

13th European Congress of Physical Medicine and Rehabilitation

28-31st May 2002, Brighton, UK

Three themes ran through this meeting in Brighton: clinical standards in rehabilitation medicine, measurement, and effectiveness. A European perspective was obtained, with a few Australasian touches. Despite great energy, it seems that everyone shares the problem of setting meaningful standards in terms that are actually useful both to clinicians undertaking the complex activity of rehabilitation and to those who fund health care. It was good for group bonding, but demoralising all the same to find that the ability of funders to mis-use clinically derived data is international: if the Barthel scale score doesn't change then rehabilitation isn't taking place.

I am beginning to feel old now I can remember conferences in rehabilitation when the message was "measure, measure and measure again" and battles would rage where the proponents of one scale would impugn the validity of rival scales. Such fun we had. In this meeting, a much more healthy nihilism about measurement was evident from the speakers. In part this was driven by the disturbing findings of the European PRO-ESOR project. This found that FIM scores mean different things in different parts of Europe and so are not comparable. This prompts me to speculate what on earth our functional scores really do measure. But the greatest challenge of all remains to find ways of defining and measuring clinical expertise: there can be no doubt that this exists, so it must be measurable.

There have been great strides in the establishment of the effectiveness of rehabilitation, particularly at a service level. Rigorous studies of specific interventions are now emerging too. An example was an elegant randomised study where patients with poor balance after stroke received balance training either with or without a blindfold. The idea was that removing the visual input would prevent visual compensation in balance tasks, and that such "visual



Inside the exhibition hall

constraint" would improve the underlying balance mechanisms, and this proved to be the case.

But with aids, appliances, prostheses and the like: how should they be evaluated? What constitutes evidence of effectiveness? In a thought-provoking lecture, Professor Henk Stam from Rotterdam outlined how much the world of prosthetics resembles the world of the marketing of any other consumer goods or products. When I buy some toothpaste for myself, I don't usually read up on the RCTs demonstrating its effectiveness before making my choice, and I will be influenced by advertising or free gifts like anyone else. But what effect does the sponsorship of medical meetings by the companies that manufacture appliances have upon prescribing decisions, (at the expense of the taxpayer in most cases)?

A wonderful thing about large meetings is to see invention, innovation diversity and enthusiasm. I was interested in the apparently



Delegates were welcomed to the congress by 'Weapons of Sound', who played drain pipes and water butts and invited audience participation in the vocal backing!

beneficial effects of magnetic fields, since in my ignorance I had thought this sort of treatment had disappeared either last century or the one before that. Hippotherapy, which is the treatment of people (with multiple sclerosis in this case) by horse riding, was under test. I noted that it improved the sexual function of men, but not women. Robotic physiotherapy was under early evaluation and development. It was not hard to see how stroke physiotherapy could be routinely robotically enhanced in a few years time. Functional electrical stimulation to enable cycling for aerobic fitness training in those with paraplegia looked like great fun and a marvellous success compared to the more usual disappointing effects of FES in walking. The next (14th) European Congress, in May 2004, will be in another cultural capital, this time Vienna, Austria.

*Dr John Gladman,
Nottingham*

A word from the BSRM President



This congress was organised by the BSRM together with the SRR to create one of the biggest forums of general rehabilitation practice and research ever seen in the UK. About 650 people attended the congress, including 400 doctors from all over Europe (joined by a few from Australasia and North America) and over 130 other health professionals from the UK.

Problems faced by those with disabilities, their families and carers not surprisingly are similar the world over. Strategies from health and social agencies seemed varied, but difficulties in enabling individuals to return to work in spite of illness or disability seem frighteningly similar in developed countries with responsibilities varying between employers and the state. As in the UK, some countries have difficulties with service provision relating to different policies being adopted by different local authorities. The need for interdisciplinary working was clear throughout all the plenary sessions. Visitors to the UK seemed interested at our community-based rehabilitation, which seems well developed compared to some European countries.

The conference was enhanced by many sponsoring organisations and companies, including some from the voluntary sector, which greatly contributed to the success of the conference (see the special news review pages at the back of this magazine, where you can also find more information about the BSRM). The BSRM is also grateful to the many individuals from the SRR and the BSRM who reviewed the hundreds of abstracts submitted.

*Andrew Frank
BSRM President*

Abbreviated Prescribing Information Botox®

Presentation: Contains 100 units (U) of *Clostridium botulinum* type A neurotoxin complex (900kD). **Uses:** BOTOX® is indicated for focal spasticity, including the treatment of dynamic equinus foot deformity due to spasticity in ambulant paediatric cerebral palsy patients, two years of age or older and wrist and hand disability due to upper limb spasticity associated with stroke in adults.

Dosage and Administration: BOTOX® is reconstituted prior to use with sterile unpreserved normal saline (0.9% sodium chloride for injection). **Doses recommended for BOTOX® are not interchangeable with other preparations of botulinum toxin. Paediatric cerebral palsy:** Diluted BOTOX® is injected using a sterile 23-26 gauge needle. It is administered into each of two sites in the medial and lateral heads of the affected gastrocnemius muscle. The recommended total dose is 4 units/kg body weight. When both lower limbs are to be injected on the same occasion this dose should be divided between the two limbs. Clinical improvement generally occurs within the first two weeks after injection. Repeat doses should be administered when the clinical effect of a previous injection diminishes, but not more frequently than every two months. **Focal Spasticity associated with stroke:** Reconstituted BOTOX® is injected using a sterile 25, 27 or 30 gauge needle for superficial muscles, and a longer needle for deeper musculature. Localisation of involved muscles with EMG guidance or nerve stimulation may be useful. Multiple injection sites may allow BOTOX® to have more uniform contact with the innervation areas of the muscle, especially in larger muscles. The exact dosage and number of injection sites may be tailored to the individual based on size, number and location of muscles involved, the severity of spasticity, and the presence of local muscle weakness. (See SPC for dosage recommendations). **Contra-indications:** BOTOX® is contra-indicated, a) in individuals with a known hypersensitivity to any component of the formulation; b) when there are generalised disorders of muscle activity (e.g. myasthenia gravis); c) when aminoglycoside antibiotics or spectinomycin are already being used or are likely to be used; d) when there are bleeding disorders of any type, in case of anticoagulant therapy and whenever there is any reason to avoid intramuscular injections and e) during pregnancy or lactation. **Warnings and special precautions:** The relevant anatomy, and any alterations to the anatomy due to prior surgical procedures, must be understood prior to administering BOTOX®. Extra caution should be paid in the case of injection sites close to structures such as the carotid artery and pleural apices. The recommended dosages and frequencies of administration of BOTOX® should not be exceeded. Adrenaline and other anaphylactic measures should be available. **Reconstituted Botox® is for intramuscular injection ONLY. Focal Spasticity associated with paediatric cerebral palsy and stroke:** BOTOX® is a treatment for focal spasticity that has only been studied in association with usual standard of care regimens, and is not intended as a replacement for these treatment modalities. BOTOX® is not likely to be effective in improving range of motion at a joint affected by a fixed contracture. **Side effects:** Side effects may occur from misplaced injections of BOTOX® temporarily paralysing nearby muscle groups. Excessive doses may cause paralysis in muscles distant to the injection site. In cerebral palsy all treatment-related adverse events were mild-to-moderate in severity. The adverse reaction most frequently reported include falling, leg pain, leg (local) weakness, general weakness and localised pain at injection site. In focal upper limb spasticity the most commonly reported adverse reactions were ecchymosis, purpura, injection site haemorrhage, arm pain, muscle weakness, hypertonia and injection site burning. Less frequent events reported included hyperesthesia, arthralgia, pain, bursitis, dermatitis, headache, injection site hypersensitivity, malaise, nausea, paresthesia, postural hypotension, pruritus, rash, incoordination, amnesia, circumoral paresthesia, depression, insomnia, peripheral oedema, vertigo. Some of the uncommon events may be disease related. **Interactions:** The effect of botulinum toxin may be potentiated by aminoglycoside antibiotics or any other drugs that interfere with neuromuscular transmission e.g. tubocurarine-type muscle relaxants. Concomitant use of BOTOX® with aminoglycosides or spectinomycin is contra-indicated. Polymyxins, tetracyclines, lincomycin and muscle relaxants should be used with caution. **Pharmaceutical precautions:** Unopened vials should be stored either at 2°C-8°C (in a refrigerator), or in a freezer at or below -5°C. After reconstitution BOTOX® may be stored in a refrigerator (2-8°C) for up to 4 hours prior to use. Cost: £128.93 per vial (excl VAT). POM. PLO426/0074. Date of preparation: May 2002. Allergan, Coronation Road, High Wycombe, Bucks HP12 3SH. Further information available on request.

International Conference on Basic and Therapeutic Aspects of Botulinum and Tetanus Toxin

8-11 June 2002, Hannover, Germany.

Between the 8th and 11th of June several hundred basic scientists and clinicians from throughout the world gathered in Hannover to discuss the scientific and clinical aspects of botulinum and tetanus toxins. The goal of the conference was to provide an opportunity to share scientific and clinical experiences and to provoke further interest in neurotoxin research. Some of the sessions were joint sessions involving both basic scientists and clinicians, and as a clinician I was fascinated by some of the insights into the molecular and biochemical basis of botulinum toxin. For example, one presentation made the point that 7 out of 13 epitopes of botulinum toxin A (BTXA) and botulinum toxin B (BTXB) cross react. Not all are neutralising epitopes but they may boost the shared immune response. In light of this it was not overly surprising to learn (in a clinical session) that up to 25% of patients in one series who were switched to BTXB because of secondary non-responsiveness due to antibodies to BTXA had, within a year, also developed resistance and antibodies to BTXB. This makes it even more important to try to prevent antibody formation by making sure that patients are not reinjected too quickly and by keeping the dose of BTX to the minimum. Most patients who develop antibodies usually do so in the first four years.

A great deal of data on the results of key clinical trials which established indications for BTX therapy (such as cervical dystonia, focal limb dystonia and adult and paediatric spasticity) was presented. This was followed by papers and discussion on the mechanisms of BTX action and on the best way to target specific muscles (such as ultrasound for the iliopsoas for spastic legs in children and EMG guided injections for occupational cramps). Several sessions concentrated on the treatment of disorders of the autonomic nervous system especially hyperhidrosis and hyper-

salivation. These are now established indications for BTX use. The enhanced effect of BTXB on neurosecretory junction blockade was emphasised. BTX as a treatment of pain syndromes raised some debate. Disorders of the upper and lower GI tract (such as achylasia cardia and rectal fissures) are regularly treated by BTX and there is work ongoing in urological conditions. I was aware that BTX use in dermatology has shown a huge increase over the last few years, but I was slightly taken aback to learn that the increase over the last 3 years had been something in the region of 1500%! The brow, periocular regions, lower face and neck are all now treatable. The muscles of the lower face are more sensitive to BTX and one speaker mentioned that it was not difficult to cause unwanted lip weakness. Ptosis and uneven eyebrows can follow injudicious upper face injections. BTX has been used to achieve relative facial symmetry after Bells palsy.

There is a great unresolved debate on the bio-equivalence between the different commercially available types of BTX. Not only is it unclear of what the conversion ratio is between the two BTXA products (it varies in different reports between 1:2 and 1:5) but also between BTXA and BTXB. To further complicate matters it is felt there is a different ratio between BTXA and BTXB when treating autonomic indications (with BTXB being perhaps 10 times more potent in this situation compared to motor conditions). The only way to establish these matters will be by carefully conducted randomised clinical trials which will need the co-operation and collaboration of different groups of investigators. Finally we were promised that new BTX preparations were in the pipeline and should be available before the next Toxin meeting in 2005.

Peter Misra, London

“ I WAS AWARE THAT BTX USE IN DERMATOLOGY HAS SHOWN A HUGE INCREASE OVER THE LAST FEW YEARS, BUT I WAS SLIGHTLY TAKEN ABACK TO LEARN THAT THE INCREASE OVER THE LAST 3 YEARS HAD BEEN SOMETHING IN THE REGION OF 1500% ”

Epilepsy - looking westward

The British Branch of the International League Against Epilepsy held its annual scientific meeting at the University of Exeter between the 3rd and 6th of April 2002. Approximately 400 delegates attended, representing the many disciplines that now make up the British epilepsy community. The programme was a diverse one, ranging from Sudden Death in Epilepsy, the basic sciences of epilepsy, epilepsy nursing practice, hypothalamic hamartoma, vagal nerve stimulation, the older person with epilepsy, predicting the outcome of anti-epileptic drug treatment, the needs of women with epilepsy, cardiac disorders mimicking epilepsy and the management of people with learning difficulty and epilepsy. Only a fraction of the busy programme can be presented here.

On the first full day of the conference there was a workshop, devised by Liam Gray of the Neurosciences Department of Southampton University, on the relationship between basic science and clinical practice in epilepsy. The workshop debated three main questions: whether epilepsy causes lesions in the brain or brain lesions cause epilepsy, whether the brain has its own endogenous anticonvulsants and the effect of brain plasticity and gene sequences on epilepsy and vice versa. Participants in the workshop left with the feeling that we are on the edge of a far better understanding of the basic mechanisms of epilepsy (with the possibility of rational effective treatment) and that answering the question "why don't we all have epilepsy?" may be eventually more illuminating than trying to answer the question "why does this person have epilepsy?"

On the same day there was a nursing workshop, devised by Lyn Greenhill from the Birmingham University Seizure Clinic, which addressed the sometimes controversial theme of advances in nursing practice in epilepsy care. Nurses no longer see themselves as devoted handmaidens of all-knowing physicians, but as independent practitioners who have a pivotal role in the management of people with epilepsy. A protocol was presented for nurse prescribing in epilepsy, which built on the covert prescribing that nurses already do, called for practical apprentice type learning and for prescribing in epilepsy to be protocol driven (as all prescribing should be). A similar apprenticeship model of learning (with agreed protocols) was presented for three areas of epilepsy in which nurses are starting to practice independently; fast track

"triage" clinics for patients with new onset seizures, preconception and pregnancy clinics and Vagal Nerve Stimulation clinics. Audit of two "triage" clinics showed a trained nurse to be as accurate in diagnosis and management as the consultant. The workshop concluded that the relationship between physician and nurse should become a mutually supportive partnership.

Adam Fitzpatrick from the Manchester Heart Centre presented, with his colleagues in cardiology and neurology, a fascinating and disturbing seminar, which provoked much discussion, on those cardiac disorders which can be, and often are, mistaken for epilepsy. Possibly as many as 30% of people with epilepsy resistant to conventional anti-epileptic treatment, may have a primary cardiac disorder that may go unrecognised for years, and yet will often respond to simple treatment. There was much discussion whether



The Peter Chalk Centre at Exeter University, where the meeting was held.

the two conditions could be distinguished by careful history taking and examination but the gloomy conclusion was that there is so much overlap in terms of symptoms that the task is almost impossible. It was suggested that in those patients where seizures remain intractable and there is no conclusive electroencephalographic evidence of epilepsy then video EEG (and ECG) monitoring will be mandatory: for epilepsy specialists access to tilt table facilities will also be needed. This has resource implications.

The conference also heard evidence (from work of the Birmingham University group on the structure and function of the ovary in women with epilepsy, from the latest data from the Belfast run British Pregnancy Register and from the Liverpool group studies of intellectual development in children exposed to anti-epileptic drugs in utero) that leads to the conclusion that the time has come to manage women with epilepsy differently from men with epilepsy, particularly in terms of avoiding certain anti-epileptic drugs if at all possible in women with epilepsy.

In another seminar they also heard that the new science of pharmacogenetics is still a long way from predicting response to anti-convulsant drugs, but may be somewhat nearer to predicting those patients likely to respond with unpleasant side effects.

*Dr Tim Betts,
Birmingham University Seizure Clinic*



Consensus Conference on Better Care for Children & Adults with Epilepsy

4-5 September, 2002, Royal College of Physicians of Edinburgh

Is there consensus on the best treatments or on issues of diagnosis and investigation of epilepsy? Come and take part in this conference which promises to produce lively interactive discussions in the pursuit of consensus on the following key questions:

- Who should make the diagnosis and what investigations should be done – in children and adults?
- Should first line treatment be different between males & females?
- What is the role of polytherapy?
- How should serial seizures & status epilepticus be treated?

Programme and registration details from:

http://www.rcpe.ac.uk/events/better_care.html or from: Mrs Margaret Farquhar, Consensus Conference Co-ordinator, Royal College of Physicians of Edinburgh, 9 Queen Street, Edinburgh, EH2 1JQ. Tel: +44 (0) 131 247 3636, Fax: +44 (0) 131 220 4393, E-Mail: m.farquhar@rcpe.ac.uk