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CONTENTS

- P1** The 11th Asia Pacific Heart Rhythm Society Scientific Session Report
- P12** Circumferential Radiofrequency Catheter Ablation for LV Papillary Muscle Ventricular Tachyarrhythmias
- P14** Arrhythmia Services and Cardiac Electrophysiology in Brunei Darussalam
- P16** APHRS 2019 Bangkok

The 11th Asia Pacific Heart Rhythm Society Scientific Session Report

17-20 October 2018, Taipei, Taiwan

The curtain fell on the 11th APHRS Scientific Session hosted by the APHRS and organized by the local organizing committee of the 11th Scientific Session after it successfully ran for four days from Oct. 17 to 20 at TICC & TWTC in Taipei with 3,341 participants from 58 countries attending.

Registration

Breakdown of Participants by Country Region

NO.	COUNTRY/REGION	NUMBER OF PARTICIPANTS
1	Afghanistan	1
2	Argentina	1
3	Australia	136
4	Austria	3
5	Bahamas	1
6	Bahrain	1
7	Bangladesh	7
8	Belgium	6
9	Brazil	3
10	Brunei	4
11	Cambodia	10
12	Canada	11
13	China	445
14	Croatia	1
15	Czechia	2

NO.	COUNTRY/REGION	NUMBER OF PARTICIPANTS
16	Denmark	2
17	Egypt	1
18	France	6
19	Germany	14
20	Greece	1
21	Guatemala	1
22	Hong Kong	70
23	India	106
24	Indonesia	65
25	Iran	1
26	Israel	5
27	Italy	10
28	Japan	768
29	Kazakhstan	1
30	Macau	6

NO.	COUNTRY/REGION	NUMBER OF PARTICIPANTS
31	Malaysia	53
32	Monaco	1
33	Mongolia	6
34	Myanmar	15
35	Netherlands	8
36	New Zealand	17
37	Nigeria	1
38	Norway	1
39	Oman	1
40	Pakistan	1
41	Philippines	46
42	Poland	1
43	Russia	1
44	Saudi Arabia	2
45	Singapore	86

NO.	COUNTRY/REGION	NUMBER OF PARTICIPANTS
46	Slovakia	3
47	South Africa	2
48	South Korea	226
49	Spain	5
50	Sri Lanka	3
51	Sweden	2
52	Switzerland	3
53	Taiwan	675
54	Thailand	127
55	Turkey	2
56	United Kingdom	21
57	United States	271
58	Vietnam	72
Total		3,341

Scientific Lectures & Faculties

This year's APHRS Scientific Session brought together 842 world-renowned faculties, and featured 326 sessions with 1,403 lectures taking place concurrently in 22 halls. Especially, Prof. Maurits Allesie (Netherlands) and Prof. Shih-Ann Chen (Taiwan) delivered the keynote lectures. The scientific meeting in Taipei this year provided a great opportunity to understand current medical issues and cutting-edge technology in cardiac arrhythmia: smart healthcare - Integrated Care & A.I Care. Nowadays, technology is reshaping the relationship between patients, healthcare providers, and the health system. And today's healthcare system has also recognized the advantages of using Information and Communication Technology (ICT) to improve the quality of healthcare, turning traditional into smart healthcare. Besides, lots of innovation in the mapping and ablation technology, and the device therapy were presented in the congress.



Prof. Shih-Ann Chen (Taiwan) delivered the keynote lecture.



Prof. Maurits Allesie (Netherlands) delivered the keynote lecture.

Anatomy and Imaging Course

The interactive cardiac Anatomy and Imaging course was organized by Dr. Hsuan-Ming Tsao and Dr. Jeong-Wook Seo. The session was comprised of two parts. The first part was a series of excellent lectures at noon on October 18 and 19. Many renowned experts, including Dr. Siew-Yen Ho from London, Dr. Jeong-Wook Seo from Seoul, and Dr. Osama Igawa from Tokyo, was invited to demonstrate the cardiac structure by using a human heart. These experts elucidated the clinical implications of Triangle of Koch, atrial muscle bundle and ventricular outflow tracts as well. On October 19, Dr. AJ Restrepo from Maryland and Prof. Wei-Chih Hu from Taoyuan shared their experience of the application of 3D printing in the clinical electrophysiology and congenital heart disease and the augmented reality (AR) of CT images for catheter ablation. The second part included heart specimens, 3D printing models and AR eyeglasses on display. The attendees could get hands-on at the booth, where the attendees could touch the hearts and acquire the accurate anatomical orientation of the structures.



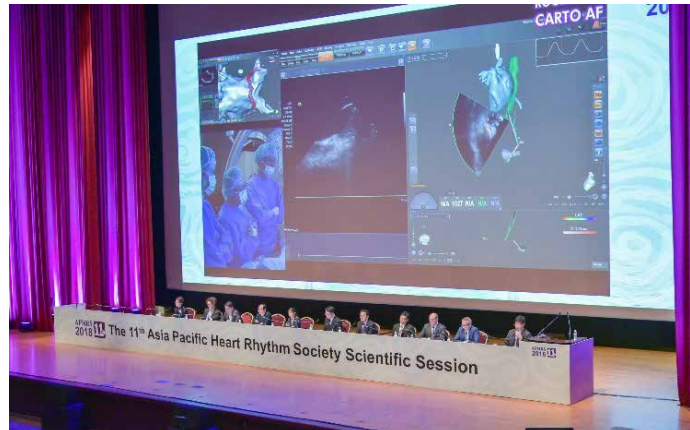
The Anatomy and Imaging Courses on 18th-19th were carried out by Professor Siew Yen Ho (UK), Hsuan-Ming Tsao (Taiwan), Osamu Igawa (Japan) and Jeong-Wook Seo (Korea)



Smart Healthcare lecture on October 18th- 20th.

Live Demonstration

This year, we tried something new in the Live Demonstration. Through the internet access and the satellite connection, we successfully presented the live demonstration from Taipei Veterans General Hospital (AF and VT ablation) and Cheng Hsin General Hospital (His bundle pacing and lead extraction) on the 3rd day of APHRS 2018. All the moderators and panelists led this live demonstration with great success. We are glad to announce that we offered the new platform for exchanging experience.



Live Demonstration on October 19th, regarding Device by Dr. An-Ning Feng and Dr. Ta-Chuan Tuan, and Ablation by Dr. Yenn-Jiang Lin, Dr. Shih-Lin Chang, Dr. Li-Wei Lo, Dr. Fa-Po Chung, Dr. Yu-Feng Hu, Dr. Chin-Yu Lin and Dr. Ting-Yung Chang.

Breakdown of Session Categories

CATEGORY	SESSIONS
AF	24
Allied Professional	10
Autonomic Nervous System	2
Basic and Translational Medicine	17
Case Sharing	3
Chaired Poster	5
Cross-Strait Chinese Session	8
Device	36
Drug	4
Education Course	13
Fellowship Program	2
Gap Junction	2
Genetics	8
Guidelines	3
HF	12
Highlight Session	3
Image and Anatomy	10
Industrial Mini-Seminar	16
Joint Session	11
LAA	4
Late-Breaking Session	1
Learning from the Experts and Legends	4

CATEGORY	SESSIONS
Live Demo	2
Luncheon Symposium	21
Mapping Strategy	2
Non-Invasive ECG	8
Nursing Care in Heart Rhythm	3
Oral Presentation	4
Pediatrics	6
Policy and Practice	3
Smart Healthcare	8
PSVT	4
Risk Stratification	8
Satellite Symposium	2
SCD	8
Special Session	3
Special Session for Asians	5
Stem Cell	4
Syncope	4
VT/VF	22
YIA	3
Young EP Club	3
Total	326

Breakdown of Faculty Members by Country/Region

NO.	COUNTRY/REGION	NUMBER OF FACULTIES
1	Argentina	1
2	Australia	64
3	Bahrain	1
4	Bangladesh	1
5	Belgium	2
6	Brazil	1
7	Brunei	2
8	Cambodia	3
9	Canada	8
10	China	44
11	Czechia	1
12	Denmark	2
13	France	4
14	Germany	9
15	Greece	1
16	Hong Kong	22
17	India	39
18	Indonesia	15
19	Iran	1
20	Israel	3
21	Italy	9
22	Japan	185
23	Macau	1
24	Malaysia	8
25	Monaco	1

NO.	COUNTRY/REGION	NUMBER OF FACULTIES
26	Mongolia	2
27	Myanmar	4
28	Netherlands	5
29	New Zealand	7
30	Norway	1
31	Oman	1
32	Pakistan	1
33	Philippines	5
34	Poland	1
35	Saudi Arabia	1
36	Singapore	17
37	Slovakia	1
38	South Africa	1
39	South Korea	55
40	Spain	4
41	Sri Lanka	3
42	Sweden	1
43	Switzerland	2
44	Taiwan	162
45	Thailand	19
46	Turkey	2
47	United Kingdom	7
48	United States	101
49	Vietnam	11
Total		842

Abstract Submission

A total of 1,148 abstracts including late-breaking trial were submitted from 35 countries to APHRS 2018. Among them were 31 abstracts presented orally, 28 abstracts in Chaired Poster presentation, 17 abstracts at the Young Investigator Session, 6 abstracts in late-breaking research presentation, and 1,066 abstracts including late-breaking research in poster presentation. Young Investigator Award, Best Late Breaking Research Award and Best Poster winners were awarded at the Gala Dinner.

NO.	COUNTRY	PRESENTATION TYPE						TOTAL
		ORAL PRESENTATION	LATE-BREAKING ORAL PRESENTATION	YIA (ORAL PRESENTATION)	CHAired POSTER PRESENTATION	POSTER PRESENTATION	LATE-BREAKING POSTER PRESENTATION	
1	Australia			2		52	2	59
2	Austria					1		1
3	Bangladesh					3		3
4	Brunei Darussalam					2		2
5	Cambodia					1		1
6	China	7	1	2		104	4	118
7	Croatia					1		1
8	Czech Republic					1		1
9	Egypt					1		1
10	France				1	6		7
11	Germany		1			2		3
12	Hong Kong				1	6		7
13	India	3		1		70	2	76
14	Indonesia					41	1	42
15	Ireland					1		1
16	Italy					7	1	8
17	Japan	7	2	5	11	327	1	353
18	Kazakhstan					1		1
19	Korea	2		1	4	141	2	150
20	Lao					1		1
21	Malaysia	1				16		17
22	Myanmar					9	1	10
23	Netherlands					1		1
24	New Zealand	1				6		7
25	Pakistan					5		5
26	Philippines					15		15
27	Russian Federation				1	3		3
28	Singapore	1				20		22
29	Switzerland	1						1
30	Taiwan	4	1	3	5	99	1	113
31	Thailand				1	14		15
32	Turkey					1		1
33	United Kingdom	2	1	1		15		19
34	United States	2		2	1	67	2	74
35	Vietnam					9		9
Total		31	6	17	283	1049	17	1148



Poster display and mounting during the 11th APHRS Congress.



Presenters presenting their posters in the Chaired Poster Session.

Young Investigator Award

For the Young Investigator Award, our abstract reviewers picked out 18 potential candidates to compete with each other and present their latest research. The result of the YIA competition is listed as below:

YIA AWARD	THE 1 ST PRIZE	THE 2 ND PRIZE	THE 3 RD PRIZE
Basic	Dr. Yimin Wuriyanghai, Japan	Dr. Shin Huei Liu, Taiwan	Dr. Baigalmaa Lkhagva, Mongolia
Clinical I	Dr. George Leef, USA	Dr. Ilaria Cazzoli, UK	Dr. Kikou Akiyoshi, Japan
Clinical II	Dr. Dhani Dharmapran, Australia	Dr. Adam Lee, Australia	Dr. Naruya Ishizue, Japan

Best Late Breaking Research Award

In this year, the abstract reviewers have arranged a session for Late-Breaking Research competition, the 1st prize was awarded to Dr. Balbir Singh from India, the 2nd prize was awarded to Dr. Vishal Luther from UK, and the 3rd was awarded to Dr. Karl-Heinz Kuck from Germany.

Best Poster Award

From all 1,148 abstracts, our abstract reviewers selected 15 abstracts from different countries as the Best Poster Award candidates, the selected abstracts are divided into 5 Best Poster Award Sessions, the winners are listed as below:

BEST POSTER AWARD	THE 1 ST PRIZE	THE 2 ND PRIZE	THE 3 RD PRIZE
Clinical I - Device	Dr. Chi Wing Wong, Hong Kong	Dr. Nobuhiro Nishii, Japan	Dr. Ami Isshiki, Japan
Clinical II - AF Ablation	Dr. Takashi Kaneshiro, Japan	Dr. Chieh-Mao Chuang, Taiwan	Dr. Emily Kotschet, Australia
Clinical III – Clinical Researches in Atrial Arrhythmias	Dr. Simon Salim, Indonesia	Dr. Geoffrey Wong, Australia	Dr. Takuya Omuro, Japan
Clinical IV – Clinical Researches in Ventricular Arrhythmias	Dr. Masateru Takigawa, France	Dr. Ching-Yu Julius Chen, Taiwan	Dr. Lisheng Lin, Japan
Basic – Basic and Translational Medicine	Dr. Jingshan Gao, Japan	Dr. Ricardo Mishima, Australia	Dr. Daun Jeong, Korea



Dr. Yimin Wuriyanghai, YIA Basic the 1st Prize Winner.



Dr. George Leef, YIA Clinical-I the 1st Prize Winner.



Dr. Dhani Dharmaprani, YIA Clinical-II the 1st Prize Winner.



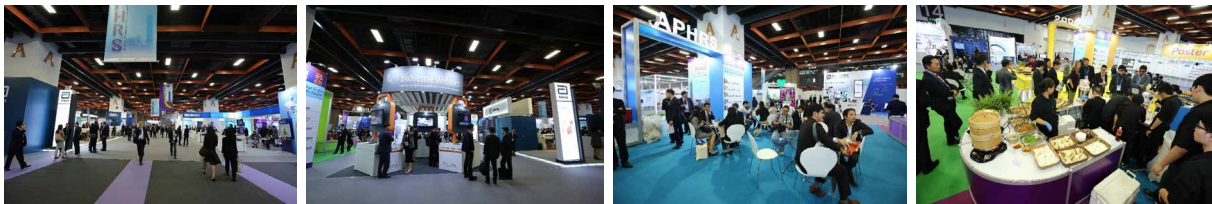
Dr. Jingshan Gao, Best Poster Award- Basic the 1st Prize Winner.



Dr. Simon Salim, Best Poster Award- Clinical III the 1st Prize Winner.

Sponsorship and Exhibition

APHRS 2018 was fortunate to experience outstanding support from the industry, not only through the diverse exhibition, but also through a number of industry run meetings and functions taking place both onsite during the meeting days and in the evenings, the hospitality area of sponsors is also provided at the second floor of exhibition area of TWTC which offer the superb chance for sponsors to communicate with the attendants. The exhibition also included a refresh area, where delegates were able to enjoy the native cuisine for free. Another unique highlight of APHRS 2018 was the congress built an area exclusive for the APHRS members to enjoy the special Refreshment with extra networking opportunity, what's more, the two theaters which located in the exhibition area also provide the great location for attendees to share their experience and to learn more! The special session - Interactive Cardiac Anatomy and Imaging course was taken the place at theater two, once our participant set foot in the Anatomy Theater, the journey will begin.



Press Conference

The Press Conference was held on 18th Oct 2018, TICC. It was led by Prof. Shih-Ann Chen, the president of APHRS 2018 Congress, and Prof. Mien-Cheng Chen, the president of Taiwan Heart Rhythm Society (THRS). During this conference, Prof. Thomas F. Deering, the president of the Heart Rhythm Society (HRS), and Prof. Hein Heidbuchelhe, the president of European Heart Rhythm Association (EHRA), were invited to sign and issue the Taipei Declaration, calling for the global treatment of atrial fibrillation and an increased commitment to stroke prevention.

The issue drew the media's attention and more than 10 national media attended this conference. This news was broadcasted subsequently on the most popular TV media in Taiwan, including CTI, SET, EBC and FTV. Besides, more than 40 reports were published in domestic newspapers and electronic Media. The issue was also discussed in 60+ reports in English and dominated the medical news in many renowned media, such as PR Newswire in USA, ChinaGoAround in China, Medicine Malaysia in Malaysia, IANS in India, Af Acrofan in South Korea, APBN in Singapore, ConnectWeb in Australia, etc.

Through more than 100 reports, Taipei Declaration successfully disseminated the importance and the urgency about Atrial Fibrillation and Stroke Prevention worldwide.



Opening Ceremony

The Opening Ceremony was held in Plenary Hall, TICC, on October 18th, 2018. President Tsai Ing-Wen, President of Taiwan was invited to attend APHRS 2018 Opening Ceremony and delivered a Welcome Address. Prof. Shih-Ann Chen, President of APHRS 2018 Congress, Dr. Jonathan Kalman, President of APHRS, Dr. Eric Prystowsky, Former President of HRS, Dr. Thomas F Deering, President of HRS and Dr. Hein Heidbuchel, President of EHRA, each delivered a Welcome Address. Plenary Lecture was delivered by Prof. Maurits Allessie.



Opening address delivered by President Tsai Ing-Wen, President of Taiwan.



Opening address delivered by Dr. Shih-Ann Chen, President of APHRS 2018 Congress.



Opening address delivered by Dr. Jonathan Kalman, President of APHRS.



Opening address delivered by Dr. Eric Prystowsky, Former President of HRS.



Opening address delivered by Dr. Thomas F Deering, President of HRS.



Opening address delivered by Dr. Hein Heidbuchel, President of EHRA.

Social Program

Three official social functions were run as part of APHRS 2018

The Welcome Reception was held in Banquet Hall, TICC. Delegates were able to stop for a drink and enjoy some food the evening after the opening ceremony. The movie which record the past journey of APHRS meetings is also published on spot for our guests to enjoy.



The Faculty Dinner (*By Invitation Only) was held at the Silk Palace, near the famous National Palace Museum. Our Guests were invited to have a special tour at the museum first and enjoy the amazing dishes at the Silk Palace.



National Palace Museum Tour.



Prof. Wee Siong Teo, Prof. Young-Hoon Kim, Prof. Jonathan Kalman, Prof. Masayasu Hiraoka and Prof. Shih-Ann Chen (Left to Right) initiating dinner toast at the Faculty Dinner.

The Gala Dinner was held at the Grand Hotel which was established in May 1952 and the guests were welcomed to the enjoy the buffet at this one of the significant landmark in Taipei.



Prof. Shih-Ann Chen delivering a hand-over address to Dr. Tachapong Ngarmukos for the APHRS 2019 at the Gala Dinner.

Circumferential Radiofrequency Catheter Ablation for Left Ventricular Papillary Muscle Ventricular Tachyarrhythmias - Experiences from Chang Gung Memorial Hospital, Linkou, Taiwan

**Chung-Chuan Chou, MD, FHRS; Ming-Shien Wen, MD, FACC
Division of Cardiology, Department of Internal Medicine, Chang
Gung Memorial Hospital, Linkou; 5Chang Gung University College of
Medicine, Taoyuan, Taiwan.**

The left ventricular papillary muscles (PMs) are the second most uncommon site of idiopathic ventricular arrhythmias (VAs) (7%).¹ Papillary muscles are among the thickest endocardial structures, covered by endocardium and consisting of myocardium and the Purkinje system, with myocardial ingrowths and conical projections into the LV myocardium. Complex structures of PMs not only hinder stable contact of the ablation catheter tip to the target site, 1-3 but may also embed the arrhythmogenic substrate deeply beneath the endocardium. In addition, fibers on the PMs have separations, and the activation conduction through the Purkinje network to the PMs is discrete,⁴⁻⁶ likely contributing to anisotropy.⁷ Therefore, radiofrequency catheter ablation (RFCA) of the left ventricular PMs-originating VAs is technically challenging and associated with lower successful rates compared to idiopathic outflow tract VAs. Yamada et al. reported that RFCA targeted at the excellent pace-mapping site alone often failed to eliminate the left ventricular PM VAs.² In that study, approximately 50% of patients with PM VAs exhibited variable QRS morphologies, and that 80% of these patients required RFCA lesions on both sides of the PMs to eliminate the VAs.² A single origin with preferential conduction to multiple exit sites may account for these findings.

Therefore, we hypothesized that circumferential RFCA at the base of PMs may effectively and completely eliminate exit sites of VAs from the left ventricular PMs. We conducted this approach to patients with sustained ventricular tachycardia (n=10) or symptomatic ventricular premature contractions (n=6). All PM VAs were cured with durable clinical outcomes.⁸ Thereafter, we further performed circumferential RFCA to additional 13 patients with left ventricular PMs VAs (4 with ventricular tachycardias), and acute success was

achieved in 12 out of 13 patients. Generally, the success rate is high and reproducible. The failure case was a 17-year-old male patient with posterior PM-originating ventricular premature contractions. The patient underwent RFCA with perfect pace map (PASSO scores 98), excellent activation map (-46 ms pre-QRS), high energy delivery (irrigated catheter, 45W, 40°C, 90 sec), and circumferential approach. However, ventricular premature contractions recurred 2 hours after RFCA shown by post-RFCA Holter monitoring.

The advantages of circumferential ablation include blocking out all possible exit sites of VAs as far as possible, and targeting the nearest site to the arrhythmogenic foci without a miss when radiofrequency energy is applied via all directions around the base of the PMs. Worsening of mitral regurgitation remains a concern of procedure-related complication. In our experience, none of our 29 patients showed significant mitral regurgitation worsening at follow-up echocardiography. Other complications, such as damage to aortic valve, embolic stroke, did not occur. There was also no malignant VAs occurred after left ventricular PM VAs ablation in our patient series.

Remote magnetic navigation (RMN)-guided catheter ablation is associated with reduced fluoroscopy duration, and several studies have shown superior success rates compared to manual ablation for treatment of idiopathic VAs.⁹ When RMN-guided catheter ablation was applied to papillary muscle-originating VAs, however, it was reported no difference in acute success rate between RMN-guided or manual RFCA in a small case series.¹⁰ The authors proposed that the flexibility of RMN ablation catheter may facilitate negotiation around chordal structures and trabeculae, and limitations on the amount of contact force that



can be applied by the magnetic field may also limit ablation lesion penetration into a deep transmural source, both counterbalancing the advantages of catheter maneuverability and stability with RMN-guided RFCA. Since circumferential RFCA delivers radiofrequency energy via all directions around the base of the PMs, it may block out all possible exits to overcome the drawback of inadequate death of RFCA lesion. In our experience, we have performed RMN-guided RFCA in one patient with posterior PM-originating ventricular tachycardia. As shown in Fig 1, circumferential RFCA surrounding the base of posterior PM could be achieved successfully to cure the ventricular tachycardia without tangling the RMN catheter with chordal structures or trabeculae.

It has been more than 10 years since the earliest reports of RFCA of left ventricular PM VAs. Meticulous mapping, titrated high power to 50 W,

and long duration up to 120 sec, and multiple burns have been recommended for PM VAs RFCA in the initial reports.^{2, 11} Intracardiac echo with or without CartoSOUND™ (Biosense Webster, Diamond Bar, CA, USA) to create an anatomical map of the PMs help to identify the arrhythmogenic substrate of PM VAs, ensure adequate catheter-tissue contact and correct orientation of the catheter tip during RFCA. Cryoablation may overcome catheter instability and improve acute procedure success rate when RFCA fails in eliminating PM VAs.¹² The advances in techniques used for mapping and ablation have improved long-term success rates as high as 90-100%. Circumferential RFCA at the base of PMs is one of the newly developed techniques for VAs from the left ventricular PMs. Larger studies are needed to confirm the effectiveness and safety of this approach.

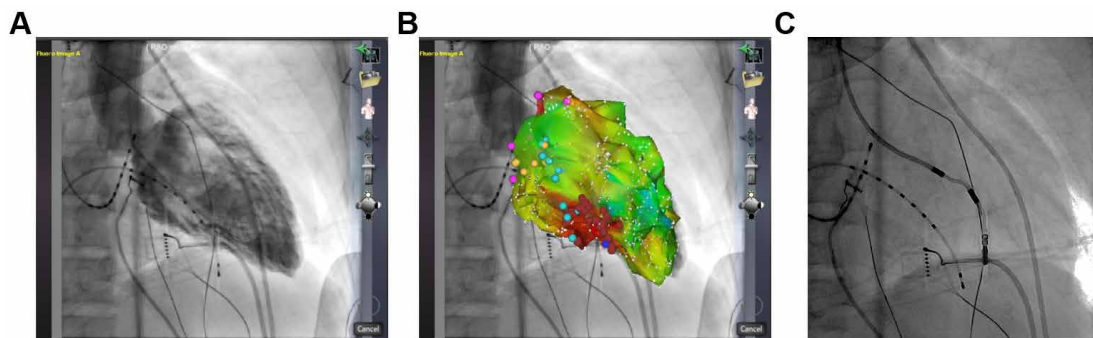


Figure 1. Remote magnetic navigation-guided radiofrequency catheter ablation of the posterior papillary muscle-originating ventricular tachycardia. A, fluoroscopy of the left ventricular (right anterior oblique 30°). The arrow indicates the base of left ventricular posterior papillary muscle. B, 3-D map constructed by CARTO 3 (Biosense Webster, Diamond Bar, CA, USA) shown on remote magnetic navigation screen. Red dots indicate RF lesions, blue dots indicate Purkinje potentials, and yellow dots indicate left side His potentials. C, RFCA by remote magnetic navigation ablation catheter.

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Arrhythmia Services and Cardiac Electrophysiology in Brunei Darussalam

Dr. Sofian Johar
Consultant Cardiologist and Electrophysiologist
Gleneagles JPMC and RIPAS Hospital

Brunei Darussalam is a country on the north-west coast of Borneo with a population of approximately 420,000 (2016 data). Its economy is dependent on oil and gas and has a high per-capita income. The Government provides free healthcare for its citizens and they have access to high quality healthcare in primary health care centres and hospitals. For treatments not available in Brunei, patients are sent overseas for treatment.

Brunei Darussalam formally joined APHRS in 2017 and we are deeply honoured to be part of the EP fraternity in the Asia-Pacific region.

Pacemakers were first implanted in Brunei Darussalam in the 1980's and ICDs started to be implanted in the 1990's. For other electrophysiology service patients were sent overseas for treatment due to lack of expertise. In 2002 Gleneagles JPMC was started as the tertiary cardiac centre and this led to the development of formal electrophysiological services in Brunei. The first biventricular implant was performed in 2005 and the first EP studies and ablations were performed for SVT in 2007.

Since then there has been a steady rise in numbers in procedures with a big increase in 2013 with the installation of the first 3D mapping system (CARTO 3) in 2013. The first radiofrequency ablation AF ablation procedure was performed in May 2013 which was a pulmonary vein isolation procedure. Ablation numbers have continued to grow with 50-80 AF ablation procedures/year for the last 4 years (approximately 50% paroxysmal and 50% persistent) which are the majority of the ablation procedures

in Brunei Darussalam. VT ablations (normal heart VT, ischaemic and dilated cardiomyopathy) and SVT ablations are also carried out regularly. Cryoballoon therapy for atrial fibrillation was introduced recently in 2017 and although numbers are small, they are continuing to increase.

The centre continues to get access to the latest technologies and Brunei was one of the first countries to implant a leadless pacemaker during its initial commercial release in 2015 (Initial Experience with a Leadless Pacemaker (Micra™) implantation in a low volume centre in South East Asia, Future Cardiology 2018 Sep 25). In addition, we implanted the first Reveal Linq implantable cardiac monitor in Asia in 2014. We have also published our experience with an active fixation LV lead for CRT devices (Pacing Clin Electrophysiol. 2015 Mar;38(3):297-30). The first combined implantation of a left atrial appendage occlusion device and leadless pacemaker has been recently reported (BMJ Case Rep. 2018 Feb 16;2018). We continue to maintain an active left atrial appendage occlusion service using the Watchman device. The first Watchman implant was performed in 2012. Lead extraction has been performed since 2013 using mechanically powered sheaths (Cook Evolution).

In summary, the population of Brunei Darussalam has access to comprehensive device and arrhythmia services. The burden of cardiovascular disease in Brunei Darussalam continues to rise, with increasing numbers of patients with atrial fibrillation and this will be an ongoing focus for the electrophysiology unit in the next decade.



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Taghji P, El Haddad M, Philips T, et al. Evaluation of a strategy aiming to enclose the pulmonary veins with contiguous and optimized radiofrequency lesions in paroxysmal atrial fibrillation: A pilot study. *J Am Coll Cardiol EP* 2017
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Important information: Prior to use, refer to the instructions for use supplied with this device for indications, contraindications, side effects, warnings and precautions.
Manufacturer: Biosense Webster. For more details go to www.biosensewebster.com
This product can only be used by healthcare professionals in EMEA.
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APHRS 2019

12th ASIA PACIFIC HEART RHYTHM SOCIETY SCIENTIFIC SESSION

SAVE THE DATE

24-27 October 2019
(THU-SUN)

Centara Grand & Bangkok Convention Centre
at CentralWorld, Bangkok, Thailand

Hosted by:



Organized by:



HIGHLIGHT

- ◆ Late-Breaking Clinical Trial
- ◆ Latest Cardiac Arrhythmia Guidelines
- ◆ First Responder Applications
- ◆ Live Sessions
- ◆ 101 Sessions
- ◆ No Slide Talk Only (NSTO)
- ◆ View points

TOPICS

1. Atrial Fibrillation and Other Atrial Arrhythmias (AF)
2. Cardiovascular Implantable Electronic Devices (CIEDs)
3. Heart Failure
4. Pediatrics
5. Sudden Cardiac Death (SCDs)
6. Supraventricular Tachycardia (SVT)
7. Ventricular Arrhythmias (VA)
8. Allied Professionals
9. Basic Science
10. Others: Career Path/ Radiation/ Stat/ Social Media

CONGRESS SECRETARIAT

CMO Public Company Limited

4/18-19 Soi Nuanchan 56, Nuanchan, Buengkum,
Bangkok 10230 Thailand

☎ 662-088-3888 ext. 1594 📠 662-088-3856

✉ aphrs2019@cmo-group.com 🌐 www.aphrs2019thailand.com