

Division of Neurosurgery
University of Cape Town
2008 Research Report

Without doubt, the highlight of 2008 was the **XXXVI Annual Meeting of the International Society for Pediatric Neurosurgery (ISPN)** which was held in Cape Town from 12-16 October. This was the first ever annual scientific conference of a major international neurosurgical society to be held in South Africa and was a success on all fronts. The meeting was attended by over 400 delegates, the largest number in the 36 year history of the ISPN. The Organizing committee comprised members of the Division (Professor Graham Fieggen, Emeritus Professor Jonathan Peter and Dr Tony Figaji) and Professor Fieggen served as Chairman of the Annual Meeting. Four satellite meetings were also held- the 1st South African ISPN Paediatric Neurosurgery Course (11 October), the 4th Cape Town Neuroendoscopy Hands-on Workshop (12 October), Neuromonitoring 2008 (17 October) and a Brain Tumour Workshop (18 October).

Degrees conferred

Dr Tony Figaji

PhD (Neurosurgery)

Multimodality monitoring in children with severe traumatic brain injury.

Dr David Le Feuvre

MMed (Neurosurgery)

Targeted embolization of AVM's: Identification of sites and results of treatment.

Postgraduate students

Two members of the Division were registered for doctoral degrees (AG Fieggen, PL Semple) and five were registered for MMed in Neurosurgery (LC Padayachy, SJ Sandler, C Thompson, MD Gowen, PK Ssenyonga).

Awards

Dr Figaji was awarded a UCT Fellows Award and also the Bronte-Stewart medal for the most meritorious doctoral thesis submitted in the Faculty in 2008.

Publications

Ahmed S, Semple P.

Cerebral ischemia in pituitary apoplexy.

Acta Neurochir (Wien) 2008; 150(11): 1193-6.

Figaji AA, Sandler SJI, Fieggen AG, Le Roux PD, Peter JC, Argent AC.

Continuous monitoring and intervention for cerebral ischemia in tuberculous meningitis

Pediatr Crit Care Med 2008; 9 (4): e25-30

Figaji AA, Fieggen AG, Peter JC, le Roux P.

Does adherence to treatment targets in children with traumatic brain injury avoid brain hypoxia? A brain tissue oxygenation study

Neurosurgery 2008; 63 (1): 83-91

Figaji AA, Zwane E, Fieggen AG, Peter JC, le Roux PD.

Acute clinical grading in pediatric severe traumatic brain injury and its association with subsequent intracranial pressure, cerebral perfusion pressure, and brain oxygenation

Neurosurg Focus 2008; 25 (4): E4

Langerak NG, Lamberts RP, Fieggen AG, Peter JC, van der Merwe L, Peacock WJ, Vaughan CL.

A Prospective Study of gait in diplegic cerebral palsy patients 20 Years after selective dorsal rhizotomy

J Neurosurg Pediatrics 2008; 1: 180-186

Vaughan CL, Langerak NG, Lamberts RP, Fieggen AG, Peter JC, van der Merwe L, Peacock WJ

Journal of Neurosurgery: Pediatrics 1(3):178-179, 2008

letter in response to: Engsborg JR, Park TS: Selective dorsal rhizotomy and Albright AL: Selective dorsal rhizotomy and the challenge of monitoring its long-term sequelae.

Journal of Neurosurgery: Pediatrics 1(3):177-178, 2008

Le Feuvre DE, Taylor AG.

Endovascular cerebral aneurysm treatment: long-term outcomes.

S Afr Med J 2008; 98 (12): 954-957

Lubbe D, Semple P, Fagan J.

Advances in endoscopic sinonasal and anterior skull base surgery.

SAMJ 2008; 98: 630-632.

Semple PL, Jane JA, Lopez BM, Laws ER.

Pituitary apoplexy: correlation of MRI and histopathology.

J Neurosurg 2008; 108: 909-915.

Semple PL.

Transsphenoidal surgery for Cushing's disease: pitfalls, results and long-term follow-up.

In: Atlas of Transsphenoidal Surgery, Laws ER, Lanzino G (eds): Elsevier (in print).

Presentations at Conferences

International

XXXVI Annual Meeting of the International Society for Pediatric Neurosurgery:

Peter JC. Convener and Session Chair: Neurosurgical management of cerebral palsy.

Fieggen AG. Invited lecture: Medical and Surgical Management of Tuberculous Hydrocephalus.

Figaji AA, Fieggen AG, Argent AA, Le Roux PD, Peter JC. Cerebral oxygen monitoring in childhood brain injury.

Figaji AA, Kogels M, Fieggen AG, Argent AA, Le Roux PD, Peter JC. Does blood transfusion improve brain oxygenation in children with severe head injuries?

Satellite meetings:

- *1st South African ISPN Paediatric Neurosurgery Course* (Convener: Professor AG Fieggen)

Fieggen AG. Neurosurgical education and training in South Africa.

- *4th Cape Town Neuroendoscopy hands-on Workshop* (Convener: Assoc Prof PL Semple)

Semple PL. Anatomy and technique of using a rigid endoscope.

Figaji AA. Management of cysts.

- *Neuromonitoring 2008* (Conveners: Dr AA Figaji, Dr F Sala, Professor Graham Fieggen)

Fieggen AG. Clinical and demographic considerations in pediatric TBI.

Figaji AA. Methods of monitoring brain oxygenation in the Neurocritical care unit.

Figaji AA. Cerebral autoregulation in childhood TBI- pathophysiology and monitoring.

Professor Taylor and Dr Figaji presented invited lectures at the World Radiology Conference and also the World Anaesthetic Conference, both in held in Cape Town.

National

The 20th biennial meeting of the Society of Neurosurgeons of South Africa was held in Durban, South Africa. 8 members of the Division attended and accounted for 50% of presentations by South African neurosurgeons at the meeting.

Jacobsohn M. Transforaminal lumbar interbody fusion (TLIF): A retrospective assessment of the clinical and radiological outcome.

Padayachy L. Cervical arthroplasty- the Cape Town experience.

DG Welsh. Interspinous devices.

Röthemeyer SJ. A retrospective review of a series of HIV positive patients presenting with hydrocephalus.

Fieggen AG. Management of tuberculous hydrocephalus in children.

Semple PL. Pituitary apoplexy.

Taylor AG. Aneurysmal vasculopathy.

Figaji AA. Brain oxygen monitoring in Paediatric Traumatic Brain Injury.

Professor Fieggen presented an invited lecture on Surgery for Epilepsy at the **South African Paediatric Association** Congress, Sun City, May 2008.

Local

Members of the Division presented at the Annual Research Days of the Department of Surgery and the School of Child and Adolescent Health, as well as the Grand Rounds of Groote Schuur Hospital.

Policy documents

Associate Professor Taylor convened the drafting of the Head Injury Guidelines for the Western Cape.

Research Grants

- The long-term sequelae of Selective Dorsal Rhizotomy in Cerebral Palsy patients
MRC Self-initiated Research Grant (PI: Professor AG Fieggen: 2008-2010)
- Investigating traumatic brain injury in children: a collaborative study between Lund University and the University of Cape Town; SIDA/NRF grant GUN 2072790 (PI: Dr AA Figaji (UCT) and Dr P Siesjö (Lund): 2006-2008)

- Multimodality monitoring of Traumatic Brain Injury; a collaborative study between the University of Philadelphia and the University of Cape Town; Integra Foundation (PI: Dr AA Figaji (UCT) and Dr P le Roux (U Penn): 2008-2010)

Editorial activities

Emeritus Professor JC Peter serves on the International Advisory Board of *Neurosurgery*.

Professor Fieggen is on the editorial boards of *Child's Nervous System*, *Journal of Paediatric Neurosciences* and *African Journal of Neurological Sciences*.

Assoc Prof Taylor serves on the editorial board of *Interventional Neuroradiology*

Professional activities

Professor Fieggen and Assoc Prof Semple were elected to the Council of the College of Neurosurgeons of South Africa for the triennium 2008-2011, with Assoc Prof Semple elected Secretary of the College and appointed as a Senator of the Colleges of Medicine of South Africa.

Assoc Prof Allan Taylor was elected Secretary of the Society of Neurosurgeons of South Africa for 2008-2010 and appointed to the Executive of the Society, while Dr Norman Fisher-Jeffes (part-time Senior Lecturer) was elected president of the Society.

Dr David Welsh was elected to the Executive of the South African Spine Society.

Professor Fieggen visited San Francisco in April to spend a week with Professor Dachling Pang, Chief of Pediatric Neurosurgery at the University of California, prior to attending the 71st Annual Meeting of the AANS in Chicago. He was elected a Corresponding member of the American Academy of Neurological Surgeons.

