Taiwan and South Korea.
EPS and RFCA have been performed routinely since July 2016, and 80 cases had performed until July 2017. The baseline characteristics of our patients were 78 patients had SVT from which 2 patients had AT, others had AVNRT and AVRT, 1 patient had LV VT, and 1 patient had paroxysmal AF. The success rate of ablation in our EP center is high, around 95 percent.

Even though our EP center is the nation first and only EP laboratory, we are only performing simple arrhythmia cases because of limited trained human resource and EP dedicated angioroom. We have only one angiomachine in our hospital, and not only EP team but also interventional cardiology team, neuro-interventional team, as well as abdominal interventional team uses this angiomachine. We perform EP procedure twice a week, despite the long waiting list of patients. Our second difficulty is lack-off specially trained human resource. We have only one properly trained electrophysiologist; 2 other doctors only had a short period of training and are not independent ablators. The training period for our two EP technicians was short too and we do not have any trained EP nurse and pediatric electrophysiologist. Our EP laboratory is equipped with a 3D mapping system but there is no trained engineer who can work on the system. In the next two years, it is expected that one dedicated room for EP services will be available with enough human resources.

Our EP team’s goal is not only performing EP procedures and pacemaker implantation. We are aiming to improve the knowledge and pharmacologic management skills of arrhythmic heart disease among general cardiologists, to improve AF awareness in general population and start the first AF registry all over Mongolian territory.

We are working in collaboration with foreign teams, proctor professor team from Korea and US. Foreign team consist of professor, junior professor, EP technician, 3D engineer visits our laboratory on a regular basis to perform complex procedures.

REFERENCE

Establishment and Progress of EP Services in Sri Lanka

Dr. Rohan Gunawardena

Though EP services were established in Sri Lanka only in 2003, pacemakers had been implanted since the later part of 1970’s, and the next 2 decades saw implants at fairly regular intervals though the numbers remained at 2-3 per year. It was only in the late 1990’s that the visionary cardiologist Dr. P N Thenabadu realized the need for a specialized arrhythmias service. At the outset it was decided that Electrophysiology (and pacing) would be a separate subspecialty in cardiology. The post graduate institute of medicine, which undertakes all specialty training developed a training programme for electrophysiology which at that time consisted of 2 years of training locally (which consisted of mainly general and interventional cardiology) and 2 years at a specialized electrophysiology centre abroad. All Electrophysiologists in Sri Lanka are exclusively involved in Arrhythmia management and do not get involved in PCI.

With establishment of specialized EP units, pacing services too developed. While in 2003 there was only one pacing centre by 2016 this had increased to 10. The expansion of pacing to 4 non-EP centres was spearheaded by Consultant Electrophysiologists, Dr. Asunga Dunuwille and Dr. Rohan Gunawardena who held workshops and encouraged cardiologist in Jaffna, Kurunegala, Batticoloa and Galle to implant pacemaker so that urgent and needy patients in that those areas could receive pacemakers without travelling long distances to the centre. In 2017 an EP centre was established in Galle, the southern capital. Pacing which hitherto had been mainly single chamber pacing predominantly for Complete Heart Block (CHB); saw an exponential increase in numbers with more dual chamber pacing. Pacing for Sick Sinus Syndrome (SSS) became commoner and by the mid and late 20’s, 30% of all pacing was for SSS. Since early 2000 the annual implant rates have gone up from about 200/year to approximately 1200/year in 2016. Even then the implant rate remains low at about 50/million population.


Formal EP services were initiated with the appointment of the first Cardiac Electrophysiologist, Dr. Asunga Dunuwille to the Institute of Cardiology, National Hospital of Sri Lanka (NHSL) in September 2003. The system consisted of a conventional Bard analyser, Micropace stimulator and an EPT 1000 ablator. We were provided with 25 diagnostic catheters and 10 ablation catheters. The first ablation was done at a workshop which was attended by Dr. Mohan Nair from New Delhi, who continued to provide us with unconditional support to improve the service by conduction further workshops in the next few years. By the end of 6 months we completed the 1st fifty successful ablations and this was presented at the 3rd Biennial South Asian Cardiac Conference of the SAARC Cardiac Society held in Nepal 2004. The second EP unit was subsequently established in 2006 in Kandy, the hill country capital, 120km away from Colombo. With the appointment of the second Electrophysiologist to the NHSL in 2007 there was further expansion of the service with increase in number of cases, inauguration of CRT therapy and innovative approaches such as single chamber atrial pacing for SSS and septal RV pacing.

Paediatric Pacemaker
Another unique event was the initiation of pacing for infant and children which began in 2006. Adult electrophysiologists from the NHSL visited the Lady Ridgeway Hospital for Children, which is a renowned children’s hospital in the region, to implant trans-venous pacemakers in children weighing more than 5Kg with smaller children having pacemakers with epicardial leads being implanted by cardiothoracic surgeons.

Device therapy came to Sri Lanka with the initial ICD implants starting in late 2004 and the first CRT procedure (again with the help of Dr. Mohan Nair) in early 2006. The number of implants remain low due to the fact that these devices, unlike pacemakers, are not freely available on the national health system and need to be funded by patients with reimbursement from insurance been negligible.

While international guidelines are followed for CRT implants the majority of ICD implants are still for secondary prevention. Interestingly a large number of primary prevention ICDs are implanted for Brugada Syndrome which seems to have an unusual high prevalence in Sri Lanka.

With the introduction of EP and Pacing in Sri Lanka, there was a need to increase awareness, initially among the medical community, not only about arrhythmias but also about the new therapeutic options available for arrhythmias, heart failure and SCD. With this in mind, a series of programmes were initiated in the form of updates and lectures at existing forums such as regional meetings and academic sessions of professional medical bodies and associations as well as special updates. EP sessions are now a regular feature of the annual academic sessions of the Sri Lanka Medical Association and the Ceylon College of Physicians. The Council of the Sri Lanka Heart Association is always represented by an electrophysiologist and its sessions have prominent arrhythmia components with renowned electrophysiologist from around the world participation as resource persons (please visit www.slheart.org). Dr. Teo Wee Siong, a past president of the APHRS has been another strong supporter of the EP programme in Sri Lanka promoted our application to become a member country of the APHRS.

With establishing of EP centres which now undertook a wide range of diagnostic and therapeutic procedures, more trainees were recruited from 2008 with the curriculum changed to 3 years of local training and 1-2 years of training abroad, mainly in the UK. With these fully trained Specialists coming back to Sri Lanka, 2 more Electrophysiology Units were started in Sri Jayawardenapura and Galle. Presently there are 6 Consultants in Cardiac Electrophysiology with a further 4 in training. The proposed plan of National Health Sector expansion hopes to see 7 EP centres with 16 Electrophysiologists in the national health system being established by 2025 in addition to 3 private sector centres which are already established.

REFERENCE

1 Electrophysiology – Initial Sri Lankan Experience – Asunga Dunuwille, Rohan Gunawardena, 3rd Biennial South Asian Cardiac Conference of the SAARC Cardiac Society held in Nepal.
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