

What's next for Pondok Indah

"We certainly have some new centers of excellence on our map, and we are planning another RS Pondok Indah hospital to expand our services. In addition, we are reassessing our current CoE to assess and acquire technologies that have the potential to strengthen our CoE with new technology, foster additional talents, and utilize that technology to further improve efficiency and streamline the processes to reduce costs with better outcome" Dr Yanwar ends

Perhaps most importantly, these initiatives and

efforts have enhanced the depth and breadth of healthcare services available in the communities served by the healthcare system. Without question, a CoE require significant level of resources, but if well designed and developed, such expenditures represent investments that have the potential to pay dividends that could even be considered to be priceless, especially in cases where in the absence of given centres, communities would simply have to do without needed healthcare services. And RS Pondok Indah has successfully championed and will continue to so for the healthcare of Indonesia.



National Hospital - A New Breath of Neurosurgery for Indonesia

The understanding of Parkinson's and Epilepsy

Functional neurosurgery encompasses surgical procedures geared towards treating movement disorders (such as Parkinson's disease and essential tremor), drug-resistant epilepsy, and various types of pain disorders. It is one of the most rapidly expanding fields within neurosurgery and utilizes both traditional open surgical methods such as open temporal lobectomy for epilepsy as well as neuromodulation-based treatments such as implanting brain or nerve stimulation devices

Parkinson and Epilepsy - a neurological disorder

Parkinson's disease is a progressive and degenerative brain condition, a growing global health challenge, affecting millions worldwide and imposing significant burdens on families and healthcare systems. This multifaceted neurodegenerative disorder is marked by progressive neuronal loss, leading to debilitating sensorimotor dysfunction and cognitive impairment.

Early diagnosis and effective interventions remain critical yet unmet needs in PD care, as current therapeutic strategies often manage symptoms without halting disease progression.

Individuals with the disease often struggle with slowed movement, tremors, muscle stiffness, and speech impairment, among other health complications. PD, along with other neurodegenerative conditions like Alzheimer's disease, causes protein build-up in neurons, leading to protein misfolding and impaired cell function. Current PD therapies can alleviate some symptoms but do not address the root cause of the protein misfolding.

Emerging advancements in biomedical research offer unprecedented opportunities to unravel the molecular, cellular, and neurophysiological mechanisms underlying PD, many of which remain elusive. By integrating artificial intelligence (AI) with innovations in genomics, proteomics, and metabolomics,



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researchers are revolutionizing our understanding of PD pathogenesis and unlocking new avenues for personalized and precision medicine. These approaches hold the promise of tailoring interventions to individual genetic, environmental, and lifestyle factors, significantly enhancing therapeutic outcomes.

Neurosurgery for patients with drug-resistant epilepsy requires locating the precise brain areas that are generating the seizures. Typically, patients undergo 7 to 10 days of invasive intracranial EEG monitoring, with electrodes surgically implanted inside the brain through one or more skull openings to capture seizure activity as it happens.

National Hospital Specialist - Doctoring with care

GlobalHealth recently sat with National Hospital Surabaya, Neurosurgery Department Specialist, Dr. Achmad Fahmi -Neurosurgeon, specialized in Parkinson's Disease and Movement Disorders, Intervention Pain Management, Peripheral Nerve, Stereotactic Surgery and Dr. Heri Subianto - Neurosurgeon, specialized in Neurofunctional, to understand more about these neurological disorders and what their hospital is centered on.

"Parkinson's is not a life threatening disease. The goal of surgery for movement disorders such as PD, essential tremor, and dystonia is to improve patients' quality of life by restoring motor function, not to cure them. The problem is that the way protein clusters form in PD looks different in different patients, and even in different brain cells of the same patient. Sometimes it takes 3 years of test to fully recognise it as 100% Parkinson disease," said Dr. Fahmi.

In the earliest stages of Parkinson's disease, the changes that eventually cause damage to neurons take place quietly in the brain long before patients show any symptoms. Without a test that can detect these changes, it's difficult to intervene early to slow disease progression.

Dr Fahmi is a board member of World Society for Stereotactic and Functional Neurosurgery (WSSFN), a body that develop, research, educates and nurture young neurosurgeons on field that encompasses many important sub-disciplines, including movement disorder surgery, psychiatric surgery, epilepsy surgery, pain surgery, spasticity surgery, and restorative neurosurgery. Dr Fahmi has performed a total of 69

Deep Brain Simulation (BDS) surgeries and 450 Brain Lesioning procedures both in and outside of National Hospital. He was the pioneer of DBS for Indonesia, hailing all the way back in 2013.

Deep Brain Stimulation in Essential Tremor Treatment

DBS is an alternative treatment option that involves the placement of electrodes in the region of the thalamic ventral intermediate nucleus (ViM). Stable tremor control can be achieved in most patients with improvement in daily activities of life, such as being able to drink water from a glass, eating food without social embarrassment, write, perform computer-based tasks etc.

"What we do during a DBS surgeries is essentially putting a pacemaker-like device placed under the skin of the chest and sends electrical signals through a wire to a part of the brain that controls movement. DBS stimulation modulates the circuitry, which then help controls their tremors, without affecting the critical areas of their brain" says Dr Fahmi.

Aside from stereostactic frame, National Hospital is currently using two imported machines; Medtronic and PINS. PINS in particular is able to do a remote programming via internet, making it possible for doctors to reach out and monitor their patient's progress from afar. "Our neurosurgeon department here in National works as a unit, we work closely as a team to ensure patients have the best care and treatment. I especially made effort in building close relationship with all my patients. They have my personal number and I'm reachable anytime they need me" Dr Fahmi further added. "There was a client of mine from Medan, male in his 50s who first came to the hospital due to a bone fracture and stiffed as a statue. He was not able to move a muscle! After a week of DBS treatment, he could run and gallop like a child. It gave me great joy seeing him happy and content. It put a smile on my face every time I see the video of him running".

Aside from making sure the infrastructure in National Hospital is of top-notch, they have started building collaborations and partnerships with other surgeons in different district, giving them guidance on patient care management should be handled as well as surgeries in hand.

In most cases, Parkinson's disease happens in adults over 55 years of age, and very small statistics in younger patients. Parkinson's affects more men than women, and people who have relatives with the disease may have an increased risk of developing it. But for Movement Disorder, it can happen to anyone. Identifying the early symptoms; dystonia, tremor, spasticity, touret are all part of getting the right diagnosis.

"The internal partnership within different department and specialties in National, is an important step toward our goal to develop a method to detect and quantify a key marker of Parkinson's disease and works towards giving our patients a better quality of life, and keeping other related neurodegenerative disorders much more effectively at bay," Dr Fahmi concluded.

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