Brainchild

The Official Publication of HKCNDP

Hong Kong Society of Child Neurology & Developmental Paediatrics
香港兒童腦科及體智發展學會

May 2002
Volume 3
No. 1

Hong Kong Society of
Child Neurology & Developmental Paediatrics
香港兒童腦科及體智發展學會

The Council

The Editorial Board

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c/o The Federation of Medical Societies
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15 Hennessy Road
Wanchai, Hong Kong

Website
www.fmshk.com.hk/hkcndp

Publisher
Medcom Limited
Unit 1310, Olympia Plaza
255 King's Road, North Point, Hong Kong
Tel: 2578 3833, Fax: 2578 3929
E-mail: mcl@medcom.com.hk

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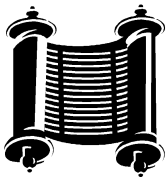
Cover

The cover picture is a drawing by a child with mucolipidosis. He has severe spastic quadriparesis. His intelligence is only mildly affected, which is unusual in mucolipidosis.

The Hong Kong Society of Child Neurology & Developmental Paediatrics
Brainchild - May 2002 issue



Message from the President

Dr. CHAN Chok Wan

The current issue of Brainchild contains excellent original articles presented at the Society's Annual Scientific Meeting on Paediatric Neuro-Ophthalmology reproduced for readers who were unable to attend the meeting. The meeting this year under the capable guidance of our Course Director Dr. David Taylor, Consultant Ophthalmologist from the Institute of Child Health, London proved to be another success and we are pleased to witness overwhelming attendances and participation by society members, ophthalmologists, ophthoptists, optometrists, and other child-health related professional colleagues. The Journal Review and Interim Report from the Working Party for Epilepsy provide useful information to readers on recent advances within our subspecialties.

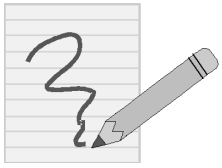
Our Society just held its 8th Annual General Meeting on 10th May 2002 whereby we are proud to witness the large variety of activities organized over the past twelve months. Our Society's scientific meetings, consisting of the regular Bimonthly Scientific Meetings, Neuro-Developmental Conferences, Child Neurology Conferences, and the Annual Scientific Meeting, added to ad-hoc lectures delivered by world experts passing through Hong Kong making up a total of 20 meeting sessions per year which constitute much more than the minimally required Category "A" CME Points (30 per year) as required by the Hong Kong Academy of Medicine! These were complemented by our official publications, Brainchild and the Newsletter while the Society Website provide education material for all professionals' reference in Hong Kong. Congratulations are due to the outing Council for the great achievements. We would like to take this opportunity to thank all retiring Council Members for their immense contribution and to welcome the newly elected council members for their dedication to help steer the Society in its coming years.

The coming twelve months will see the Society endeavouring to consolidate and assure quality of its existing activities. It should focus on areas of current emphasis as mediated via the Society Working Parties on Epilepsy, Cerebral Palsy and Specific Learning Disabilities (SLD). The latter is

expected to be active at this time in view of the successful arousal of public and professional interest in specific learning disabilities in Hong Kong. The International Conference on "Developmental Dyslexia in Children using the Chinese Language" will be a milestone whereby the Society will bring experts on the subject together to explore biological underpinnings of the disabilities, share experience and knowledge on the subject, and to formulate strategic plans to tackle the problem for the benefit of children within the Chinese speaking regions. For public and professional education, we would continue to host certificate courses with the Federation of Medical Societies of Hong Kong on Specific Learning Disabilities, Child Neurology and Developmental Paediatrics, and Epilepsy. We will strive to uphold standard of our Website and to coordinate with the Community Rehabilitation Network (CRN) on Epilepsy for community support on epilepsy. Last but not the least, we aim to cooperate with the Hong Kong College of Paediatricians in supplying information and data regarding accreditation of higher training in child neurology and developmental paediatrics. This is an important step towards training, standard setting and quality assurance for our subspecialties.

Judging from the heavy workload and diversified areas of involvement, it is quite evident that the coming year will be another year of vigor and activities for our Society. To achieve this, we need an effective council as well as generous support and guidance from our resourceful members which is always vital for the ultimate success of the Society. To all your dedication and contribution, I say thank you and I look forward to your active participation in all Society activities in the future.

Editor-in-Chief, Brainchild
President, HK Society of Child Neurology & Developmental Paediatrics



Education Section

Synopsis of Local Presentations Given at the Annual Scientific Meeting 2002

During our last Annual Scientific Meeting held in March 2002 a number of local presentations were given. A selection panel, which was chaired by Dr. David Taylor, our Course Director of the Annual Scientific Meeting, had awarded the first prize to Drs. CY Ko, CH Ko, L Chia and P Tse for their presentation entitled "Paediatric Ophthalmic Assessment Clinic in the Developmental Disabilities Unit of Caritas Medical Centre". The abstract of this presentation, together with a number of other excellent local presentations, are published in this issue of Brainchild.

Paediatric Ophthalmic Assessment Clinic in the Developmental Disabilities Unit of Caritas Medical Centre

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[#]Department of Ophthalmology and *Department of Paediatrics, Caritas Medical Centre

The Paediatric Ophthalmic Assessment Clinic (POAC) was established in September 1999 at the Developmental Disabilities Unit of Caritas Medical Centre. We provide detailed ophthalmic examination and functional visual assessment to children with multiple disabilities and severe grade mental retardation. Useful information concerning the visual potential of these children can be provided to the paediatricians, nurses, therapists and caretakers, who may tailor their training programs according to the children's abilities. To facilitate assessment and communication between different disciplines, we have introduced an innovative Visual Function Checklist (VFC) to document the Visual Quotients (VQ) of these children. The VFC includes an inventory of items relating the visual function to daily activities, and is easily understandable by different disciplines of health care workers. From September 1999 to September 2001, we have assessed 89 patients in the POAC. A variety of ophthalmic disorders were identified, which included mobility impairment, glaucoma, cataract and other anterior segment abnormalities, optic atrophy, retinal disorders, and eyelid and other oculoplastic disorders. Appropriate interventions, such as prescription of spectacles, squint surgery, and medical treatment of glaucoma were given. The ultimate targets are to achieve functional and cosmetic improvements, together with relief of discomfort in this group of children.

Developmental Management of Severe Visual Impairment: Experience of Child Assessment Service in Hong Kong

IKC LAU, KKT LEUNG
Child Assessment Service, Department of Health

Developmental Difficulties of Severe Visual Impairment

Vision is the main input sense for many aspects of development, especially so in the early months when an infant perceives the world predominantly through vision. Early onset severe visual impairment this poses a major developmental obstacle. Emotional development between the child and his parents may suffer when the child fails to establish eye contact with the parents. The lack of visual input also affects all aspects of development, including motor balance, bimanual manipulation, concept formation such as object permanence, and language development.[1] Early and intensive intervention is critically needed in early infancy. The parents, on the other hand, are faced with the devastating news of this major impairment. The overwhelming blow of the loss of a "normal" child renders the parents themselves victims for whom support is desperately needed before they can participate in the intervention programs for their child.

Role of Child Assessment Service

A severe visually impaired child, even in the absence of other impairment, requires a detailed functional assessment of his vision and the way he learns through different senses. The Child Assessment Service (CAS) of the Department of Health of Hong Kong is equipped with multidisciplinary teams to assess the functional status and training needs of these children. The assessment is followed by interim support and treatment, as well as recommendations and coordination of further habilitation and training for the client.

Experience of Child Assessment Service in the Past 10 Years

Over the past ten years, ninety-one children were diagnosed to have severe visual impairment on first assessment at one of the six regional centres of CAS. The visual impairment was at least severe grade (worse than Snellen equivalent of 3/60) to complete blindness with no light perception.

Sixty cases were referred by hospital pediatricians, 19 via maternal and child health centres. Only three cases were referred by ophthalmologists, The reasons for referrals were mostly delay in development or delay associated with visual loss (over 70%), while close to one quarter was suspected visual loss alone. The male to female ratio was 1.7:1. One third had history of prematurity and amongst them, close to half had birth weight less than 1500 g. Fifty-two cases (57%) presented at less than one year of age, 31 (34%) between one and three years, and 8 (9%) over three years.

The causes associated with the visual impairment were classified into predominantly cerebral origin, ocular origin and mixed (see Table 1). Cerebral visual impairment refers to posterior visual pathway disease, with a normal ophthalmological findings. Fifth-eight percent were predominantly cerebral visual impairment, while ocular and mixed origin each accounted for about 21%. Our series also showed a striking preponderance of multiple impairment, occurring in 80% of cases, as shown in Figure 1. More than one co-morbidity might co-exists in one patient.

Table 1. Aetiologies associated with visual impairment in the series

Aetiology	Number of cases	Percentage of cases (n=91)
A. Mainly Cerebral Origin	53	58.2
Congenital CNS malformation	16	17.6
Perinatal Hypoxia	10	11.0
Prematurity with periventricular leucomalacia	5	5.5
Head injury	4	4.4
Brain tumour	4	4.4
Cerebral vascular accident	4	4.4
Meningitis	3	3.3
Miscellaneous	7	7.7
B. Mostly Ocular Origin	19	20.9
Congenital ocular disease (excluding congenital infections)	13	14.3
Retinopathy of prematurity, with retinal detachment	4	4.4
Bilateral retinoblastoma	2	2.2
C. Mixed Cerebral and Ocular Origin	19	20.9
Prematurity with multiple complications	8	8.8
Congenital infections	7	7.7
Multiple congenital malformations	4	4.4

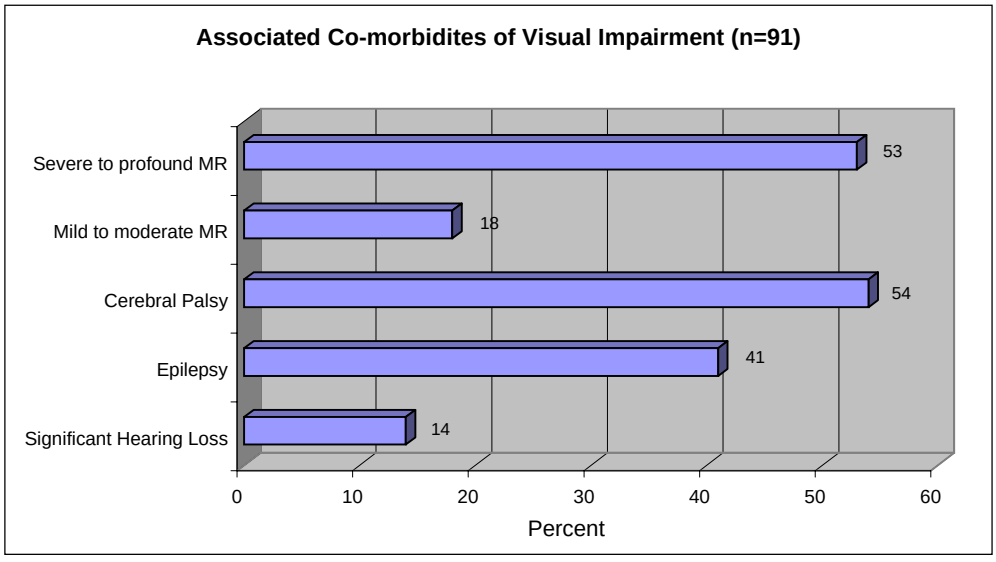

Figure 1. Associated co-morbidities of Visual Impairment.

Visual function and mental function were documented at first (mean at 26 months) and the most recent (mean at 55 months) review assessments: visual function by clinical observation, preferential looking tests and various acuity tests; developmental level by measuring against norms of developmental tests for visually impaired children. Visual function was graded from 0 (no light perception) to 6 (normal vision). Mental function was grouped into 6 grades from close to age for blind child (0) to profound retardation (5). The changes in visual function and mental function between the first and the last assessment were compared in the cerebral and the ocular visual impairment groups.

For the cerebral group there was significant improvement in visual function; the mean level (among 36 subjects) improved from 0.64 to 1.39 (p=0.02 paired t-test). No significant improvement was found or the ocular group; the mean level (among 17 subjects) changed from 0.82 to 1.24 (p=0.07, paired t test).

For the group with cerebral visual impairment, 34/53 (64%) were in the severe to profound mental retardation range and 12/53 (23% in the mild to moderate retardation range at first assessment. Among 28 cases with follow up assessment, 16 remained in the same mental function level while 9 crossed over to a lower level. Among the ocular group, 17/19 (90%) had borderline to normal development at first assessment, and 6 out of 14 at the last assessment showed improved mental functional grouping as compared to only 3 out of 28 among the cerebella visual impairment group (p=0.04, Fisher exact test). Seven remained in the same group and one got worse.

Compared to other cohorts,[2-7] our cases showed a relatively high proportion of cerebral visual impairment and severe multiple handicapped children. Our finding of a significant improvement in visual function in the cerebral visual impairment group is in accordance with other studies.[8-12] Mental function among the ocular visual impairment group improved on follow-up, suggesting that early assessment and proper management could prevent the deleterious effects on the other areas of development.

Developmental Management of Severe Visual Impairment

Management of visually impaired children involves two major aspects, visual and developmental habilitation.

Visual habilitation aims to maximize the use of functional residual vision. A detailed ophthalmological examination and vigilant treatment of any correctable defects helps to optimize visual images. This is followed by visual stimulation programme that aims to drive the interest in "looking" through tactual and auditory reinforcement of blurred visual images. An example is to encourage "looking" at bright visual targets, reinforced by musical sounds and stimulating touch. Next target is to establish

basic ocular motor mechanism and visual awareness, and discrimination of daily use items. Use of low vision aids helps to magnify objects.

Developmental intervention requires a careful evaluation of the perceptual and learning strategies used by the child. Estimation of the developmental functioning and the constraints to the next level of functioning helps plan the strategies to overcome the present constraint. Substitution system for perceptual learning, such as auditory, tactile and kinaesthetic senses is employed to compensate for the loss of visual input, and help the child develop spatial concept and exploratory strategies. Real objects are best presented to the child in daily natural sequence and this helps in the understanding of the environment.

Need for a Visual Impairment Team

As severe visual impairment stands out as a low prevalence but high morbidity disorder, specialized team is in a good position to deal with the developmental crisis and needs. The increased recognition of cerebral visual impairment and its neurological complexity required the joint effort of ophthalmologist, child neurologist and child development team in the diagnostic workup, recommendation and support to the child and family.

The Current Operation in CAS Has Much Room for Improvement

We target early functional assessment of vision and developmental needs, through joint assessment by a team consisting of paediatricans, orthoptist or optometrist, audiologist, occupational therapist, physiotherapist and medical social worker. Early documentation and explanation help parents clarify their queries and enhance their acceptance of the child's condition. Parent support programme is provided individually and in groups to facilitate parents' participation in visual and developmental stimulation programmes. Occupational therapy and physiotherapy combined with training at Early Education Training Centres are arranged of every confirmed cases of severe visual impairment. A parent resource library for visually impaired children has been set up at CAS to provide information and support for parents. Coordination and referral to the Early Intervention Programme set up be the Ebenezer School for the Blind facilitate outreach support at home and in special child care centres.

What Needs To Be Done

There is no systemic collection of incidence data across hospitals and clinics in Hong Kong. We urge a joint effort from the different disciplines to set up a central database for children with severe visual impairment in Hong Kong. This will facilitate communication among different sectors and enhance service planning in medical, developmental and educational perspectives.

There is a pressing need for a developmental Vision Clinic where visually impaired children can be seen and managed by a team consisting of ophthalmologist, developmental pediatrician and other health care providers, close liaison with child neurologist and geneticist is necessary for diagnostic workup and counseling. Good coordinated support for the client an family can be effected through close network of parent support groups with the help of dedicated professionals and childcare workers.

References

1. Sonken PM. Effects of severe visual impairment on development. Clinics in Dev Med 1993;128:78-90.
2. Good WV, Jan JE, Burden SK, Skoczenski A, Candy R. Recent advances in cortical visual impairment. Dev Med Child Neurol 2001;43:56-60.
3. National Perinatal Epidemiology Unit. Oxford Register or Early Childhood Impairment Annual Report. Oxford, Radcliffe Infirmary 1998, pp32-36.
4. Rogers M. Visual impairment in Liverpool: prevalence and morbidity. Arch Dis Child 1996;74:299-303.
5. Bryars JH, Archer DB. Aetiological survey of visually handicapped children in Northern Ireland. Trans Ophthalmol Soc U K 1977;97:26-9.
6. Goggin M, O'Keefe M. Childhood blindness in the Republic of Ireland: a national survey. Br J Ophthalmol 1991;75:425-9.
7. Rosenberg T, Flage T, Hansen E, et al. Incidence of registered visual impairment in the Nordic child population. Br J Ophthalmol 1996;80:49-53.
8. Huo R, Burden SK, Hoyt CS, Good WV. Chronic cortical visual impairment in children: aetiology, prognosis and associated neurological deficits. Br J Ophthalmol 1999;83:670-5.
9. Groenveld M. Observations on the habilitation of children with cortical visual impairment. J Visual Impairment and Blindness 1990;84:11-5.
10. Wong VC. Cortical blindness in children: a study of etiology and prognosis. Paediatr Neurol 1991;7: 178-5.
11. Groenendaal F. Visual deficits and improvements in children after perinatal hypoxia. J Visual Impairment and Blindness 1992;86:215-8.
12. Good WV, Jan JE, Desa L, Barkovich AJ, Groenveld M, Hoyt CS. Cortical visual impairment in children: a major review. Survey Ophthalmol 1994;38:351-64.

Orthoptic Management of Strabismus and Amblyopia in Children

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Chairlady, Hong Kong Orthoptists Association

Strabismus in children can lead to defective binocular functions and amblyopia if untreated. Early detected of strabismus and amblyopia with proper diagnosis and carefully planned treatment can restore or prevent disturbance to binocular single vision and visual function.

The goals of orthoptic management of strabismus and amblyopia are therefore to make proper diagnosis, as well as to restore visual acuity and comfortable binocular single vision. Obviously, these goals cannot be achieved in all cases. Proper management is important in reaching these goals and should at least result in good ocular alignment for social benefits.

Orthoptic management of strabismus and ocular deviation comprises of:
(1) Optical treatment
(2) Orthoptic exercises
(3) Pharmacological management

In practice, these methods may be used alone or together. Frequently orthoptic treatment is integrated with surgical management to achieve food results.

Amblyopia is defined as defective visual acuity in one or both eyes which persists after full correction of refractive error and removal of all pathological obstacles to vision. Amblyopia treatment aims at the restoration of visual acuity by:
(1) Occlusion of the better eye
(2) Penalization
(3) CAM visual stimulator and
(4) Drugs

Early detection and treatment of amblyopia is important in children. It is because of the critical period of visual function development during which amblyopia can occur. In human this critical period is approximately the first 8 years of life. Therefore if amblyopia is untreated before the child reaches 8 years old, the prognosis is considerably poor.

Two Cases of Acquired Abducens Nerve Palsy in Children: A Benign Case and a Not So Benign One

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Eye Department, Caritas Medical Centre

Two cases of acquired isolated sixth nerve palsy in children are presented. A 14 years old boy complained of acute onset of horizontal diplopia after a recent history of upper respiratory tract infection. Examination revealed an isolated sixth nerve palsy. All investigations, including a Tensilon test, CT scan and magnetic resonance imaging are normal. He recovered uneventfully within 10 weeks. The diagnosis of "benign" sixth nerve palsy was made.

A six-year-old girl was noted to have face turning to the left for two months. An isolated sixth nerve palsy was detected on examination. There was no history of recent infection, and investigations including CT scan were unremarkable. She then developed progressive right sided weakness and headache. Urgent magnetic resonance imaging showed a mass measuring 2 cm in diameter situated at the midbrain. Resection was done and histology showed a high grade astrocytoma. These two cases illustrate the two extremes in the outcome of acquired sixth nerve palsy in children. The diagnostic possibilities of acquired sixth nerve palsy in children are reviewed and presented in Table 1.

Table 1. Some causes of isolated Abducens nerve palsy

Congenital palsy	Acquired palsy
Moebius syndrome	Trauma
Birth trauma	Brain tumour
Duane anomaly	Inflammation, collagen vascular disease
Arnold Chiari Malformation	Infection e.g. meningitis, brainstem encephalitis
	"Benign sixth nerve palsy"
	Cavernous sinus thrombosis
	Mastoiditis
	Diabetes
	Migraine
	Cranial polyneuropathy

Cerebral Revascularization for Moyamoya Disease: The Prince of Wales Hospital Experience

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Prince of Wales Hospital, The Chinese University of Hong Kong

Introduction

Moyamoya disease is a progressive occlusive cerebral artery disease with the development of collateral circulation. It often causes cerebral ischaemia or infarction in children and young adult patients. Surgical revascularization may improve cerebral perfusion in this group of patients.

Method and Result

From 1993 to 2000, 7 patients with Moyamoya disease were operated on for revascularization in the Prince of Wales Hospital. There were 4 children (3 boys and 1 girl, age 2 to 8 years) and 3 young adults (all female, age 20-29 years), all presented with transient ischaemic attacks (TIA) or cerebral infarction. Five encephaloduroarteriomyosynangiosis (EDAMS) operations were performed on 4 children and 1 adult patient. Progress of the disease was observed and subsequently two EDAMS were performed on the contralateral side in two of the four children. Two superficial temporal artery (STA) – middle cerebral artery (MCA) anastomosis were performed on two adult patients. All cases improved clinically and on imaging.

Conclusion

EDAMS and STA – MCA bypass are effective in improving cerebral perfusion in Moyamoya disease with cerebral ischaemia. Instead of catheterized cerebral angiogram, MR angiogram is good enough for follow up of the disease. Different methods of cerebral blood flow study were discussed.

Ways Spectacle Frames Fit Children with Nose or Ear Deformities

H ENG, RSF CHIU
The Hong Kong Polytechnic University

With medical advances in technology, babies born with abnormalities are surviving longer. Incidence of visual impairment among children with disabilities is high. Spectacle frames fit with nose or ear deformities may be more complicated. Typically spectacle frames bear on the nose and rest on both ears for balance. Certain adjustments may be possible for alleviating the pressure from the nose by using extra padding to "nose-free" devices such as headband eyeglasses suspenders, clip-on pedestals and cheeklifts. For ear deformities spectacle headband or temple rest frames may be considered.

Inter-rater Reliability of a Visual Function Checklist for Cerebral Palsy Children with Severe Grade Mental Retardation

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Introduction

The Visual Function Checklist (VFC) is an innovative behavioral tool to assess visual function in children with severe visual impairment or poor cooperation. It assesses the child's response to light perception, abilities of visual exploration, fixation, following, distance viewing, grabbing, orientation and the presence of optokinetic nystagmus.

Methods

The subjects included fifteen children with cerebral palsy and severe to profound grade mental retardation residing in the Developmental Disabilities Unit of Caritas Medical Centre. Patients with underlying syndromal disorders, poorly controlled epilepsy, respiratory diseases requiring oxygen therapy, concurrent acute ophthalmic or systemic infections were excluded from the study. Each child received repeated independent assessments by an ophthalmologist, paediatric neurologist and optometrist with the VFC. The assessment was conducted in standardized settings. The result was converted to a visual quotient (VQ), with a range from 0 to 1. Each rater was blinded to the other's scores. Interclass correlation coefficients (ICC) were computed to determine the inter-rater reliability.

Results

The mean VQ measured by the ophthalmologist, paediatric neurologist and optometrist were 0.592±0.397, 0.597±0.390 and 0.615±0.431 respectively. The overall ICC was 0.873 (95% confidence interval 0.695-0.961). The ICC between the ophthalmologist and optometrist was 0.954 (0.837-0.987). The ICC between the ophthalmologist and the neurologist was 0.747 (0.378-0.911). The ICC between the neurologist and the optometrist was 0.838 (0.506-0.954).

Discussion

The VFC has a degree of inter-rater reliability across different disciplines of health care professions. It is particularly useful for children with multiple disabilities precluding accurate determination of visual acuity. It is also a useful tool to monitor treatment outcomes in this group of patients.

A Randomized Controlled Trial Study on Effectiveness of Social Skills Training Group in Queen Mary Hospital

PPP CHEUNG, CLY LAU
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A child's ability to develop and maintain appropriate peer relationship is considered to be an important predictor of positive adult adjustment and behaviour (Cowen, Pederson, Babigan, Izzo and Trost 1973). It is well recognized that children with autistic spectrum disorders are at significant risk to experience difficulty developing appropriate social and peer interaction skills as the result of their inattention, poor eye contact, poor theory of mind thinking, to name a few. These social impairments may exacerbate when they enter the puberty stage.

The purpose of this study is to evaluate the effectiveness of group social skill training program in improving children and parent perceived social skills. Forty-eight preadolescents were randomly assigned to three groups (social skills group, social activity group and waitlist group) to attend seven weeks training programmes. Both children relatives were invited to attend the training.

Result showed that there was no difference among the three groups in the child's report of self-esteem status. But there was a statistically significant difference ($p<0.001$) in parent's report social skills in treatment group as compared to placebo group and waitlist group. The effectiveness of social skills training program for pre-adolescents with autism was preliminarily established. The implication of the present study and the future direction for research in social skills will be discussed.

A Survey on Parents of Children with Physical Impairment Especially Cerebral Palsy

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Background

Cerebral palsy is a complex disease with a complex health chain. In order to understand the parents' opinion on the efficacy of the current services and the opportunity for their children to participate in the community, the Child Assessment Service conducted a parent survey.

Method

Total 420 questionnaires were sent out to the parents whose children have physical impairment. The response rate was 70%. Data were analyzed with the collaboration of the Department of Rehabilitation Science of the Hong Kong Polytechnic University.

Result

Majority of the parents were satisfied with the current available services. Major problems including inadequate explanation of the diagnosis, lack of service coordination and inadequate training time for their children, were identified. One-third of the parents reported dissatisfaction in the participation of recreational activities, while three-quarters of the parents have difficulties in outdoor activities.

Conclusion

This is the first local survey studying the opinion of the parents of cerebral palsied children. The result suggests that there is room for improvement. More studies are needed on finding how "Team Around Child" could be established to provide a more comprehensive, integrated and family - oriented service. Parents and public education concerning the condition, disability and the children's need, are important.

Physiotherapy Fitness Program for Adolescents with Cerebral Palsy

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Introduction

A fitness program for adolescents with cerebral palsy was conducted by the Physiotherapy Department of Jockey Club Kowloon Rehabilitation Centre this summer with the aims to promote their physical fitness and to enhance their competence to joint community fitness program.

Methods

This was a single group pre/post study. Six subjects (mean age 14.4 years, range 11-18 years) completed this intensive program of weight training, aerobic and stretching exercises three times a week for 4 weeks. The outcome measures taken were: (1) energy expenditure index (EEI); (2) heart rate while cycling at a submaximal workload; (3) flexibility using the sit-and-reach test, the behind-the-back reach test, and intermalleolar distance; (4) performance in functional activities, knowledge and practical on warm-up, cool-down, stretching, strengthening and aerobic exercises were introduced. Special emphasis was put on how to monitor cardiopulmonary fitness and performing weight training safely within individual physical capacity.

Results

Significant changes occurred in flexibility ($P<0.05$). Enhanced muscle strength was reflected by increased loading in weight training and performance of functional activities. Frequency of fall was much reduced. There was obvious improvement in EEI and submaximal test in those high functioning clients. All participants showed strong interest to continue such training. However, accessibility to such set up in the community is limited.

Pilot Study in Evaluating Side Effects of Chloral Hydrate Sedation in Children

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Objective

Our study aimed at finding incidence of adverse effects when chloral hydrate was used in selected patients at appropriate dosages and as the sole sedative agent. We also tried to analyze factors that might be associated with an increased incidence of such adverse effects.

Methods

Retrospective review was done on 282 children admitted to the Paediatric Department of Alice Ho Miu Ling Nethersole Hospital for computed tomography of brain or thorax, electroencephalogram, echocardiogram or brainstem evoked potential studies under sedation with chloral hydrate from 1 April 1997 to 31 March 1999. Children were stratified into two groups: infants and those older than one year old. Dosages of chloral hydrate was stratified into three groups: less than 50 mg/kg, 50-75 mg/kg and 75-100 mg/kg. Incidences of desaturation, prolonged sedation, vomiting and paradoxical excitation were analyzed in relation to the age groups and dosages of chloral hydrate using the Fisher's Exact Test.

Results

The overall risk of prolonged sedation was 8.9%. No statistical significance could be shown among the different age groups or among the different dosage groups. There was no desaturation, vomiting or paradoxical excitation.

Conclusion

This retrospective study suggested that the incidence of complication arising from sedation by chloral hydrate alone might be lower than reported in overseas studies. A larger prospective study may be necessary to refine the need for routine intensive monitoring in all children undergoing sedation by chloral hydrate alone.

Red Eyes as the Initial Presentation of Systemic Meningococcal Infection

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*Department of Paediatrics, Prince of Wales Hospital, #Department of Paediatrics, Alice Ho Miu Ling Nethersole Hospital, @Department of Ophthalmology and Visual Sciences, Prince of Wales Hospital

We report a fourteen-month-old boy who presented with fever, coryzal symptoms and red eyes. He developed generalized tonic-clonic convulsion on day 2 of his illness. Ophthalmological assessment demonstrated bilateral hypopyon and vitreous opacity resulting from endoophthalmitis. Cerebrospinal fluid was positive for Nisseria meningitides (A, C, Y, W 135 serotypes) by latex agglutination. He was treated with high dose intravenous cefotaxime and intravitreal ceftazidime. He made good recovery and his vision was preserved. In view of the potential morbidity and mortality associated with systemic meningococcal infection, the presence of red eye and hypopyon provides important diagnostic clues to seek beyond just superficial conjunctivitis and it should prompt the clinician to early recognition of endoophthalmitis and accurate diagnosis of this serious disease.

Journal Watch

Radiological-Pathological Correlation in Focal Cortical Dysplasia and Hemimegalencephaly in 18 Children

Chris LF Woo, Sylvester H Chuang, Laurence E Becker, Venita Jay, Hiroshi Otsubo, James T Rutka and OC Carter Snead III.
Pediatr Neurol 2001;25:295-303.

Malformations of cortical development have long been recognized in children with seizure and developmental delay. These disorders are caused by the interruption of cell proliferation, neuronal migration and cortical organization, starting at the eighth to twenty-fourth week of gestation. There are successive generations of neurons migrating from the germinal matrix towards more superficial layers in the neocortex, with eventual neuronal maturation and cytoarchitectonic organization of the cerebral cortex in layers and columns.

Such malformations were first described by Taylor et al when they examined the resected brain tissue from a series of patients treated surgically for intractable epilepsy.

With the advent of modern neuroimaging especially Magnetic Resonance Imaging (MRI), more children with cortical malformations are being recognized. Thus early and definitive treatment such as epilepsy surgery can be considered. Nevertheless, sometimes lesions like focal cortical dysplasia (FCD) can only be confirmed by pathological examination of the resected brain tissue.

This article in Pediatric Neurology described the radiologic-pathologic correlation in focal cortical dysplasia and hemimegalencephaly in a group of children with medically intractable epilepsy who underwent epilepsy surgery. The clinical, radiological and pathological features of these children were reviewed in detail. However, in this series, MRI could not diagnose FCD in two patients. The first patient was diagnosed to have pial haemosiderosis. The resected sample showed FCD. The authors believed that the FCD might predispose to an occult bleeding after a minor head injury. The other patient had a normal MRI but electroencephalogram and single photon emission computerized tomography confirmed an epileptic lesion, which was found to be FCD pathologically.

In this series, there were also discussions on the relationship of FCD and hippocampal sclerosis and an interesting case of hemimegaencephaly with chronic cytomegalovirus encephalitis, both of which were worth mentioning.

In our local context, we seldom see resected brain tissues from epileptic children as the development of paediatric epilepsy surgery is still in its infantile stage. With the collaboration of various disciplines, I believe we could catch-up such 'delay' very soon.

(Reviewed by Dr. Chris Woo, Department of Paediatrics, Pamela Youde Nethersole Eastern Hospital)

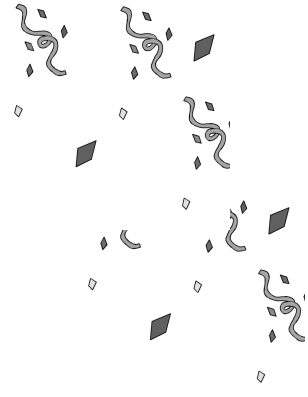
News of Society

Annual General Meeting 2002

The Annual General Meeting this year was held on 10 May 2002 at M Ground Lecture Theatre, Queen Elizabeth Hospital. During the meeting Dr CW Chan, our President, reported on the activities of the Society the year before. CNDP has had a very fruitful and productive year. Thanks to our hard-working Honorary Treasurer, Dr Rose Mak, the Society also has a very healthy bank account. The abdicating Council is very proud of the keen participation of members in the various meetings and conferences. Your support is the coming year will be also extremely important for the success of the Society.

During the AGM a new Council has been elected. The officer bearers and Council members are as follows:

President	Dr Chok Wan Chan
Vice President	Dr Wai Hung Lau
Honorary Secretary	Dr Shun Ping Wu
Honorary Treasurer	Dr Sharon Cherk
Council Members	Dr Becky Chiu
	Dr Catherine Lam
	Dr Kam Tim Liu
	Dr Kwing Wan Tsui
	Dr Sam Yeung
	Dr Wai Lan Yeung



The president would like to thank Dr Kwok Yin Chan, Dr Philomena Tse and Dr Winnie Yam for their contribution to the Society as they honorably discharge their duty as Vice President and Council Member for the year 2001-2002.

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Asian-Oceanian Child Neurology Association (AOCNA)

Full and Associate members of the HKCNDP are automatically members of the AOCNA, the regional liaison of child neurologists. This year as the Congress in Beijing is coming up, we are required to pay a subscription to the Association.

If our members do not object the Society will pay this subscription on all members' behalf. If you opt not to join the AOCNA, please inform the Honorary Secretary by fax at 2384 5204 or by e-mail at wusp@ha.org.hk on or before 10 June 2002.

Welcome New Member

The Council would like to welcome our new associate member Dr Eunice Wong.

The Council also would like to welcome the following colleagues being accepted as full members of the Society as they have fulfilled the requirement stipulated by the Society Constitution:

Dr Sophelia Chan
Dr Eva Fung
Dr Nai Chuen Sin
Dr Chris LF Woo
Dr Ada Yung

Certificate Course on Childhood Epilepsy

The aforementioned course will be held in liaison with the Federation of Medical Societies from 3 July 2002 to 7 August 2002. For details and enrolments please contact the Federation at 2527 8898. Details are available on their web site www.fmshk.com.hk.

Joint Congress of ICNA and AOCNA

The Ninth International Child Neurology Congress and Seventh Asian and Oceanian Congress of Child Neurology will be held in Beijing from 20 to 25 September 2002. The theme of the joint congress is "Child Neurology in New Life Science Millennium". It will undoubtedly be the big event in Child Neurology this year.

Professor Xi-ru Wu, President of the Organizing Committee, has invited child neurologists and developmental paediatricians in Hong Kong to the Congress. It would be a extremely convenient opportunity to meet colleagues from around the world and to catch abreast with the latest advances in the topic. In fact a number of local paediatricians plan to attend the Congress and it will be a good chance for the local colleagues to get together for fraternity and socializing, too. Members who are interested to attend to conference are asked to contact our Honorary Secretary for possible formation of a delegation from Hong Kong. You can certainly look forward to some fun together.

There is a discounted registration fee for those who register before 15 June 2002. You would have to fill in registration form which is available from the Congress Web site at www.ciccst.org.cn/icnc2002. Do not miss this Congress. Register early!

Working Group for Paediatric Epilepsy Surgery in Hong Kong

Interim Report

Epilepsy surgery has become an established effective modality of treatment in the management of refractory epilepsy in children in developed countries. In Hong Kong this form of treatment has also aroused a lot of interest amongst medical professions looking after children with refractory epilepsy in recent years.

Under the auspices of the Hong Kong Society of Child Neurology & Developmental Paediatrics a working group for paediatric epilepsy surgery was formed in June 2001. The aim of the Working Group is to look at the extent of problems in refractory epilepsy in children in Hong Kong and hence estimate the local needs for paediatric epilepsy surgery. The group also plans to evaluate the strengths and deficiencies of existing services for paediatric epilepsy surgery in the local setting. The final goal of the working group is to formulate a model of paediatric epilepsy surgery appropriate for our local setting to be recommended to the Society as a professional body with keen interest in the welfare of children with epilepsy.

The Working Group under the advice of Dr. C.W. Chan, President of the Society is chaired by Dr. Dawson Fong, local eminent neurosurgeon and consists of eight paediatric neurologists from HA Hospitals. At the time of this report six meetings have been held since inception. A survey to look into the incidence of epilepsy in children was decided upon. Thanks to their enthusiasm, all of the Paediatric neurologist colleagues in the public sector and four of the paediatric neurologists in the private sector we contacted have kindly agreed to take part in the survey. This one-year survey of local incidence of paediatric epilepsy starts in 1 April this year and will be completed by end of March 2003. The prevalence of refractory paediatric epilepsy will also be looked into from retrospective data from five HA Hospitals. These data will then enable us to estimate the need of epilepsy surgery in children in Hong Kong.

In the best interest of children with refractory epilepsy, The Working Group looks forward to the continued support from colleagues working with children with epilepsy.

Dr. Sharon Cherk
Honorary Secretary for The Working Group For Paediatric Epilepsy Surgery in Hong Kong
23 April 2002

The Hong Kong Society of
Child Neurology and Developmental Paediatrics

in collaboration with

The Hong Kong College of Paediatricians

Hong Kong Paediatric Society

INTERNATIONAL CONFERENCE 2002

"Developmental Dyslexia in Children Using the Chinese Language: fMRI and Advocacy"

26th – 28th October 2002, Hong Kong

Second Announcement

The theme of this conference is to promote knowledge in the fundamental nature of, and the professional, social and political issues required for addressing the subject with focus on -

- Neural bases and clinical correlates through functional MRI in Developmental Dyslexia in Children using Chinese Language
- Advocacy issues in all Chinese speaking countries.

Panel Speakers

Dr Chok-Wan CHAN (*Hong Kong)*	Paediatrician
Dr Michael CHEE (*Singapore)*	Neurologist
G.Emerson DICKMAN III, Esq (*USA)*	Attorney
Mrs. Georget DICKMAN (*USA)*	Teacher-Trainer
Dr Catherine LAM (*Hong Kong)*	Developmental Paediatrician
Ms Shuk-Han LEE (*Hong Kong)*	Education Psychologist
Prof Che-Kan LEONG (C*anada)*	Education Psychologist
Prof Danling PENG (*China)*	Cognitive Psychologist
Prof SHU Hua (*China)*	Cognitive Psychologist
Prof Li Hai TAN (*Hong Kong)*	Cognitive Psychologist
Prof Ovid TZENG (*Taiwan)*	Cognitive Psychologist

Registration Fees

HKCNDP members	Complimentary
Local participants	HK$200
Overseas participants	USD$200

Registration via website at ***http:www.fmshk.com.hk/hkcndp*** or *Fax **(852)-25998996***

Sponsored by: Wyeth (H.K.) Limited & Wyeth-Whitehall Pharm. Co., Ltd.

The Hong Kong Society of
Child Neurology and Developmental Paediatrics

INTERNATIONAL CONFERENCE 2002

"Developmental Dyslexia in Children Using the Chinese Language: fMRI and Advocacy"

26th – 28th October 2002, Hong Kong

Conference Programme

	26 Oct 2002 (Sat)	27 Oct 2002 (Sun)	28 Oct 2002 (Mon)
09:00 to 12:30	**Registration of Participants and Meeting of Panel Speakers**	**Advocacy Issues in Dyslexia** **Keynote Lecture** G. Emerson Dickman III, Esq. **Seminar** **Advocacy Issues in Regional Areas** Panel Speakers ***Hong Kong*** Dr. CHAN Chok Wan ***China*** Prof. SHU Hua ***Taiwan*** Prof. Ovid TZENG	**Neural Systems underlying Chinese Reading: fMRI Studies and their Correlates** Panel Speakers ***Hong Kong*** Dr. Li Hai TAN ***China*** Prof. PENG Danling ***Taiwan*** Prof. Ovid TZENG ***Singapore*** Dr. Michael CHEE
14:00 to 17:00	**Current Practice and Provisions** Panel Speakers ***Hong Kong*** Dr. Catherine LAM Ms LEE Shuk Han ***China*** Prof. SHU Hua ***Taiwan*** Prof. Ovid TZENG ***Singapore*** Dr. Michael CHEE	**Clinical Presentations** Panel Speakers ***Hong Kong*** Prof. LEONG Che Kan ***Taiwan*** To be announced ***Singapore*** To be announced	**Forum for Advocacy on Services and Legislation** Forum Speakers International speakers and Local invited guests* **Press Forum** Hosted by HKCNDP SLD Working Party Advocacy Committee
Evening	**FREE**	**17:00 –19:30** **Satellite Symposium** **Inclusive Education in Hong Kong** (Hosted by Support Group on Integrated Education)	**19:30** **Open Lecture and Dinner at Sheraton Hotel**

Collaborating Organizations

The Hong Kong College of Paediatricians

The Hong Kong Paediatric Society