

CFS/ME joint session

G207 EXECUTIVE FUNCTIONS IN CHILDREN WITH SEVERE, MODERATE AND MILD TRAUMATIC BRAIN INJURY IN COMPARISON WITH NON-INJURED CONTROLS AND THEIR RELATIONSHIP TO BEHAVIOUR

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Introduction: Traumatic brain injury (TBI) selectively damages neural systems responsible for executive function (EF), a collection of inter-related functions responsible for purposeful, goal directed, problem-solving behaviour. TBI is a common problem in childhood, yet surprising few paediatric data exist concerning the impact of TBI on EF and its relationship with behaviour.

Aims: To compare EF in children with severe, moderate and mild TBI and non-injured controls, and to relate EF to other measures of cognition and behaviour.

Methods: Prospective cohort study. TBI was classified by admission Glasgow Coma Score (GCS) as severe (GCS 3–8), moderate (GCS 9–12) and mild (GCS 13–15). EF was assessed using the Behaviour Rating Inventory of Executive Function (BRIEF); intellect by WISC-III; attention by Test of Everyday Attention in Children (TEA-Ch), memory by Children's Memory Scales (CMS); behaviour by Child Behaviour Checklist (CBCL). Cognitive and behavioural assessments were performed 12–24 months after injury.

Results: 57 subjects were studied (20 severe TBI, 18 moderate/mild TBI, 19 controls). Mean age was 12.8 years (TBI) and 12.2 years (controls). There were significant differences in the three groups with respect to the BRIEF summary scales Behaviour Regulation Index (BRI) ($p = 0.001$), Metacognition (MI) ($p = 0.007$) and Global Executive Composite (GEC) ($p = 0.006$). Significant group differences were seen in the domains relating to inhibitory control ($p = 0.003$), shifting ($p = 0.006$), emotional control ($p = 0.003$), initiation ($p < 0.001$), working memory ($p = 0.002$), planning ($p = 0.025$), self-monitoring ($p = 0.028$) but not organisation of materials ($p = 0.072$). Significant correlations were seen in TBI children between the BRIEF GEC and performance IQ ($p = 0.001$); attention ($p = 0.04$); and CBCL externalising ($p < 0.001$), internalising ($p = 0.005$), total competence ($p = 0.012$) and total problem scales ($p < 0.001$) but not between GEC and verbal IQ ($p = 0.365$) or memory ($p = 0.147$). In control children, GEC correlated with the CBCL externalising index ($p = 0.027$) only.

Conclusions: TBI children differ significantly from controls with respect to EF. Executive dysfunction correlates with performance IQ, an aspect of cognition recognised to be particularly sensitive to TBI, and behavioural difficulties. Executive dysfunction underpins behaviour problems post-TBI.

G208 THE MANAGEMENT OF YOUNG PEOPLE WITH ALCOHOL INTOXICATION

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Aims: The excessive use of alcohol by young people is becoming a major public health concern. In our emergency department (ED) and others, there is no protocol for the care of intoxicated young people or involvement of the mental health services. This is in contrast to the procedures in place for young people who self-harm. The aim of this study was to assess the current management of these individuals and implement changes that will improve young people's health in the future.

Methods: A cross-sectional descriptive study was performed at two EDs. For a 4-month period; the case notes were retrieved for children aged 12–16 years who attended with alcohol intoxication. Data were also collected from a large monitoring study performed by colleagues,

concerning all the episodes of non-fatal self-harm in that age group during the same 4 months. These two processes, from both EDs, resulted in samples of 68 episodes of drunkenness and 99 episodes of self-harm.

Results: Analysis of the alcohol intoxication data demonstrated that 65% of the cases were female. The median age was 15 years. Most of the Glasgow coma scores (GCS) suggested mild impairment of consciousness with a mean GCS of 13.9. However, 16% had a GCS of 12 or less requiring care in the resuscitation room. 22% received input from a social worker, 16% were living in institutional care or with foster parents and 10% reported previous contact with mental health services. 65% of intoxicated young people were discharged from the ED without further assessment and only 35% of cases had documented follow-up arranged. In contrast, 70% of young people who attended because of self-harm were admitted for psychosocial assessment, plainly related to the existence of an agreed protocol.

Conclusions: The research demonstrates a need for cross-disciplinary attention to improve the care of young people attending hospital with alcohol intoxication. A protocol is currently being developed to enable these vulnerable individuals access to the services they require.

G209 MEASURING MEDICAL FEARS IN SCHOOL-AGED CHILDREN

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Aims: Maintenance of a good relationship with a sick child in healthcare service provision is essential. Most of the time children are afraid of going to healthcare facilities due to various reasons. There are several initiatives world-wide to allay child medical fears, eg, Teddy-Bear Hospitals in the UK. For an understanding of the problem, valid measurement tools are essential. This study aims to validate the Child Medical Fear Scale (CMFS).

Method: The CMFS was developed based on the theories of cognitive development, social learning, psychoanalysis and differentiation in the USA to measure fears in children in healthcare settings. This 17-item scale contained few colloquial terms and a translation and back-translation was done. The final version of CMFS was drafted after a consensus was arrived for the differences in two translations. A consecutive sample of 88 school children in the age group 11 years and above presenting with musculoskeletal pain to two rheumatology clinics and the outpatient department of a larger hospital were selected. They were administered CMFS twice, 2 weeks apart, and adolescent musculoskeletal pain assessment tool (AMPAT) at the first visit with interviewer-guidance.

Results: Response rate was 100% at first visit and 71.6% with the second administration. There were 43.2% females and 56.8% males with a mean age of 15.04 (SD 2.01) years. There was no significant difference between two CMFS scores ($p = 0.071$) showing a good test-retest reliability. No significant linear correlation was found between scores of AMPAT and CMFS with a Pearson correlation coefficient of 0.056, thus indicating that the two tools discriminate between musculoskeletal pain and medical fear—discriminant validity appraised. The reliability statistics for CMFS showed a Cronbach's α of 0.782 for 17 items and 87 cases.

Conclusions: The CMFS is a valid and reliable tool to measure medical fears in school-aged children. CMFS can be used to compare medical fears quantitatively before and after preventive strategies are employed.

G210 PREVALENCE OF DISABLING FATIGUE AND CHRONIC FATIGUE SYNDROME IN 13-YEAR-OLD CHILDREN: A POPULATION-BASED STUDY

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Background: The Royal College of Paediatrics and Child Health (RCPCH) definition for CFS/ME is: "disabling fatigue without

another cause" lasting more than 3 months (National Institute for Clinical Excellence guidelines). There are no prevalence data for paediatric CFS/ME using these definitions.

Objectives: To describe the prevalence of CFS/ME in 13 year olds.

Methods: The Avon Longitudinal Study of Parents and Children (ALSPAC) is a population-based birth cohort of children born between April 1991 and December 1992 in south-west England. At age 13, parents were asked whether their child had been feeling tired or lacking in energy over the last month, how long the tiredness had lasted and whether it was disabling (interfered with school or other activities). CFS/ME at age 13 was defined using the RCPCH definition. Fatigue secondary to playing sport or snoring, or associated with depression, was not considered as CFS/ME.

Results: Of 6781 mothers who completed questionnaires, 836 (12.3%) described their 13 year olds as being tired or lacking in energy for more than 3 months. Of these, 476 (7.0%) were disabled by their tiredness. After exclusion of fatigue with other causes, 319 children (4.7%) had disabling fatigue fulfilling the RCPCH definition for CFS/ME. Of these 178 (55.8%) were female. Only 80 (25%) had been to see their doctor because of fatigue. Seven children (2.2% of those with CFS/ME) were unable to attend school because of fatigue. 119 (37%) had fatigue lasting for more than 6 months (consistent with previous definitions), and 22 (6.9%) had disabling fatigue lasting more than 5 years.

Conclusions: This is the largest cross-sectional population-based study investigating disabling fatigue in teenagers. The main limitation is that diagnosis was based on parental questionnaires rather than clinical consultation. The prevalence of disabling fatigue was higher than reported in previous epidemiological studies. This could be due to differences in definition or methodology. However, these results are consistent with recent population-based studies in adults reported by CDC. The prevalence of CFS/ME is considerably higher than suggested by the number of children seen by paediatric services in the region, implying that a significant number of children with disabling fatigue are not receiving appropriate support and treatment.

G211 NEURODEVELOPMENTAL PATHWAYS FOR DIAGNOSIS AND SUPPORT OF CHILDREN AND YOUNG PEOPLE WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER, AUTISM AND OTHER DEVELOPMENTAL AND BEHAVIOURAL DIFFICULTIES

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Introduction: Services for children with behavioural concerns are patchy and often delivered by different professionals including community paediatricians, child psychiatrists and sometimes psychologists. Often children wait for a long time to undergo one assessment only to be told that they do not meet the diagnostic criteria and end up on another waiting list for yet another prolonged assessment. Educational and behavioural support is often dependent on receiving the diagnosis hence the anxiety to get the label!

Aim: To streamline the services and provide a clear pathway where intervention in the form of support for parents and support at educational settings is provided at an early stage irrespective of the diagnosis, which in itself is facilitated by intervention.

Methods and results: Multidisciplinary meetings were held between various stakeholders, including education, health, social care and differences in geographical patches identified and expertise noted. Clear pathways were identified as follows. Universal services, including health visitors, special education co-ordinators, etc., to provide early support for parental concerns. Community paediatricians as secondary service to receive referrals from all professionals in primary care. School doctors to be the initial contact and expected to filter and fast track all those requiring

further attention-deficit hyperactivity disorder (ADHD) or autism spectrum assessments. Parent training groups to be offered at this stage and those with suspected social communication difficulties to be offered autistic spectrum disorder specific parenting advice, including CYGNET or HANEN training. ADOS (Autism Diagnostic Observation Schedule), ADI (Autism Diagnostic Interview) or DISCO (Diagnostic Interview of Social and Communication Disorders) to be used as a diagnostic tool for those requiring further assessment in liaison with the Autism Support Educational Team that provides guidance to all schools for children with suspected social communication difficulties. Those with a diagnosis of ADHD to be monitored and followed as a shared care protocol with GPs and offered individual behaviour advice. Severe comorbidities to be referred to child and adolescent mental health services (CAMHS) for support and advice. CAMHS learning disability team to work with children with learning disability.

Conclusions: A staged approach with intervention at every phase allows appropriate access to resources, thus avoiding the need to get a diagnostic label before receiving support. Close liaison within various services and a tiered approach avoids duplication and wastage of valuable resources.

G212 THE EVOLUTION OF COMMUNITY PAEDIATRIC CASE MIX OVER 4 YEARS SHOWS A RAPIDLY INCREASING MENTAL HEALTH COMPONENT

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Aim: To determine whether there has been a change in the composition of the outpatient community paediatric case mix over the last 4 years.

Methods: We analysed our service activity data for each of four successive years (April 2005, May 2006, June 2007, July 2008) to detect changes in referral patterns, types of contact, new vs follow-up numbers, clinic attendances and multidisciplinary meetings as well as main diagnostic groups. The service covers a child population of 122 000 children aged 0–16 years. Behaviour problems were coded using child and adolescent mental health services (CAMHS) mapping codes.

Results: Over the last 4 years new referrals for behavioural difficulties have more than doubled, up from 368 to 811 per year. Follow-up attendances for behavioural problems have increased from 350 to 749 per year; multidisciplinary/multiagency team meetings for children with behavioural difficulties have increased threefold for new cases, from 24 to 87, and eightfold for follow-ups, from 54 to 398 per year. The number of children diagnosed with autistic spectrum disorders and attention-deficit hyperactivity disorder has increased each year. 40% of all patients have dual mental health and physical, learning or psychosocial problems. There has also been a steady increase in activity for other categories (learning/developmental difficulties and physical problems) but not on the same scale as that seen for behavioural difficulties. Over this 4-year period, our reporting system has not changed significantly while funding for dedicated CAMHS services in mental health trusts (but not for paediatric services dealing with mental health) has doubled.

Conclusions: Our community paediatric service carries a rapidly growing share of mental healthcare; we work increasingly in cooperation with other health providers and agencies. We suggest there is an urgent need to document this work accurately nationwide, especially as this increased specialisation and inter-agency cooperation have not been so far been recognised by commissioners despite clearly stated governmental objectives to deliver holistic and co-ordinated care close to home and school as well as an increased emphasis on children's mental health. Our data demonstrate a possible way to evidence the delivery of such objectives.