

6th World Congress on Brain Injury

Melbourne 6-8 May, 2005.

The 6th World Congress on Brain Injury was held at Melbourne Convention Centre in Australia. With simultaneous parallel oral, symposium and plenary sessions over 3 days, it is difficult to be comprehensive, but some excerpts are described below.

Acute Management of TBI

Professor T Kossman stressed the importance of prioritising timing and procedure - this is the basis of their trauma team protocol. He discussed primary survey for resuscitation, secondary survey for assessing associated injuries, and definitive treatment during which life threatening injuries were given highest priority. He described a 25-year-old young man with severe traumatic brain injury who had a good acute outcome after being managed according to their trauma team protocol, for three months. Mortality rate was only 11% in their hospital, compared to 20% internationally.

P Reilly discussed future clinical guidelines for the management of severe head injury. He pointed out two important attributes: accurate and continuous measurement of the injury and specific therapies. Primary brain injury may be diffuse or focal and hypoxemia and hypoperfusion are potential secondary insults. Clinical trials of neuroprotective agents were encouraged.

Assessment and rehabilitation of minimally responsive and slow to recover patients

Clinical evaluation tools, predictors of rehabilitation outcome, and effectiveness of sensory stimulation in severe brain injury and stroke patients were discussed. Jose Maria Dominguez-Roldan from Spain compared Glasgow coma scale, Innsbruck scale, Edinburgh-2 scale, Neurological Assessment Revised, Rancho de Los Amigos scale, Near-Coma Semi-Coma scale, and Disability Rating Scale, to determine the best scale for use during this clinical period. None of the scales showed sufficient accuracy to evaluate awakening after coma. Some of the items in the scales and some

clinical signs had high predictive value. A combination of these items and clinical signs could help to develop a more predictive scale. Unfortunately he did not include the Wessex Head Injury Matrix, which has been designed and validated in this population. H J Eilander from the Netherlands discussed introduction of PALOC-s (Post Acute Level of Consciousness scale) and predicting recovery from coma using PALOC-s. PALOC-s is a reliable and valid tool in severe brain injury, showing high correlation with WNSSP (Western Neuro Sensory Stimulation Profile). It is an eight level classification system which ranges from coma to consciousness. J Morarty from Australia is conducting a randomised controlled trial with 70 patients, to study the hypothesis that, through a standardised daily stimulation of five senses, patients will emerge from a vegetative state earlier. She commences her research in September 2005. SMART (Sensory Modalities Assessment and Rehabilitation Technique) and functional assessment tools will be used.

Medical Sequelae

Three presentations covered dysautonomia, medication and serum biochemical markers for evaluation of outcome and diagnosis in early brain injury patients. I. Baguley presented preliminary evidence of Heart Rate Variability (HRV) changes in dysautonomic TBI patients. The same group from Australia discussed safe prescribing in early in-patient TBI rehabilitation. In three major metropolitan TBI rehabilitation units, the most commonly used medication groups were anticonvulsants, analgesics, benzodiazepines, alpha/beta blockers, antidepressants, dopamine blockade and dopamine agonists in descending order. The units showed clear differences in their prescribing habits. The paper also highlighted problems with reduced awareness, polypharmacy, adverse drug reactions, and individual variation in response to the drug.

Nam D Nguyen from Belgium described the use of protein S-100B and Neuron specific Enolase (NSE) to diagnose septic encephalopa-

thy after traumatic brain injury. Over four days, 34% of S-100B and 66% of NSE were raised in patients with septic encephalopathy.

Interventions for Cognitive Impairments

A group from Hong Kong presented computerised memory rehabilitation programmes, for brain injury patients. Their expert system consisted of a knowledge base and decision-tree mechanism.

Professor R Tate from Australia has published a new resource for treating psychological consequences of acquired brain impairment "PsychBITE" (Psychological Database for Brain Impairment Treatment Efficacy).

Community-based Rehabilitation

Professor Ponsford described a community-based rehabilitation program that was compared with centre-based outpatient treatment at two-year post injury. Participants were matched for age, gender, injury severity, level of initial independence in ADL and time spent with therapists. Costs and number of hours of therapy were also documented. Personal ADL and physical independence were improved, despite lower cost of community-based rehabilitation. Employment status, social integration, mood status and mobility subscale of CHART (Craig Handicap Assessment and Reporting Technique) were not significantly different. L Callaway, presented their Community Approach to Participation (CAP). CAP is an individualised and collaborative model, which encourage people to increase their level of participation in the community.

The 6th World Congress on Brain Injury covered a spectrum from acute management and medical sequelae to cognitive intervention and community reintegration. I look forward to 7th World Congress on Brain Injury in Miami.

*Dr KoKo Naing, SpR in Rehabilitation
Medicine, Poole General Hospital.*