

## centres of EXCELLENCE

# Exploring the Deep Recesses of the Mind

**Holistic treatment is an integral component of health care at the Wits Donald Gordon Medical Centre's (WDGMC) neurology department.**

Armed with a multidisciplinary team responsible for addressing various needs, each patient receives individualised health care. In addition, patients' families have access to ongoing education and support to help them deal with loved ones' illnesses, which often impact negatively on the entire family.

The approach to treatment is multidisciplinary. Neurologists work closely with a geriatrician, a geneticist, a neuroradiologist, a host of psychiatrists, psychologists, a bio-kineticist and a rehabilitation team consisting

of occupational therapists, physiotherapists, speech therapists and nursing educators. Upon admission, the patient is assessed by the team and a treatment plan is initiated.

"Logically, fewer team members are required for the straightforward, less complicated cases," stated WDGMC neurologist, Dr David Anderson.

#### Types of work

Each team member has a special area of interest, which varies from specialist to specialist. "My specialties are epilepsy and movement disorders, such as Parkinson's disease and Huntington's disease," said Dr Anderson. "We are developing the epilepsy arena at WDGMC and are already quite well-

established in terms of movement disorders," he said.

He added that Dr Desmond Shamley, one of the other WDGMC neurologists, deals with inflammatory neurology and sees patients with multiple sclerosis.

The geriatrician, Dr Brent Tipping, focuses primarily on the dementias, such as Alzheimer's disease. However, Parkinson's and Huntington's also fit into the geriatric field. In general, the neurologists engage in lots of neurodegenerative work, occasionally treating stroke patients.

If a patient's condition is attributed to genetic factors, the geneticist sees the patient's family members to establish if they are also

at risk of the illness, such as in the case of Huntington's disease.

They will also meet with the psychologist, psychiatrist and, finally, the neurologist. Only once they have gone through this process and all the reports are congruent, will a blood test be performed.

Rehabilitation plays an important role in the department, especially in relation to head injuries and strokes.

The ICU also plays a role, as many epilepsy-related cases are admitted into the unit, where a pulmonologist is generally involved.

#### Collaboration

The neurologists often discuss cases and weekly meetings take place with the neuro-radiologist, Dr Mark Haagensen, to offer the best treatment options possible. "I do lots of epileptic work with Dr Haagensen and we look for focal sites causing epilepsy," said Dr Anderson.

The specialists constantly engage with the societies involved in the various disease areas, such as the Huntington's Association, the SA Parkinson's Association and Alzheimer's SA, with Epilepsy SA soon to join the ranks.

#### WDGMC leads the way

Subspecialisations in the neurology department include epilepsy and Parkinson's. WDGMC is proud to have the only epilepsy specialist in Johannesburg - one of only two in the country.

"We are fortunate to have a neuro-radiologist, performing MRIs of the brain and spine," said Dr Anderson.

Furthermore, WDGMC is the only institute in the country that offers transcranial ultrasound for the diagnosis of Parkinson's disease, and one of its neurologists has been extensively trained in this modality in Germany. Some people grapple with the fact that the diagnosis of Parkinson's disease is based on clinical symptoms, therefore, a tangible screening technique may be helpful.

A DaTSCAN, costing between R20 000 and R30 000, is difficult to perform in SA, as the radioisotope can only be imported at an exorbitant cost.

"This ultrasound makes it possible to use a high-frequency probe to look inside the brain and measure the substantia nigra in about 85% of people. This cannot be ascertained via MRI or CT scan but the substantia nigra's resonance on the ultrasound is very useful.

"If the brightness indicates an area over a certain size, it's very suggestive of Parkinson's. It is significantly cheaper and is solely used for Parkinson's at present," said Dr Anderson.

#### Going forward

"We're hoping also to develop into a neuropsychology department," stated Dr Anderson, citing that neuropsychology would be invaluable in helping with neurodiagnostics, which would enable full neuropsychological evaluations. This would assist in distinguishing between the dementias - frontotemporal vs Alzheimer's vs Lewy body (which are the main ones). Neuropsychology is also very important in the work-up of patients who are contemplating deep brain stimulation surgery for Parkinson's disease.

It is envisioned that a neurosister will eventually join the dynamic team.

\* Written on behalf of WDGMC



The Wits Donald Gordon Medical Centre is a private Academic Hospital providing quality multidisciplinary care.

The centre was established to enhance training of specialists and sub-specialists.

Units of excellence already established:

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- Adult and Paediatric Oncology unit
- ICU (Closed ICU with doctor on site 24 hours a day)
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21 Eton Road, Parktown,  
Johannesburg, 2193, South Africa  
P.O. Box 2072, Houghton, 2041, South Africa  
Tel +27 11 356 6000 Fax +27 11 482 7651  
www.dgmc.co.za

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