GUEST EDITORIAL

# Functional neurosurgery

It is a great honour to write the editorial for this month's CME component of the *SAMJ*. Functional neurosurgery is a subdivision of neurosurgery that does not always receive the recognition we feel that it deserves among general medical practitioners. It is definitely the less 'sexy' component of neurosurgery compared with vascular and skull base neurosurgery, but it is an important and highly specialised part of our field. There are currently only one academic unit and about five private sector units that perform functional neurosurgery procedures on a regular basis in South Africa. This, unfortunately, leads to many patients and their medical caregivers not knowing about the options available to them on their doorstep. Patients do not need to leave the country to search for help in other countries.

Functional neurosurgery consists of four subcategories: epilepsy surgery, spasticity surgery, pain surgery and surgery for movement disorders. The surgical techniques used are often very specialised and not part of the armamentarium of the general neurosurgeon. The specialised equipment used in the evaluation of the patient before and during surgery is very expensive. This equates to functional neurosurgery being performed in centres of excellence worldwide, where expertise and funding are clustered together, thereby ensuring the most reliable and safest outcomes in patients who are affected by functional neurosurgical problems. Surgery for epilepsy, pain, spasticity and movement disorders is definitely not something an isolated neurosurgeon should be performing. The functional neurosurgical unit consists of neurologists with an interest in these conditions, a developmental paediatrician, a neuropsychologist, social workers, neurophysiologists and, often, a psychiatrist. A multidisciplinary approach to decision-making and therapy is crucial. Surgery has high associated risks, as the patients are often 'well'. They still function, although they are impaired by their condition. Surgery therefore has a high risk of causing significant morbidity to the patient if things go awry.

It is clear from this month's CME that the mere presence of epilepsy or spasticity is not a trigger for surgery. Only if a patient's epilepsy is refractory to medical care and reviewed by a competent epileptologist, should one consider surgery. Spasticity is often protective and even useful to a patient, but when it leads to pain and deformities and hinders the patient's functioning, surgical management becomes an option. Lengthy discussion with the patient and the family is crucial.

A common opinion held by medical care funders and especially by state health departments is that functional neurosurgery procedures are too highly specialised and expensive for developing countries to be spending time and finances on. Readers of the August and September CME articles will observe that intelligent use of resources and long-term saving of money are the reasons why developing countries should be investing in functional neurosurgery units. Surgery for medical refractory epilepsy can save large amounts of money in the long run if one considers the cost of second- and third-line anti-epileptic drugs and the associated morbidity of uncontrolled epilepsy. The same argument holds for pain, spasticity, and movement disorder surgery. It is important that healthcare funders on our continent develop long-term management strategies that are not penny wise, pound foolish.

This month's CME covers the first two[1,2] of four articles that are dedicated to functional neurosurgery topics.

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1. Enslin JMN, Fieggen AG. Surgical management of spasticity. S Afr Med J 2016;106(8):753-756. DOI:10.7196/SAMJ.2016.v106i8.11225
2. Enslin JMN, Rothemeyer SJ, Fieggen AG. Surgical management of epilepsy. S Afr Med J 2016;106(8):757-760. DOI:10.7196/SAMJ.2016.v106i8.11194

*S Afr Med J* 2016;106(8):752. DOI:10.7196/SAMJ.2016.v106i8.11195