



INSTITUT JANTUNG NEGARA
National Heart Institute

MEDIA RELEASE

FOR IMMEDIATE RELEASE

IJN OFFERS THE WORLD’S SMALLEST PACEMAKER WHICH TREATS AV BLOCK PATIENTS

KUALA LUMPUR, 8 JULY 2020: IJN has achieved yet another milestone by being the FIRST hospital in the region to successfully implant Micra AV pacemaker.

Micra™ AV is the world’s smallest pacemaker with atrioventricular (AV) synchrony. This new device, specially developed for the treatment of patients with an AV block in their heart, extends the most advanced pacing therapy to more patients than ever before.

This was also the first successful Micra AV implantation performed outside of United States, done within a couple of months of receiving the pre-market approval in January 2020.

The procedure was performed by IJN Cardiac Electrophysiology team led by Senior Consultant Cardiologist and Electrophysiologist – Dr Azlan Hussin in March 2020. Subsequently, two more patients were implanted with this device in the following month.

Dr Azlan has explained that IJN Cardiac Electrophysiology team was deeply involved in the device development as well as in the pre- clinical studies since 2018.

He also said, “Micra AV is designed to provide a safe alternative to conventional pacemakers – without the complications associated with leads in the long run – the Micra AV is small enough to be delivered through a catheter and implanted directly into the heart with small tines and delivers electrical impulses that pace the heart through an electrode at the end of the device. Overall, this is a minimally invasive procedure. “

Developed and manufactured by Medtronic, the Micra AV is unlike traditional pacemakers because the device does not require cardiac wires (leads) or a surgical “pocket” under the skin to deliver a pacing therapy. Micra AV has specialized internal atrial sensing algorithms which detect cardiac movement, allowing the device to adjust pacing in the ventricle to coordinate with the atrium, providing “AV synchronous” pacing therapy to patients with AV block.

In addition, comparable in size to a large vitamin capsule, the Micra AV is one-tenth the size of a traditional pacemaker, but still delivers the most advanced pacing technology – all the while being cosmetically invisible.

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IJN BEYOND HEART



Dr Azlan also added that this device came at the right time when the IJN medical team was brainstorming on minimizing patient exposure in midst of COVID-19. The leadless pacing technology offers a host of potential benefits and shorter procedure time is one of them. Meanwhile, IJN Chief Executive Officer, Datuk Dr Aizai Azan Abdul Rahim, congratulated the team for their efforts in the face of adversity.

“Given the current global health situation, this has been an uplifting news and is going to improve the lives of many of our cardiac patients. I’m very proud to see our professionals continue to do excellent work despite the challenges they face,” he said.

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About Institut Jantung Negara Sdn. Bhd.

Institut Jantung Negara (IJN) was set up in 1992 and is dedicated to the management and treatment of heart diseases by providing cardiology, paediatric cardiology and cardiothoracic surgery services for adults and children.

Today, IJN is reckoned to be among the best medical centres for cardiovascular and thoracic care in Malaysia and the region. IJN has kept abreast with the latest medical advances, from handling a simple hole in the heart surgery to heart and lungs transplantations.

With a strong commitment to be a global heart care centre of excellence, IJN has paved the way by creating many “firsts” for cardiovascular and thoracic care in the country, namely:

- 1. 1st in SEA to introduce AXCESS Stent to treat bifurcation lesions*
- 2. 1st in Asia to introduce Renal Denervation – a radio frequency ablation procedure to treat patients with resistant hypertension*
- 3. 1st in the SEA to implant Bio resorbable Vascular Scaffold – a new stenting device*
- 4. 1st in the country to implant the Watchman device to reduce the risk of stroke in patient with AF*
- 5. Introduced HeartMate II – a new mechanical heart assist device as a bridge to transplantation in 2010*
- 6. 1st in Malaysia to perform Transcatheter Aortic Valve Implantation (TAVI)*
- 7. 1st in Malaysia to perform minimally invasive lobectomy for lung disease*
- 8. 1st in the country to perform minimally invasive procedure to repair congenital chest deformity called “Pectus Excavatum” and “Pectus Carinatum”*
- 9. 1st in Malaysia to perform a double heart transplantation (redo) within 24 hours*
- 10. 1st to perform keyhole (endoscopic) surgery to treat lone atrial fibrillation in Asia and Australasia in 2006*
- 11. 1st to perform single and double lungs transplant*
- 12. 1st to perform the implantation of an Implantable Ventricular Assist Device (IVAD).*

13. *1st medical institute in the country and the Southeast Asean region to perform coronary bypass surgeries and complex thymectomy procedures on conscious or 'awake' patients without general anesthesia.*
14. *1st in Malaysia to perform bone marrow stem cell transplantation in patients suffering from severe ischemic heart disease with no other treatment options.*
15. *1st medical institute to conduct a homograft procurement to facilitate heart transplant.*
16. *1st medical institute in the country to perform a heart transplant.*

17. *One of the first in the region to perform detailed mapping for complex arrhythmia.*
18. *1st medical institute in the world to Implant a Bio-absorbable Pulmonary Valve Conduit*
19. *1st medical institute in Malaysia to carry out the complete replacement of the aorta.*
20. *1st in the world 2nd Generation smallest pacemaker*
21. *1st in Asia to perform Peripheral Arterial Disease procedure with Vasculflex Multi-LOC device*
22. *1st in Malaysia to implant dual chamber pacemaker system in a pregnant patient using non-fluoroscopic imaging*

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