



The Hong Kong Society of
Child Neurology and Developmental Paediatrics

ANNUAL SCIENTIFIC MEETING

26 – 29 November 2010 • Hong Kong

NEURO-IMMUNOLOGY

Programme Book



Programme-at-a-Glance

Date	Time	Session	Topic	Speaker
26 Nov (FRI)	1900 – 2000	Registration and Light Dinner		
	2000 – 2200	Seminar I	CNS demyelinating syndromes: ADEM or multiple sclerosis?	Professor Russell Dale
27 Nov (SAT)	1315 – 1400	Registration		
	1400 – 1500	Seminar II	Acute onset movement disorders	Professor Russell Dale
	1500 – 1530	Coffee Break		
	1530 – 1730	Local Presentations	Multiple sclerosis in Hong Kong, the perspective from an adult neurologist Laboratory diagnosis of neuro-immunological problems Recent advances in the rehabilitation of children with cerebral palsy	Dr. Kwok-kong Lau Dr. Eric Chan Professor Joe Watt
28 Nov (SUN)	0900 – 0930	Registration		
	0930 – 1030	Seminar III	Autoimmune movement disorders	Professor Russell Dale
	1030 – 1130	Free Paper Presentations	Assessment of social development of children The effects of problem-solving skills training based on metacognitive principles for children with acquired brain injury attending mainstream schools: a controlled clinical trial Paediatric epilepsy surgery programme in New Territories West Cluster: audit of seizure outcome from a tertiary referral center Vestibular hypofunction and ocular-motor deficits in children with Developmental Coordination Disorder (DCD) Development of Attention Deficit Hyperactivity Disorder (ADHD) service programme in a paediatric unit: local experience	Ms. Vanessa Lau Ms. Donna Chan Dr. Wai-kwong Chak Ms. Dora Poon Dr. Sammy Wong
	1130 – 1200	Coffee Break		
	1200 – 1230	Case Presentation I	Cases from HA hospitals	
	1230 – 1400	Light Lunch		
	1400 – 1530	Case Presentation II	Cases from HA hospitals	
	1530 – 1600	Coffee Break		
	1600 – 1700	Seminar IV	Postinfectious ataxia and cerebellitis	Professor Russell Dale
	29 Nov 2010 (MON)	1900 – 2000	Registration and Light Dinner	
2000 – 2200		Keynote Lecture	Auto-antibodies in paediatric neurology	Professor Russell Dale

Venues:

- **26 – 28 Nov 2010:** Lecture Theatre, G/F, Block M, Queen Elizabeth Hospital, 30 Gascoigne Road, Jordan
- **29 Nov 2010:** Lecture Theatre, 1/F, Hospital Authority Building, 147B Argyle Street, Kowloon

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Welcome Message



We are pleased that our Annual Scientific Meeting for 2010 will be held on 26 – 29 November 2010 at the Queen Elizabeth Hospital and Hospital Authority Building, Hong Kong. The theme for the meeting is “Neuro-immunology”. We are privileged to have Professor Russell Dale from Australia as our course director to deliver a series of lectures covering important aspects of this pathology. Professor Dale is the Senior Lecturer at Paediatrics and Child Health, Department of Children’s Hospital, Westmead at the University of Sydney in Australia. He is also a paediatric neurologist with clinical interests on brain inflammation syndromes including brain demyelination such as acute disseminated encephalomyelitis and multiple sclerosis; post-infectious movement disorders such as Sydenham’s chorea; PANDAS and encephalitis lethargic as well as childhood movement disorders including Tourette syndrome. His laboratory expertise focuses on acute onset brain inflammation and brain autoimmunity including the role of novel autoantibodies in post-infectious movement disorders and behavioural syndromes; the immunological differences between monophasic brain demyelination syndromes such as acute disseminated encephalomyelitis (ADEM); and chronic relapsing demyelination such as multiple sclerosis.

In addition to Professor Dale, we are also inviting local experts to share with us their latest research, both basic and clinical, and the most up-to-date information on this area, which will be of interest to specialists and professionals alike. Amongst all, we have an outstanding guest speaker Professor Joe Watt from Canada speaking on child psychiatry. Professor Watt was our Course Director for our ASM 1996 and is currently Honorary Advisor to our Society. His participation will undoubtedly provide added values to our Meeting. This together with the full programme will promise all professionals a top quality meeting capable of achieving our mission of providing a platform for exchange of academic data and professional experience.

The Hong Kong Society of Child Neurology & Development Paediatrics (HKCNDP) was established in the year 1994 with the vision for advancement of knowledge, promotion of services, enhancement of professional and public health education and taking proactive roles as advocacy for children with child neurology (CN) and developmental paediatrics (DP) disorders and problems with great success. One of the powerful means for achieving these has been transcended through our well-organized Professional Meetings in the form of Annual Scientific Meetings, Child Neurology Conferences, Neuro-developmental Conferences and featured Monthly Scientific Meetings on regular basis as well as ad-hoc meetings delivered by world experts visiting Hong Kong. The Society not only provides scientific activities to our members but also endeavour to promote information within the subspecialties of CN and DP to generalists in paediatrics, child health, physicians and family physicians and to professionals within the domain of neurosciences. The coverage is also extended to nurses, midwives and allied health professionals to render all professionals amalgamated into an effective transdisciplinary team in the care of our children. We do invite specialists from Macau and colleagues from the Asia-Pacific Region for cross-pollination and collaboration of professionals to maximize the leverage of our activities.

Hong Kong professionals are privileged to have world experts patronizing the Pearl of the Orient in the past few months. We have Professor Simon Harvey from Australia talking to us on Childhood Epilepsy in September 2010, Professor Peter Wong from Vancouver providing us with an EEG Course in October 2010 and Professor Joe Watt from Canada delivering a commissioned series of lectures on psychiatry in November 2010. We actively participate at the international and region congresses on CN and DP and our members contributed significantly to medical literature in these areas.

The Joint Meeting on Developmental Paediatrics between Hong Kong, Macau, Taiwan, Mainland China and Singapore now at its Seventh Year has been hosted at Suzhou, China this year. The Joint Meeting was themed on the timely subject of "Parade of DP services in the Mainland China and the Asia-Pacific Region" with more than 180 experts from transdisciplinary and transectoral professions participating. Through six seminars and more than 15 speakers, we explored the subject in great depth. The Meeting was accomplished in great success with good collaborative and cooperative plans made between professional within the region. One of the achievements of these Joint Meetings is that the outcome positively catalyzing the establishment of Developmental Behavioural Paediatrics as a paediatric subspecialty in Macau and Taiwan and the Mainland China.

I would like to take this opportunity to thank Queen Elizabeth Hospital and the Hospital Authority for providing us with the meeting venues, and to express my gratitude to the following key figures amongst others for contributing to the success of this meeting: Dr. Kwing-wan Tsui, Dr. Catherine Lam, Dr. Theresa Wong and Dr. Wai-kwong Chak as well as all speakers at the Meetings. Special thanks are due to an Educational Grant from Pfizer Corporation Hong Kong Ltd. for their generous sponsorship and to Ms. Melissa Leung of CMPMedica for the efficient organization of this meeting. Most important of all, I would like to thank all members for their support and to all registrants for their active participation which are always vital for the success of this Meeting. For all your support, I say thank you and I look forward to receiving your continual support in all future activities of our Society.

I wish you all a fruitful and enjoyable Annual Scientific Meeting 2010 and above all forever fraternity.



Dr. Chok-wan Chan

President, The Hong Kong Society of Child Neurology & Developmental Paediatrics

Council Members



The Hong Kong Society of Child Neurology and Developmental Paediatrics (2008 – 2010)

President	: Dr. Chok-wan Chan
Vice-President	: Dr. Catherine Chi-chin Lam
Honorary Secretary	: Dr. Stephenie Ka-yee Liu
Honorary Treasurer	: Dr. Theresa Yee-ling Wong
Council Members	: Dr. Wai-kwong Chak Dr. Sharon Wan-wah Cherk Dr. Kim-tim Liu Dr. Kwing-wan Tsui Dr. Eric Kin-cheong Yau Dr. Sam Chak-ming Yeung
Co-opt Council Member	: Dr. Florence Mun-yau Lee

Organizing Committee

Members	: Dr. Wai-kwong Chak Dr. Catherine Chi-chin Lam Dr. Stephenie Ka-yee Liu Dr. Kwing-wan Tsui Dr. Theresa Yee-ling Wong
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Course Director



Professor Russell Dale is a clinical academic and paediatric neurologist at the Children's Hospital at Westmead, The University of Sydney, Australia. His interests are Paediatric Neuroimmunology and Paediatric Movement Disorders. He has published 65 peer reviewed papers including in the journals *Nature Medicine*, *Annals of Neurology*, *Brain* and *Neurology*. He co-edited the 2010 MacKeith book 'Inflammatory and autoimmune disorders of the nervous system in children'. He is a member of the International Paediatric Multiple Sclerosis research group, and International Paediatric Movement Disorders group. In 2010 he won the International Child Neurology Association junior investigator award (John Stobo Prichard award).

Detailed Scientific Programme

Date: 26 November 2010 (Friday)
Venue: Lecture Theatre, G/F., Block M, Queen Elizabeth Hospital
Chairpersons: Dr. Chok-wan Chan and Dr. Kwing-wan Tsui

1900 – 2000 Registration and Light Dinner

2000 – 2200 **Seminar I**

CNS demyelinating syndromes: ADEM or multiple sclerosis?
Professor Russell Dale, Australia

Date: 27 November 2010 (Saturday)
Venue: Lecture Theatre, G/F., Block M, Queen Elizabeth Hospital
Chairpersons: Dr. Wai-kwong Chak and Dr. Catherine Lam

1315 – 1400 Registration

1400 – 1500 **Seminar II**

Acute onset movement disorders
Professor Russell Dale, Australia

1500 – 1530 Coffee Break

1530 – 1730 **Local Presentations**

Multiple sclerosis in Hong Kong, the perspective from an adult neurologist
Dr. Kwok-kong Lau, Hong Kong

Laboratory diagnosis of neuro-immunological problems
Dr. Eric Chan, Hong Kong

Recent advances in the rehabilitation of children with cerebral palsy
Professor Joe Watt, Canada

Date: 28 November 2010 (Sunday)
Venue: Lecture Theatre, G/F., Block M, Queen Elizabeth Hospital
Chairpersons: Dr. Tim Liu and Dr. Sam Yeung (morning sessions)
Chairpersons: Dr. Stephenie Liu and Dr. Theresa Wong (afternoon sessions)

0900 – 0930 Registration

0930 – 1030 **Seminar III**

Autoimmune movement disorders
Professor Russell Dale, Australia

1030 – 1130 **Free Paper Presentations**

Assessment of social development of children
Ms. Vanessa Lau, Hong Kong

The effects of problem-solving skills training based on metacognitive principles for children with acquired brain injury attending mainstream schools: a controlled clinical trial
Ms. Donna Chan, Hong Kong

Paediatric epilepsy surgery programme in New Territories West Cluster: audit of seizure outcome from a tertiary referral center
Dr. Wai-kwong Chak, Hong Kong

Vestibular hypofunction and ocular-motor deficits in children with Developmental Coordination Disorder (DCD)

Ms. Dora Poon, Hong Kong

Development of Attention Deficit Hyperactivity Disorder (ADHD) service programme in a paediatric unit: local Experience

Dr. Sammy Wong, Hong Kong

1130 – 1200 Coffee Break

1200 – 1230 **Case Presentation I**
Cases from HA hospitals

1230 – 1400 Light Lunch

1400 – 1530 **Case Presentation II**
Cases from HA hospitals

1530 – 1600 Coffee Break

1600 – 1700 **Seminar IV**
Postinfectious ataxia and cerebellitis
Professor Russell Dale, Australia

Date: 29 November 2010 (Monday)

Venue: Lecture Theatre, 1/F., Hospital Authority Building

Chairpersons: Dr. Chok-wan Chan and Dr. Sharon Cherk

1900 – 2000 Registration and Light Dinner

2000 – 2200 **Keynote Lecture**
Auto-antibodies in paediatric neurology
Professor Russell Dale, Australia

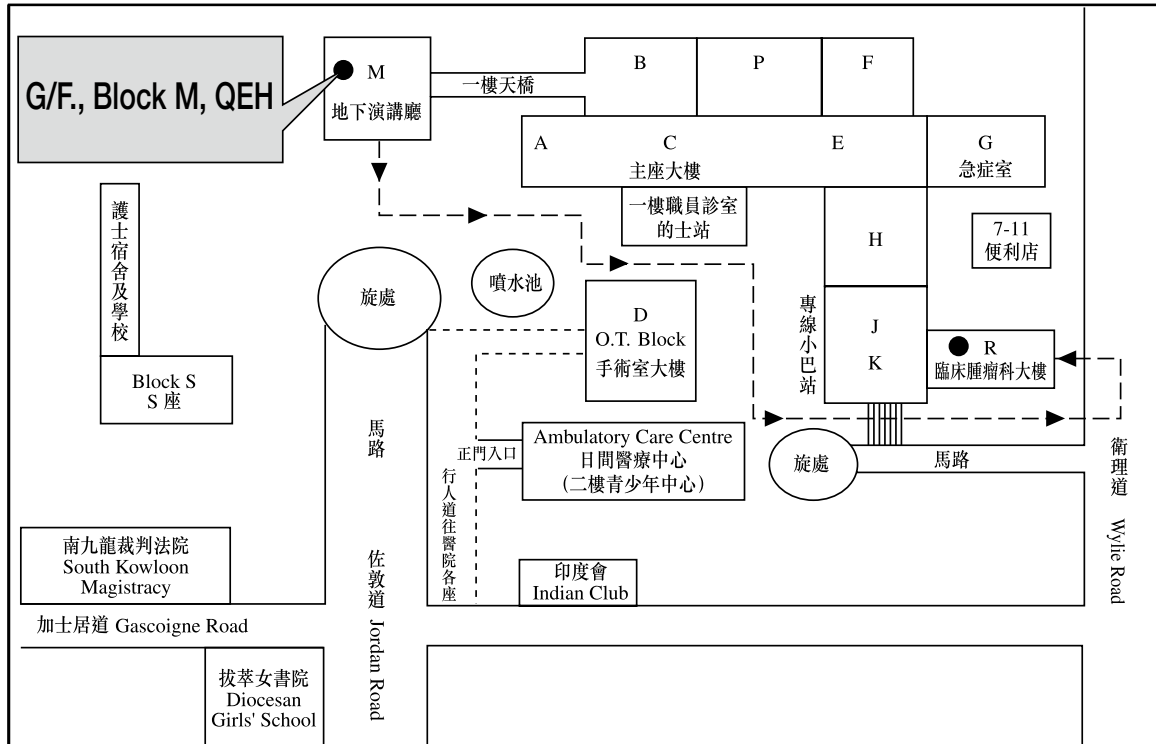
Academic Accreditations

Colleges	26 Nov	27 Nov	28 Nov	29 Nov
Hong Kong College of Paediatricians (cat A)	2 pts	2 pts	6 pts	2 pts
Hong Kong College of Family Physicians (cat 5.2)	2 pts	3 pts	5 pts	2 pts
Hong Kong College of Pathologists (passive)	2 pts	2 pts	4 pts	2 pts
Hong Kong College of Physicians	2 pts	2.5 pts	5 pts	2 pts
MCHK CME Programme (passive)	2 pts	3 pts	5 pts	2 pts
Hong Kong Occupational Therapists Association	1 pt	1.5 pts	2.5 pts	1 pt
Hong Kong Physiotherapy Association	2 pts	3 pts	5 pts	2 pts

Venues

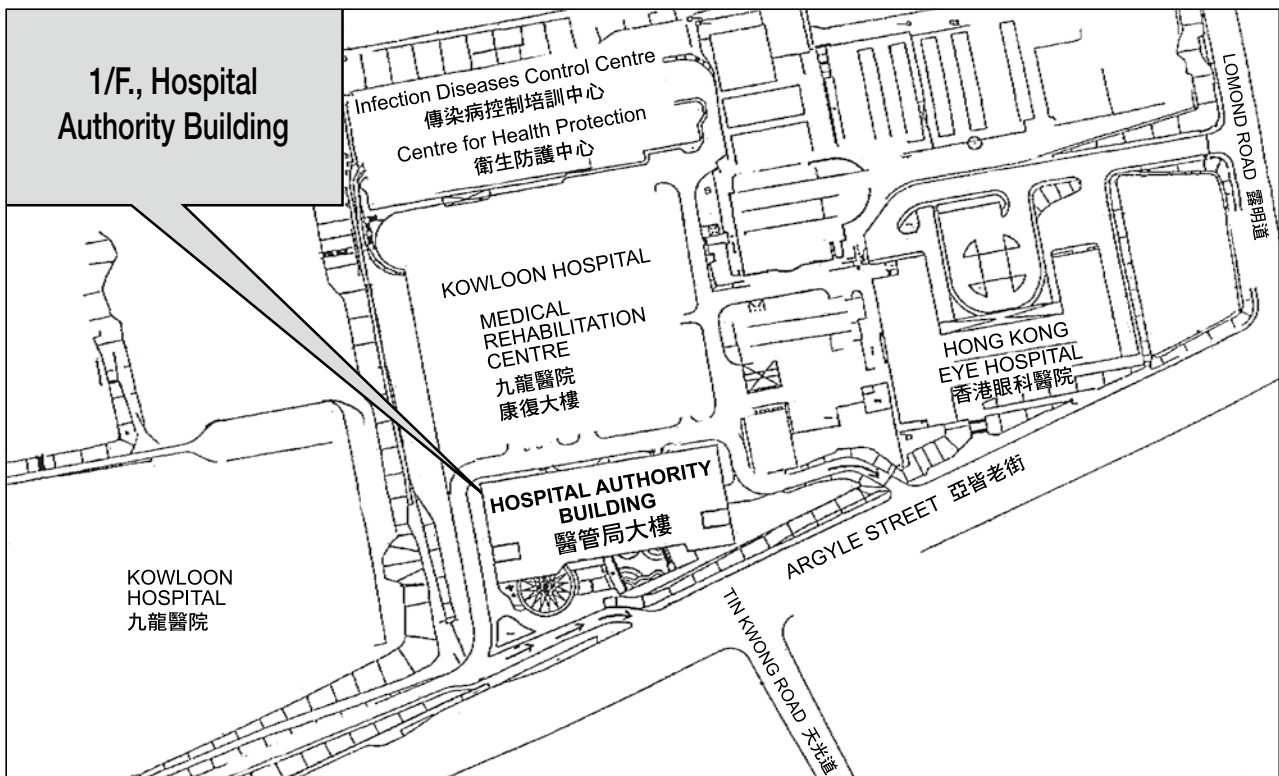
Queen Elizabeth Hospital (伊利沙伯醫院)

26 - 28 November 2010



Hospital Authority Building (醫管局大樓)

29 November 2010



CNS demyelinating syndromes: ADEM or multiple sclerosis?

Professor Russell Dale

Associate Professor, Department of Paediatrics, The University of Sydney, Australia

Over the last few years, there have been significant improvements in the understanding of CNS demyelination in children. When a child first presents with an episode of CNS demyelination, one of the primary questions is whether this represents a monophasic demyelinating episode (acute disseminated encephalomyelitis- ADEM), or whether this represents a first attack of the chronic demyelinating disorder, multiple sclerosis (MS).

This talk will review the clinical differences between ADEM and MS, with particular reference to new International classification systems. The talk will review the new Magnetic Resonance neuroimaging features which attempt to differentiate between ADEM and MS. In addition, we will discuss neuromyelitis optica, an inflammatory autoimmune syndromes affecting the spinal cord and optic nerves.

There have been a number of other recent and exciting insights into the pathology of CNS demyelination in children. The talk will review recent studies which highlight the role of Vitamin D insufficiency in CNS demyelination relapses. Also, we will review new auto-antibody data which may suggest there are immunological subgroups of CNS demyelination in children. There are many new therapies available to treat adults with MS, we will briefly discuss the options available to the paediatric neurologist, and the problems and challenges involved in treating young children with CNS demyelination.

Acute onset movement disorders

Professor Russell Dale

Associate Professor, Department of Paediatrics, The University of Sydney, Australia

Acute onset movement disorders present a particular challenge to the paediatric neurologist. The first important task is to clearly define the type of extra or abnormal movement disorder. The talk will start by defining different types of movement disorders including chorea, dystonia, tics, myoclonus, tremor, stereotypy and Parkinsonism.

The talk will use videos to discuss different causes of acute movement disorders in children. Presenting a cohort of 52 children with acute movement disorders seen by the author during a 3 year period, the cases can be grouped into inflammatory, non-inflammatory and psychogenic subgroups. For each disorder we will discuss the clinical features, investigation findings, treatment and outcome.

The inflammatory disorders which can cause acute onset movement disorders include NMDA-receptor encephalitis, Sydenham chorea, Systemic lupus erythematosus and opsoclonus myoclonus syndrome. The non-inflammatory causes include drug-induced causes, metabolic disorders such as Glutaric aciduria type I, post-pump chorea, and stroke.

Finally, psychogenic movement disorders represent a significant subgroup of acute movement disorders in children. We present the typical clinical features which are typical of psychogenic disorders, and discuss a management approach.

This talk will attempt to help the clinician in the approach to the child with acute movement disorders.

Multiple sclerosis in Hong Kong, the perspective from an adult neurologist

Dr. Kwok-kong Lau

Senior Medical Officer, Department of Medicine and Geriatrics, Princess Margaret Hospital, Hong Kong

The diagnosis of multiple sclerosis has been revolutionary revised with McDonald's criteria in the era of MRI. The difficulty of making the diagnosis is comparatively less than 50 years ago. Yet we have to be aware of the many disease entities which mimic.

Central nervous system inflammatory demyelinating disorders (CNS IDD) include classical multiple sclerosis (MS), neuromyelitis optica spectrum disorders (NMOSD), a single attack of/recurrent acute disseminated encephalomyelitis (ADEM), a single attack of idiopathic acute transverse myelitis (ATM), optic neuritis (ON) and brainstem encephalitis. CNS IDD are potentially serious disorders with risk of mortality and significant disability. Typical relapsing forms of CNS IDD are relapsing remitting multiple sclerosis and relapsing NMO. Relapsing NMO is typified by recurrent longitudinally extensive transverse myelitis (LETM) and severe unilateral or bilateral ON. Early diagnosis of CNS IDD is important as long-term treatments for different forms vary. Recognition of clinical, radiological and serological characteristics of different forms of CNS IDD facilitates early diagnoses. A significant proportion of NMO patients are seropositive for autoantibodies against aquaporin-4 (AQP4), the most abundant water channel in the CNS; this supports the hypothesis that NMO is an autoimmune disorder. Is NMO an autoantibody-mediated disorder sharing similar pathogenesis with myasthenia gravis (MG), a classical autoantibody-mediated autoimmune disease? An interesting observation is that paraneoplastic NMO associated with various tumors is recognized recently, suggesting similarity with MG which is associated with thymoma in about 15% - 20% of patients.

Laboratory diagnosis of neuro-immunological problems

Dr. Eric Chan

Consultant, Department of Pathology, Queen Mary Hospital, Hong Kong

Many neuro-immunological diseases are characterized by the presence of circulating antibodies to self targets. Although the role of these autoantibodies in the pathogenesis of the diseases may be unclear some of them become useful diagnostic markers for a variety of autoimmune neurological diseases. Myasthenia gravis is diagnosed with the help of testing anti-acetylcholine receptor, anti-striated muscle and other antibodies. Para-neoplastic neurological manifestations are characterised by the presence of some anti-neuronal antibodies such as anti-Hu, Yo, Ri. Antibody against the N-methyl-D-aspartate (NMDA) receptor is present in a type of autoimmune encephalitis initially recognised in young females with teratomas of the ovary. For autoimmune neuropathies antibodies against different gangliosides are often necessary for diagnosis and classification of the disease. Neuro-immunological diseases also include neurological manifestations of systemic diseases which are autoimmune in nature. A typical example of this is systemic lupus erythematosus. Finally multiple sclerosis is a disease in which characteristic autoantibodies are not found but is marked by intrathecal production of immunoglobulins; thus detection of oligoclonal bands in CSF is needed in the workup of this entity.

Recent advances in the rehabilitation of children with cerebral palsy

Professor Joe Watt

Professor, Department of Paediatrics, The University of Alberta, Canada

Cerebral palsy (CP) describes a group of permanent disorders of the development of movement and posture, causing activity limitation, that are attributed to nonprogressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication, and behaviour, by epilepsy, and by secondary musculoskeletal problems (Rosenbaum et al, 2006). This new definition and the widely accepted functional classification systems have unified the approach in the diagnosis, assessment and treatment. Advanced neuroimaging has clarified some aspects of the causation of intrauterine brain insult (Krageloh-mann DMCN 2007; 49:144-151). Functional motor abilities of lower extremities, as classified by the Gross Motor Function Classification System, GMFCS, (Palisano et al, DMCN 1997 39:214-223), and the upper extremities by the Manual Ability Classification System, MACS, (Eliasson et al, DMCN 2006 48:549-554), helped tremendously to establish goals of therapy and other intervention. Numerous new outcome measures were designed to allow objective assessment of treatment outcomes and to guide evidence based interventions. However, most conventional therapies that had been used widely and routinely, had yet to be put under the rigorous scrutiny of modern randomized control trials to establish their efficacies. New interventions including Constraint Induced Movement Therapy (CIMT), Partial Weight Support Treadmill Therapy (PWSTT), strengthening and fitness training are being studied while gaining popularity in being part of best practice in the treatment of cerebral palsy. The treatment of cerebral palsy has been revolutionised by spasticity treatment programs. Botulinum Toxin Injections injected repeatedly at multiple levels have been proven to be safe and efficacious in growing children. The use of ultrasound in localization is becoming a best practice. Selective Dorsal Rhizotomy and Intrathecal Baclofen in well selected patients have good evidence of benefit. The main stay of management of cerebral palsy remains a multidisciplinary endeavor, aiming for a family centered approach. The ultimate goal is to improve activity limitation and participation restriction as defined by the WHO ICF model, for maximal functional gains in spite of impaired body structure and function. On the other hand, in a growing child, progressive muscular contractures and bony deformities do occur. The Hip Surveillance Program as suggested by Graham et al (2008) ensures a proactive approach in the management of hip problems in children with spastic cerebral palsy according to their GMFCS levels. Instrumented gait analysis is a vital component in the assessment of ambulatory children with cerebral palsy, allowing Single Event Multilevel Surgery (SEMLS) or Staged Multiple Intervention of Lower Extremities (SMILE), as well as providing objective measure of orthopedic and neurosurgical outcome. New surgical techniques for correcting contractures and bony deformities have been developed. In spite of major progress in the management of children with cerebral palsy, more than half the children with cerebral palsy continue to get complimentary alternative treatment (CAM) that have no scientific or historical efficacy. Stem cell therapy currently offered as a CAM has no proven therapeutic efficacy but formalized research is being initiated as an international collaborative study. Emerging therapies include the use of transcranial magnetic stimulation, robotics and virtual rehabilitation. The non-motor disabilities associated with cerebral palsy and the complexity of the motor disabilities mandates a multidisciplinary therapeutic approach in ensuring the best outcome.

Autoimmune movement disorders

Professor Russell Dale

Associate Professor, Department of Paediatrics, The University of Sydney, Australia

This talk will review four autoimmune brain disorders which cause movement disorders in children. Sydenham chorea was originally described by Thomas Sydenham in the 17th Century and is the classic post-streptococcal autoimmune brain disorder in children. Sydenham chorea is still endemic in Africa, South America, parts of Asia, and Aboriginal populations of Australia. The syndrome is very recognizable and includes a pure chorea, dysarthria and behavioural alteration. Recent studies support the presence of auto-antibodies that bind to, and affect neuronal function. The outcome is usually good, although residual chorea and behavioural disturbance is well described.

Pediatric Autoimmune Neuropsychiatric Disorders associated with Streptococcal infection (PANDAS) was a term coined in the 1990s for a group of children who had abrupt onset tics or obsessive-compulsive behaviours associated with Streptococcal infections. The PANDAS hypothesis has remained controversial, and we review the arguments for and against the existence of PANDAS.

Chorea and Parkinsonism has been described associated with systemic lupus erythematosus and anti-phospholipid syndrome. Cases and treatment approaches will be presented. Chorea is strongly associated with anti-phospholipid antibodies, whereas Parkinsonism is probably due to other autoimmune mechanisms.

Finally we discuss opsoclonus myoclonus syndrome, a highly recognizable and enigmatic syndrome which is often associated with neuroblastomas in young children. Untreated this paraneoplastic disorder typically results in major neurological morbidity. With immune therapies such as steroid, intravenous immunoglobulin, Rituximab and other immune suppressants, the outcome is much better, although prolonged treatment is often required.

Assessment of social development of children

Vanessa Lau

Clinical Psychologist, Child Assessment Service, Department of Health, Hong Kong

Social and emotional development is an indispensable area in child assessment. Increasing empirical evidence suggests that social-emotional problems identified in young children are likely to persist over time, thus early identification and treatment of the problems is crucial. The present paper aims at presenting the development of the Preschool Developmental Assessment Scale (PDAS), which assesses five important areas of children's development, namely, 1) cognitive, 2) social, 3) language, 4) gross and fine motor skills, and 5) literacy and numeracy, in pre-school children in Hong Kong. The focus of the present paper is to describe the validation study on the social domain. The social domain of PDAS was administered to 338 children aged from 3 years 4 months to 6 years 3 months. 240 children were recruited from mainstream pre-schools, 48 children were attending integrated programmes (for children with special educational needs) in integrated child care centers, and 50 children were clinical group receiving service from Child Assessment Service. Results that will be further detailed in this presentation suggest a developmental trend in the items responses. Children from different age groups performed significantly different from one another. The scale could also differentiate children from mainstream pre-schools and clinical groups. The social domain of PDAS is considered a promising assessment tool for assessing children's social development.

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The effects of problem-solving skills training based on metacognitive principles for children with acquired brain injury attending mainstream schools: a controlled clinical trial

Donna Chan

Occupational Therapist, Child Assessment Services, Department of Health, Hong Kong

Objective: To investigate the effects of an explicit problem-solving skills training programme based on metacognitive principles for children with ABI who attend mainstream schools.

Methods: 32 children with moderate to severe ABI studying in mainstream schools were allocated randomly by matched-pairs to either an experimental or a comparison groups. The participants in the experimental group received problem-solving skills training based on metacognitive principles, while those in the comparison group were on a waiting list to receive the experimental intervention shortly after the intervention in the experimental group had been completed. All participants were measured pre- and postintervention using measures of abstract reasoning, metacognition, problem-solving functional behavior in the home environment or social situations, and individual goal-directed behavior.

Results: Significant differences in posttest scores were found for all measurements between children in the experimental group and those in the comparison group, using the baselines of dependent variables, years of schooling, and the full IQ scores as the covariates.

Conclusions: The results of this study supported the use of explicit problem-solving skills training to improve daily functioning for children with ABI, and the need for a larger scale randomized controlled study with long-term follow-up.

Keywords: acquired brain injury, children, problem-solving, metacognition.

Running head: Problem-solving skill training.

Paediatric epilepsy surgery program in New Territories West Cluster: audit of seizure outcome from a tertiary referral center

¹Wai-kwong Chak, ²TS Fong, ²KY Yam, ³TS Lai, ⁴Y Kwok, ⁵R Yip, ⁶YC Wong, ¹GP Lee, ¹NS Kwong

¹Paediatrics and Adolescent Medicine, ²Neurosurgery, ³Psychiatry, ⁴Psycho-behavioural Unit, ⁵Occupational Therapy, ⁶Radiology, Tuen Mun Hospital, Hong Kong

Background: More evidence showed that epilepsy surgery is effective treatment to control seizure in paediatric patient with refractory epilepsy.

Objective: We report the seizure outcome of Paediatric Epilepsy Surgery performed at Tuen Mun Hospital.

Methods: Patients with refractory epilepsies have undergone pre-surgical evaluation. Seizure outcome was evaluated according to Engel's classification.

Results: Total 36 children and adolescent underwent surgery from 1998 to 2010. Mean duration of follow up was 44 months. Etiologies and surgery were including: 6 Cortical Malformation, 4 Mesial Temporal Sclerosis, 2 post-encephalitic epilepsy, 5 benign temporal tumour undergone temporal lobe surgery; 1 Neurofibroma, 1 Cavernous hemangioma, 2 Hypothalamic Hamartoma 1 Porencephalic Cyst undergone lesionectomy; 1 residual Cingulate Arteriovenous Malformation undergone resection; 1 Tuberos sclerosis with Hemimegalencephaly undergone functional hemispherotomy; 8 multi-focal epilepsy underwent corpus callosotomy; 1 patient with Temporo-Parieto-Occipital Dysplasia underwent TPO disconnection. There was no mortality. One patient had transient right eye ptosis. One patient had visual field defect after temporal lobe surgery.

For curative surgery including resective and disconnecting surgery, 54% got Engel class 1, 25% got Engel class 2-3, 21% got Engel class 4. For corpus callosotomy, 50% had seizure reduction.

Conclusion: Epilepsy surgery is an effective treatment for selected paediatric patient with refractory epilepsy.

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Vestibular hypofunction and ocular-motor deficits in children with Developmental Coordination Disorder (DCD)

¹Dora MY Poon, ²Olivia WN Fan, ³Clara WN Lee, ¹Mason CP Leung

¹Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hong Kong

²Physiotherapy Department, Yung Fung Shee Memorial Centre, Hong Kong

³Physiotherapy Department, Morrison Hill Child Development Center, Hong Kong Christian Service, Hong Kong

Objective: To examine oculo-motor, vestibulo-ocular function, dynamic visual acuity and their possible correlation with motor performance in children with DCD.

Methods: 18 children with DCD (10 males, 8 females; mean age 8y 9 mo), and 19 typically developing (TD) children (13 males, 6 females; mean age 7 y 8mo) were evaluated by Bruininks-Osewetsky Test of Motor Proficiency Second Edition (BOT-2), videonystagmography (VNG) for caloric test and ocular-motor function, and computerized dynamic visual acuity test (CDVAT).

Results: Compared to TD children, DCD children sample had below 1- 2 S.D motor performance and significantly poorer (p values < 0.05) ocular-motor function (i.e. slower saccadic, smooth pursuit, optokinetic's velocity). Alarmingly, 33% of them had vestibular hypofunction (5 bilateral, 1 unilateral) with no response with caloric test. Visual acuity was significantly lower during both dynamic and static test, demonstrating lower vestibular-ocular and possible visual processing deficits, respectively. Poorer upper limb coordination (ball skills) was found to correlate with lower optokinetic velocity. Poorer ocular-motor function (saccade and optokinetic's velocity) was correlated with poorer dynamic visual acuity.

Interpretation: Ocular-motor and vestibulo-ocular deficits were noted in children with DCD, and influenced their motor performance. Recommendation on gaze stabilization and ocular-motor training to these children is suggested.

Development of Attention Deficit Hyperactivity Disorder (ADHD) service programme in a paediatric unit: local experience

Sammy Wong, KH Ma, KW Tsui, CT Tong

Department of Paediatrics and Adolescent Medicine, Alice Ho Miu Ling Nethersole Hospital, Hong Kong

Objective: ADHD is a common childhood behavioral disorder affecting 3 - 7% of the general popul. This descriptive study aimed to review the clinical data of an ADHD programme which had been implemented in a local paediatric unit through collaboration with child psychiatric unit and child assessment centers in New Territories East Cluster.

Design: A descriptive study involving case note review of all children referred from CAS with diagnosis of ADHD. Descriptive data including demographic profile, co-morbidities, treatment, and response to treatment were analyzed.

Results: A total of 99 children with diagnosis of ADHD had been followed up between November 2007 and June 2010. The mean age on referral was 8.9 years and there was a predominance of males (86.8%). Overall, 69.6% of patients had at least one co-morbid condition. 85% of children were on medical therapy and improvement of ADHD symptomatology was observed in 77% of children treated with methylphenidate.

Conclusions: Paediatricians should be involved to help alleviating the growing demand of service for children with ADHD. Patients without severe psychosocial problems could be managed well by paediatricians with satisfactory outcome. Development of shared care protocols would be essential to improve the quality of care in the future.

Postinfectious ataxia and cerebellitis

Professor Russell Dale

Associate Professor, Department of Paediatrics, The University of Sydney, Australia

Acute onset cerebellar disorders are a further interesting diagnostic challenge. Acute cerebellar ataxia can be due to space occupying lesions, toxic or metabolic disorders. In addition, pseudo-ataxia can be the presenting features of Guillain Barre syndrome or vestibular disorders.

This talk will focus on two post-infectious or inflammatory disorders that affect the cerebellum. We will first deal with post-infectious cerebellar ataxia which is a relatively benign syndrome typically occurring after varicella infection, or after other common childhood infections. Typically the young child presents with a pure cerebellar syndrome with gait ataxia and sometimes other cerebellar signs. Neuroimaging is normal, and no other investigation is typically required. The outcome is excellent and no treatment is required.

Cerebellitis is on the different end of the spectrum, and is defined when there is cerebellar swelling or inflammation present on neuroimaging. These children may present with evidence of raised intracranial pressure: headache, vomiting and drowsiness. Cerebellar signs are also present, but may be delayed. Imaging reveals swelling and cerebellar cortical enhancement. Cerebellitis is a severe and potentially life-threatening disorder as the child may be at risk of obstructive hydrocephalus and tonsillar herniation. Neurosurgical involvement is recommended, and, when there is life threatening raised intracranial pressure, decompressive hemicraniectomy may be required. Steroids and other immune therapies may be beneficial although there is little literature to guide the treating physician. The outcome after cerebellitis is more mixed, and although a good outcome is possible, motor and cognitive disability is also well described. We also discuss new auto-antibody findings which support a possible autoantibody process in some of these patients.

Auto-antibodies in paediatric neurology

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Encephalitis is a severe acute neurological disorder due to inflammation of the brain parenchyma. Encephalitis results in serious neurological deficits including motor weakness, cognitive problems and epilepsy. The outcome after encephalitis is mixed, and can be excellent with a good recovery, or can be poor with permanent disability or death. There are many causes of encephalitis: both infectious and autoimmune. Recent cohorts have demonstrated the high incidence of encephalitis with unknown cause (40 - 70%).

There have been a number of recent exciting developments with the demonstration of autoimmune encephalitis due to specific auto-antibodies that bind to the extra-cellular domain of neuronal receptors or channels. Autoimmune encephalitis has been described in adults and children.

NMDA- receptor encephalitis was first described in 2007 by Josep Dalmau from Philadelphia. He described a syndrome that has probably been described for centuries under different names including 'non-herpetic limbic encephalitis, chorea encephalopathy syndrome and dyskinesic encephalitis lethargica'. The encephalitis is a paraneoplastic encephalitis in adult females and 60% of adult females with this disease have an ovarian teratoma. In children, this association is only weakly present and most children do not have a tumour. The encephalitis is quite characteristic with a very dominant psychosis, encephalopathy with loss of speech. There may be seizures and autonomic dysfunction. There is also often a hyperkinetic movement disorder which is complex and difficult to characterize. The movements are often stereotypical and bizarre. The patients are very difficult to manage, and the admission is often prolonged. The MRI is often normal, although CSF pleocytosis and oligoclonal bands are common. The patients are defined by the presence of auto-antibodies in serum and CSF against the NR1 subunit of the NMDA receptor. Treatment is recommended with steroids, intravenous immunoglobulin and other immune suppressants if required. There is now strong evidence that these antibodies are pathogenic.

Voltage Gated Potassium Channel encephalitis is a limbic encephalitis which causes memory deficits and seizures. Previously only described in adults over the age of 40 years, there is emerging evidence that this syndrome also occurs in children, and may be a cause of temporal lobe epilepsy. Patients with this disease benefit from immune therapy. Untreated there can be permanent neurological morbidity.

There are undoubtedly other autoantibody mediated brain disorders, and we will review new and emerging auto-antibody mediated disorders of the central nervous system in children. Recognition and early treatment is essential to minimize morbidity and mortality.

Record of Past Annual Scientific Meetings

Since the inauguration of our Society in 1994, Annual Scientific Meetings were held each year:

- 2009** Date: 13 – 16 November 2009
Theme: Autism Spectrum Disorders: Updates on Management
Keynote Lecture: Complementary and Alternative Medicine in Autism Spectrum Disorders: Public Forum by Professor Lonnie Zwaigenbaum, Canada
- 2008** Date: 21 – 24 November 2008
Theme: Neuro-Genetics
Keynote Lecture: Exploring the Neurogenetics of Mental Retardation by Professor Alan Percy, USA
- 2007** Date: 16 – 19 November 2007
Theme: Energy Crisis of Nervous System
Keynote Lecture: Approach to the Diagnosis and Management of Muscle Cramps, Exercise Intolerance and Recurrent Childhood Myoglobinuria by Dr. Ingrid Tein, Canada
- 2006** Date: 10 – 13 November 2006
Theme: Attention Deficit Hyperactivity Disorder
Keynote Lecture: Treatment of ADHD: Medical Behavioural and Educational and Prognosis by Professor Drake Duane, USA
- 2005** Date: 11 – 14 November 2005
Theme: Neuromuscular Disorders of Infancy, Childhood and Adolescence
Keynote Lecture: Childhood Neuromuscular Disorder from the Perspective of Adult Neurology by Professor Royden Jones, USA
- 2004** Date: 19 – 22 November 2004
Theme: Paediatric Rehabilitation
Keynote Lecture: Evolution of Developmental Paediatrics in Hong Kong by Dr. Chok-wan Chan
Keynote Lecture: Developmental Paediatrics in the 21st Century by Professor Rober Armstrong, Canada
- 2003** Date: 19 – 22 September 2003
Theme: Paediatric Neurocritical Care
Keynote Lecture: Head Injury and Neuroscience – Inside Fragile Minds by Dr. Robert Tasker, UK
- 2002** Date: 8 – 11 March 2002
Theme: Paediatric Neuro-Ophthalmology
Keynote Lecture: The Apparently Blind Child by Professor David Taylor, UK
- 2000** Date: 8 – 11 December 2000
Theme: Language Development, Learning Disorders and Brain Plasticity: Research and Clinical Implications
Keynote Lecture: Language Development, Learning Disorders and Brain Plasticity: Research and Clinical Implications by Professor Albert Galaburda, USA
- 1999** Date: 20 – 22 November 1999
Theme: Paediatric Neuro-Epidemiology
Keynote Lecture: What Happens to Children who Suffer with Febrile Convulsions by Dr. C. M. Verity, UK
- 1998** Date: 14 – 16 July 1998
Theme: Paediatric Epilepsy
Keynote Lecture: Epilepsy: A Potential Reversible Cause of Developmental Disability by Professor Brian Neville, UK
- 1997** Date: 11 – 13 November 1997
Theme: Neonatal Neurology
Keynote Lecture: Brain Injury in Premature Newborn – An Overview by Professor Alan Hill, Canada
- 1996** Date: 29 October – 1 November 1996
Theme: Paediatric Neurorehabilitation
Keynote Lecture: Recent Advances in Paediatric Neurorehabilitation by Professor Joe Watt, Canada
- 1995** Date: 14 – 16 November 1995
Theme: Neurometabolic Diseases
Keynote Lecture: Update on Neurometabolic Diseases in Childhood by Professor Kenneth Swaiman, USA



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