

## **DEEP BRAIN STIMULATION IN MALAYSIA: 10 YEARS' EXPERIENCE**

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In 2003, a comprehensive functional neurosurgery programme was developed at Sunway Medical Centre for deep brain stimulation (DBS) in patients with movement disorders. The surgical results in Parkinson's Disease (PD) patients are presented.

The stimulation target for all PD patients was the subthalamic nucleus (STN). For target localisation, we used frame-based stereotactic navigation with MRI imaging, augmented with navigation software. Electrophysiological definition of the target was done with microelectrode recording. Final confirmation of target localisation was performed with MacroStimulation.

16 of 21 patients (76%) showed good improvement in motor function (>50% reduction in mean UPDRS "ON" Motor Score). 17 of 21 (81%) had significant reduction in dyskinesia scores. Good responders included two patients who had prior unilateral pallidotomy. Dosage of medication was reduced by about half. At follow-up (range 27-124 months), functional outcomes were maintained, after allowing for age-related decline and disease progression. The oldest patient (now aged 81) continues to show motor benefit after 10 years.

Video recordings of patients will be shown to demonstrate results of DBS. Selection of candidates, choice of electrode contacts, programming parameters and medication adjustments will be discussed.