

European Federation of Neurological Societies (13th Congress)

Conference details: 12-15 September, 2009; Florence, Italy. **Reviewed by:** AJ Larner, Walton Centre for Neurology and Neurosurgery, Liverpool, UK

Florence's most famous son was Dante Alighieri, author of what came to be known as the *Divine Comedy*. Whether by chance or not (and he was, to my knowledge, not once mentioned at the meeting), this year's EFNS coincided with the anniversary of his death, on the night of 13/14 September, from malaria, in exile in Ravenna in 1321.¹ Did this conference lead delegates to Paradise, Purgatory, or the Inferno?

Picking my way with care, as one must in the busy Florentine streets, through the schedule (having no Virgil or Beatrice to guide me) I found, for good or ill, the apparently most intellectually profitable sessions to be drug company sponsored satellite symposia and focused workshops. In the former category, results of a trial (RE-LY; www.rely-trial.com) of dabigatran etexilate versus warfarin for the prevention of stroke and systemic embolism in atrial fibrillation (P Gorelick, USA) showed non-inferiority of the trial medication, and indeed superiority to warfarin at a dose of 150 mg bd, in a trial of >18000 patients with 99.9% follow up. Adverse events showed less intracranial haemorrhage but more dyspepsia than warfarin, but with the benefit of no necessity of INR monitoring. The same symposium also presented trial (ECASS3) and registry (SITS-MOST) data regarding the safety and utility of rt-PA up to 4.5 hours, as opposed to the previous limit of 3 hours, after acute stroke, which may have major implications for clinical practice.

Another satellite symposium included data from a trial of Souvenaid, a multi-nutrient drink, in Alzheimer's disease (AD). Preclinical studies have suggested that precursors to phosphatides can enhance numbers of neuronal dendritic spines. Although brief (12 weeks), the trial found benefit in delayed verbal memory in the treatment group, and was taken to show proof of concept (P Scheltens, Netherlands), prompting further trials of this "medical food". Also on the subject of AD, a survey (IMPACT) of physicians, caregivers, the general public and payers (including those who commission services) in five European countries was the topic of one symposium. Amongst the findings, it suggested that time from symptom onset to diagnosis of AD has improved in the UK (32 months in a previous survey,² to 10 months). A salient finding for me was that only 16% of payers thought the diagnosis of AD was difficult, much

lower than the other groups, a finding perhaps not surprising for anyone who has read the UK National Dementia Strategy.

The absence of treatment for vascular dementia (cholinesterase inhibitors [ChEIs] have no licence, despite a modest evidence base) may have prompted the re-emergence of cerebrolysin, a peptide mixture said to have neurotrophic properties. A 24-week trial from Russia suggested improvement in ADAS-Cog and CIBIC+ in mild to moderate vascular dementia, and another trial from Spain suggested equivalence to donepezil in AD with combined donepezil/cerebrolysin treatment tending to superiority. However, cerebrolysin requires iv administration, so it may be less acceptable than oral medication.

No EFNS is complete without a lecture from Hans-Christoph Diener. His review of new acute and prophylactic treatment for migraine suggested that the ones to watch are potentially beneficial were, in the former category CGRP antagonists such as telcagepant (MK0974), which unlike triptans lacks any vasoconstrictive properties, and 5HT-1F agonists (COL144). Amongst new prophylactic agents, he did not rule out the controversial possibility of botulinum toxin noting the big placebo response in trials (50% respond to saline injections!), the lack of a defined mechanism of action (modulation of peripheral nociceptive inputs?) and the tendency for an "all-or-nothing" response. Neurostimulation (DBS, occipital nerve stimulation) also seems to hold promise for the future. In the treatment of chronic migraine, Jean Schoenen noted that the most efficacious preventive treatments also have the most side effects. The importance of treating comorbidity (e.g. depression) was emphasized. The exclusion of medication overuse headache is also crucial, a fact underscored by a poster (one of 6) from the Norwegian Akershus study of chronic headache showing that this is akin to dependency, using the Severity of Dependence Scale.³

What can one observer make of 1700+ posters (minus no shows, which must amount to several hundred)? Few messages of possible clinical relevance emerged for me. The possible change in normative performance in the Mini-Mental State Examination over 20 years, reported from Portugal, will, if true (as for general intelligence), require changes in cutoffs, and so further undermine use of this instrument as a measure for ChEIs efficacy. In movement dis-

orders, new cognitive tests are being piloted for use specifically in Parkinson's disease, such as SCOPA-Cog and PANDA, as well as ACE-R. Camptocormia may be relieved by sensory tricks such as placing the hand on the thigh or a table or bar in front of the patient. Awareness of NMDA-R antibody encephalitis in association with ovarian teratoma seems to be increasing, with reports in three posters, from Ireland, Japan, and Singapore. An illustrative case from Austria showed that a provisional diagnosis of "Hashimoto encephalopathy", based on the finding of anti-thyroid antibodies, required revision to paraneoplastic limbic encephalitis when an underlying malignancy (bronchial carcinoma) was found by PET scanning. ChEIs have been used (off licence) for sleep-related disorders (OSAHS, narcolepsy) with apparent benefit in terms of the Epworth Sleepiness Scale; this was a surprising inclusion since a poster submission on ChEI treatment (off licence) for MS-related cognitive impairment from this centre was not accepted.

Most focused workshops were on predictable topics but one on Wernicke's encephalopathy (WE) caught the eye. The prevalence is higher in alcoholics, often undernourished, but increased interest in WE has been kindled by cases (2 per 1000) in the context of bariatric surgery, indicating that the obese are not immune to this condition, an unbalanced diet perhaps being key to its occurrence (e.g. hyperemesis gravidarum, hunger strikers despite oral thiamine supplements). The evidence base for thiamine treatment is thin (e.g. dose? route? duration?) but good practice points have been formulated by an EFNS Task Force such as using parenteral thiamine (iv), to be given before glucose in suspected WE, and return to a balanced diet as soon as possible. These guidelines will appear in the European Journal of Neurology in due course. ♦

REFERENCES

1. Lewis RWB. *Dante. A life*. London: Phoenix, 2001.
2. Bond J et al. *Inequalities in dementia care across Europe: key findings of the Facing Dementia Survey*. *Int J Clin Pract* 2005;59(suppl146):8-14.
3. Grande RB et al. *The Severity of Dependence Scale detects people with medication overuse: the Akershus study of chronic headache*. *J Neurol Neurosurg Psychiatry* 2009;80:784-9.

Brain Injury Rehabilitation Trust Biannual Conference

Conference details: 23-24 September, 2009; Birmingham, UK. **Reviewed by:** Professor Michael Oddy, Director of Clinical Services for BIRT.

The Brain Injury Rehabilitation Trust held the latest in its series of biannual conferences on brain injury rehabilitation on the 23rd and 24th September in Birmingham.

As with previous conferences the goal was to provide a good balance between advances in the basic science underlying brain injury rehabilitation and talks concerning current best practice.

The first day comprised of keynote speakers from around the world. Professor Robyn Tate from the Rehabilitation Studies Unit at the University of Sydney reviewed the somewhat neglected topic of motivational changes following brain injury. She gave a useful evaluation of measures of motivation that can be employed and then reviewed current treatment approaches, both pharmacological and behavioural. She concluded that there is weak evidence that stimulants may be helpful in treating low motivation following brain injury but that the amount of progress made in developing pharmacological and behavioural interventions over the past 20 years was disappointing.

Professor James Fawcett from the Cambridge University Brain Repair Centre described the state of play in terms of the development of treatments to stimulate both axon regeneration and plasticity. As far as the former is concerned Phase 2 trials are currently underway. Plasticity is a double edged sword and Prof Fawcett emphasised the need for a combination of appropriate training with simultaneous pharmacological intervention to promote plasticity if functional recovery is to be achieved.

Dr Tamara Ownsworth from Griffiths University in Queensland emphasised the huge significance that return to work has for the individual following brain injury before reviewing the evidence for predictors of return to work following acquired brain injury. The factors with the strongest predictive value were pre-injury occupational status, functional status at discharge, certain aspects of cognition (notably executive function and global intellectual ability), emotional status and amount of rehabilitation and vocational support. Dr Ownsworth also examined the role of awareness of deficit in terms of return to work and concluded that impaired self-awareness does not preclude a return to work and indeed such a return may be necessary to enable self-awareness to improve. She advocated approaches which

combined self-awareness and self-regulation training with modification or enhancement of the vocational environment (ie educating employers, providing on-the-job support etc).

Dr Tedd Judd from Washington State gave what proved to be a popular and entertaining talk on neuropsychotherapy. His presentation was riddled with common sense advice and clinical wisdom and he gave many examples of how one can circumvent the memory and the other cognitive deficits associated with brain injury to provide good psychotherapeutic assistance in the process of adjustment to brain injury.



The second day of the Conference consisted of three parallel sessions, each of which was either in the form of a workshop or a short symposium. Topics for workshops ranged from smart technology to sexual consent and from challenging behaviour to cross-cultural considerations. There were symposia on training staff (both in how to promote basic functional skills and in how to communicate with someone with a severe brain injury) in the measurement and management of challenging behaviour and in the controversial topic of 'effort testing'. This concept arose in a medicolegal context and suggests that performance on cognitive tests is not always optimal for reasons of differing motivation and that so-called effort tests should always be employed to gauge the extent to which the person is performing to the best of their ability. The message was that effort testing should be incorporated into all cognitive assessments and that the best effort tests were those embedded in existing neuropsychological tests. Care has to be taken, however in the interpretation of failure on effort tests as it is not, as has sometimes been assumed, synonymous with malingering.

In a talk entitled 'From the farmer's field to the airfield' Dr Sarah Mackenzie-Ross from UCL described the evidence for the neuropsychological effects of toxins in these two areas. In the farmer's field she described a study suggesting that exposure to organophosphates was associated with

deficits in response speed, mental flexibility, memory functioning and fine motor control with significant correlations between neuropsychological performance and duration and intensity of exposure. Exposed farmers also scored higher on tests of depression and anxiety and were more likely to complain of other symptoms such as fatigue, joint stiffness and sleep disturbance.

The toxicity relating to the airfield concerned the air circulating in aircraft. During flights the air in the cockpit and the cabin is a mixture of recirculated air and 'bleed' air. The latter is taken from the engine and can be contaminated by engine oils and lubricants and may contain carbon monoxide. The number of air contamination events is difficult to quantify as aircraft do not have air monitoring equipment. The study related to 27 self-selected pilots. Nine were eliminated as they had other health problems which could influence their performance. The remaining 18 pilots were assessed neuropsychologically and found to have intact language, perceptual and general intellectual ability but were poorer than expected on tests of psychomotor speed, attention and executive skills.

Dr MacKenzie-Ross emphasised that both these studies were preliminary and that causality was not conclusively proven in either case but her findings would certainly appear to justify further investigation.

One workshop considered the issue of capacity to consent to sexual relationships following severe brain injury which often leads to anxiety amongst staff in residential brain injury units. Professor Glynis Murphy, University of Kent and Dr Camilla Herbert, BIRT explored the relevant law with the Sexual Offences Act 2003 being the most significant act in this respect but both speakers agreed that difficult dilemmas still arise.

Children who suffer brain injuries were not forgotten. Fiona Adcock from the Children's Trust, Tadworth Court, described the work of a Community Support Services Team and Drs Phil Yates and James Tonks from Exeter University described a series of studies they have conducted into the developmental consequences of brain injury in childhood. Their message was that such children face increasing problems as they struggle to keep up with their rapidly developing peers in adolescence and may continue to face problems in adulthood. ♦