

BSRM summer meeting: Exercise, Brain Repair and punting down the Cam

10-11 July, 2003; Cambridge, UK

The meeting was held at the beautiful location of St. John's College in the centre of Cambridge. The organisation was immaculate as usual.

Exercise in health and illness was the theme of the first day. Professor Tom Storer from UCLA was the first speaker and he gave a very clear introduction to exercise prescription. Most of the UK rehabilitation specialists leave the details of the exercise prescription to physiotherapists. However, the clarity of the presentation and the special focus he gave on the different methods to determine the intensity of the exercise and the ways to assess its outcome probably made the whole subject less intimidating. Prof. Storer stressed the need for valid and objective measurements such as metabolic markers in the assessment phase and prescription, whilst simple measures such as heart rate or psychometric measures could be used to monitor progress. Dr Kathy Speed from Addenbrooke's Hospital then talked about the importance of exercise in the elderly population. She emphasised the importance of exercise in this group to tackle the problems associated with deconditioning and sarcopenia.

Following that, Professor Chris Cooper talked about exercise as a therapeutic modality that has dose dependent characteristics. He used pulmonary rehabilitation as a framework for his talk. The basic principle is to identify a lower threshold for exercise intensity that elicits a clinically meaningful and measurable response. It was very useful to hear of the new guidelines from The American Society of Sports Medicine for aerobic exercise for healthy individuals, particularly that the frequency now recommended is 5 or 6 days a week and not just 3 days, as it used to be. I was disappointed to hear that exercise for less than 2 days a week is useless. The duration of each session should be at least 30 minutes and the intensity should be between 55% to 95% of maximum heart rate.

Dr Kate McGlashan then presented the results from her research on the value of exercise in chronic stroke patients. In that study 20 chronic stroke patients showed improvement in mobility after having aerobic exercise training on a treadmill or static bike. The improvement in mobility was maintained at 6 months follow up. These encouraging results were consistent with the literature and gave some food for thought regarding the different ways to organise such a service. As most of the speakers stressed the safety of exercise after excluding serious cardiac pathology, it was felt that health clubs could probably offer such a service in the future.

Mr Tim Theologis, an orthopaedic surgeon from Oxford, talked about his experience in using gait analysis for the assessment of patients with cerebral palsy. The main take home message is that the principal value of the analysis is to test a hypothesis already formulated by the clinician and either acceptance or rejection of the hypothesis will lead to a specific intervention. It is unjustified to ask for a gait analysis just to understand what the problem is. The presentation was a real surgeon's lecture, clear and to the point.

Dr Alison Sansome, a Cambridge Paediatrician, talked about the use of botulinum toxin in the management of spasticity in children with cerebral palsy. She gave very good tips especially regarding the dosage and potential complications. Dr Turner-Smith, Reader in Rehabilitation Engineering at KCL, rounded up the day with a presentation that explained the principles of the ICES programme (Integrated Community Equipment Services) which

should improve the provision of assistive technology in the UK.

Professor David Menon from The Wolfson Brain imaging centre in Cambridge started the second day with an overview of the value of the new imaging methods such as PET and MR spectroscopy scans in increasing our understanding of the immediate sequelae of brain injury. Nevertheless, it will still be some time before these tests become widely available to guide more adventurous interventions. At the moment, maintaining normal physiology, especially blood perfusion, together with keeping the patient's temperature down are the main management strategies for the acute head injury patient.

This talk was followed by a fascinating account of the mechanogrowth factor (MGF) by Professor Geoffrey Goldspink. He presented the recent work of his team in the Royal Free Hospital. Professor Goldspink went through the steps in identifying MGF and its potential to play an important role in the management of muscle diseases. That was followed by ACNR's Editor in Chief Dr Roger Barker who took us on a journey through the highs of cell replacement therapies with the promise from studies in the lab and animal models, to the lows of the modest successes in clinical trials with occasional catastrophes, as the media likes to call them. Dr Aileen Ho, a neuropsychologist working with Dr Barker in the Cambridge Brain Repair Centre, then presented her preliminary results from a study using human striatal foetal tissue to repair the damaged striatum in patients with Huntington's Disease. The preliminary results were encouraging and the presentation was followed by a lively discussion about the ethics and future of cell therapy.

The second session of the last day is traditionally devoted to biomechanics and prosthetics. Professor Alan Wing from Birmingham presented some elements of his current research in behavioural neuroscience which dealt mainly with motor control and rehabilitation of the motor function of the brain damaged. That was followed by an interesting talk by Dr Carol Fraser, recently retired from the Occupational Therapy Department at Addenbrookes, who described how upper limb amputees actually used their prostheses, and emphasised how functional dress or cosmetic limbs can be, and how often patients do not actively use their "functional" terminal devices.

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Rajiv Hanspal (left), BSRM President and Emlyn Williams (right), at the meeting.



Venue: St. John's College in Cambridge