

## Plenary

P01

### INCIDENCE AND CLINICAL ASSOCIATIONS OF ACUTE PANCREATITIS IN CHILDREN AGED 0–14 YEARS IN THE UNITED KINGDOM

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**Aims** To establish the incidence and clinical associations of acute pancreatitis (AP) in children aged 0–14 years in the UK.

**Methods** Monthly surveillance of new cases of AP in children under 15 years of age through the British Paediatric Surveillance Unit.

**Results** A total of 94 cases (48 boys and 46 girls) of AP, clinician-diagnosed from April 2013 to April 2014, fulfilled the diagnostic criteria. The median age of diagnosis was 11.2 years (range 1.30–14.89 years). White children accounted for 60% of cases compared to 40% from ethnic minorities (71% Asian and 13% Black). Pakistani children alone made up 19% of the cohort. The reported incidence of AP in children under age 15 in the UK was 0.78 per 100,000 (95% CI 0.62–0.96). Of the 94 cases: 36 (38%) were idiopathic, drugs 18 (19%), gallstones 12 (13%), hereditary 7 (7.5%), organic acidaemia 7 (7.5%), anatomical anomalies 4 (4%), viral infections 3 (3%), vasculitis 3 (3%), trauma 1 (1%) and others 3 (3%). The most common drug associations were asparaginase (28%), azathioprine (17%) and sodium valproate (17%). Of the 12 gallstone-associated cases, 5 were boys; body weight of 5 cases were above the 91st centile (4 were above the 98th centile). Overall, 6 of 7 organic acidaemia cases (86%) and 3 of 5 asparaginase-associated cases (60%) were of Pakistani ethnicity.

**Conclusion** This is the first estimate of incidence of AP in children in the UK. In children, AP is associated with a wide variety of potential aetiologies and more than one third of cases have no cause identified. The associations of AP have changed significantly since the 1970/80s. Drug therapy and gallstones are now the commonest associations, whilst trauma and mumps have become uncommon. Children from some ethnic minorities are greatly over-represented, which possibly reflect the greater frequency of inborn errors of metabolism in some ethnicities. However the over-representation of asparaginase associated AP in Pakistani children merits further investigation.

P02

### OUTCOME OF MILD TRAUMATIC BRAIN INJURY (TBI) IN CHILDREN- RESULTS FROM A PROSPECTIVE UK COHORT STUDY

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**Aim** To use prospectively collected data to investigate the outcomes up to 16 years of TBI in childhood.

**Methods** Data from the Avon Longitudinal Study of Parents and Children (ALSPAC) were analysed. Background demographics and developmental and behavioural profile of the

children were derived from questionnaires completed by the mother in pregnancy, at 6 weeks and at 18 and 42 months. Injury data were derived from questionnaires completed by the child's carer at 4½, 5½, 6½, 8½ and 11½ years of age. Outcomes were collected when the child was 11–16 years old, from ALSPAC questionnaires and research clinics, and from linked educational data.

TBI cases ( $n = 410$ ), defined as any head injury resulting in loss of consciousness and/or a skull fracture before the age of 11, were compared with children of the same age ( $n = 1819$ ) who suffered traumatic orthopaedic injuries (fractures- excluding skull fractures). Controls ( $n = 8770$ ) were all children with available injury data who did not have a TBI or orthopaedic injury.

**Results** 410 ALSPAC participants (59% male) had a TBI before 11; 154 (38%) had a fractured skull, and 36 (9%) had multiple TBIs. Orthopaedic injuries were reported for 1819 participants (52% male) before 11. Compared to controls, children who had a TBI came from families living in adversity, with mothers with lower educational qualifications and a history of depression. The children who suffered a TBI had higher hyperactivity and conduct scores age 42 months, but no differences were apparent for those who later suffered orthopaedic injuries. Outcomes at 13–16 which remained associated with TBI after adjustment were the total behavioural problems score, the hyperactivity score and the conduct problems score of the SDQ, and high levels of anxiety and depression. Adjustment for pre-injury SDQ scores attenuated the associations with the SDQ scores but these remained significantly different from controls. Weak associations were also observed between orthopaedic injuries and later conduct problems.

**Conclusions** TBI in childhood was associated with increased behavioural problems up to 16 years, and increased hyperactivity and conduct problems which were not explained by pre-injury characteristics. Depression and anxiety were also more common in TBI survivors.

P03

### BASELINE CHARACTERISTICS AND EARLY MENTAL HEALTH SEQUELAE IN ADOLESCENTS PRESENTING AFTER SEXUAL ASSAULT

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**Background** Estimates suggest 29% of rapes and 41% of sexual assaults reported to the police involve victims <17 years. Longitudinal research evaluating outcomes following adolescent sexual assault is lacking.

**Aims** To describe the characteristics of adolescent sexual assault and early mental health sequelae in young people (YP) presenting to the sexual assault referral centres (SARCs) serving a large UK city.

**Methods Design:** Prospective longitudinal cohort study.

**Study population:** We approached all YP aged 13–17 years presenting to a SARC within six weeks of assault. Baseline data collection included psychological evaluation using the Short Moods and Feelings Questionnaire (depressive symptoms), Self-Report for Childhood Anxiety-Related Disorders (SCARED)-short form (anxiety symptoms) and Impact of Events Scale (post-traumatic symptoms).

## Abstracts

**Results** 30% of YP consented to take part. Data are available for the first 94 participants (mean [SD] age: 15.16 [1.24] years; 96% female). Those with learning disability and young people of black ethnicity were over-represented compared to the local population (18% vs. 2.5%, and 23% vs. 11%, respectively).

15% had a history of previous non-consensual sex and 44% were known to social services. 39% had sought help for mental health difficulties in the previous year and 37% had previously self-harmed.

Participants experienced vaginal rape in 72% of cases, oral rape in 40% and anal rape in 13%. 44% of assaults involved physical violence and 9% involved a weapon. 29% involved alcohol and 14% involved drugs. 36% were stranger assaults, 47% involved an acquaintance and the remainder involved partners or ex-partners (3%), or a relative (5%). Assailants were most commonly aged 15–20 (41%) or 21–30 (22%), with 12% <15 years.

Early psychological outcomes: 73% had significant depressive symptoms, 90% had a high likelihood of post-traumatic stress disorder, 69% met criteria for panic disorder or significant somatic symptoms, and 60% met criteria for generalised anxiety disorder.

**Conclusions** Adolescents accessing SARCs are a vulnerable population and exhibit high levels of psychological morbidity within six weeks of sexual assault. Longitudinal research is critically important for evaluating outcomes over time and to inform interventions and preventive programmes.

**P04 RCT OF A MOTIVATIONAL LIFESTYLE INTERVENTION (THE HEALTHY EATING AND LIFESTYLE PROGRAMME (HELP)) FOR OBESE YOUNG PEOPLE**

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**Aims** To assess whether a motivational multi-component lifestyle intervention delivered in the community was effective in reducing body mass index (BMI) and improving related health outcomes in obese adolescents.

**Methods** 174 obese adolescents (13–17 years old; 109 females) from a UK community setting were randomised into intervention or control arms. Intervention participants received 12 sessions across 6 months, addressing lifestyle behaviours and focusing on motivation to change and self-esteem rather than weight change. The intervention was delivered by trained Graduate Health Workers in community settings. Control participants received a single 2 h nurse-delivered session providing didactic weight management advice. The primary outcome was BMI change at 6 months. Secondary outcomes included body fat (impedance), dieting behaviours, self-esteem and quality of life. Random-effects linear regression was used to detect differences in endpoint outcomes between Intervention and control groups, adjusting for sex, age, and outcome value at the beginning of the intervention. The primary analyses used the intention to treat sample.

**Results** 145 (83.3%) adolescents completed the intervention. Mean BMI across the whole group was 32.3 kg/m<sup>2</sup> (SD 4.4) at start and 32.6 kg/m<sup>2</sup> (SD 4.7) at the end of the intervention. We found no significant difference in the primary outcome (BMI) at 6 months: effect estimate -0.06 (95% CI: -0.57 to 0.45) p = 0.8. No significant differences were observed for changes in secondary outcomes (all p > 0.4) between intervention and control groups at 6 months. Fidelity monitoring showed moderately strong fidelity to treatment. The process evaluation found that participants and their families found the intervention highly engaging, respectful and helpful in making behavioural changes.

**Discussion** We did not find evidence that a motivational multi-component lifestyle modification intervention delivered in the community was effective in reducing BMI or improving health and well-being in a community sample of obese adolescents, despite moderately strong fidelity and process evidence that young people used the intervention to make changes in their lifestyle. Our findings suggest that obesity interventions with a strong theoretical basis and evidence of effectiveness when delivered by trained psychologists may not be effective when delivered at lower intensity in the community by entry-level health workers.

**P05 LONG-TERM EFFECTS OF ACUTE MALNUTRITION ON GROWTH AND BODY COMPOSITION IN MALAWIAN CHILDREN**

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**Aims** Severe Acute malnutrition (SAM) is an important cause of child mortality worldwide and most treatment to date has focused on reducing those deaths. However, with emerging evidence that early nutritional adversity affects adult health, it is vital that treatment strategies also start looking beyond short term outcomes at programme discharge. To do this, improved evidence on the long term implications is needed; in this study, we examined growth and body composition 7 years after an episode of SAM.

**Methods** We present latest data from a follow-up of 462 ex-malnourished Malawian children, comparing their growth and body composition to both siblings and age/sex matched community controls. These are the known survivors of an original cohort of 1024 children admitted to a large Malawian nutrition ward, from 2006 to 2007, for treatment of SAM. The current round of follow-up is 7 years after the original episode of malnutrition. Linear regression is used to analyse interim anthropometric data.

**Results** To date, 321/412 (78%) of searches have been successful. Median age of the ex-malnourished 'case' children was 9 yrs 2 months (range: 7–20 years). 79/321 (25%) are HIV positive; 35/321 (11%) died in the last six years. Cases are significantly more stunted and underweight than community controls. Waist-hip ratio was significantly higher for cases suggestive of adverse body composition, however skinfold thickness ratio (subscapular +waist/tricep) was not significantly different between the groups. Sitting height ratio was also significantly higher for case children suggesting that torso length has been preserved and limb growth compromised. In addition, ex-malnourished case children had evidence of functional impairment with their hand-grip strength