

There were 121 positive cultures positive, 79.3% in patients obeying the defined criteria and 91.7% with clinical predictors of positivity. *Campylobacter* was the most frequently identified agent (68.6%), followed by *Salmonella*. *Campylobacter* decreased within an increasing age whilst *Salmonella* showed an inverse pattern. *Campylobacter* was the most frequently identified agent throughout all seasons of the year, followed by *Salmonella*, except in the winter when *Yersinia* took the second place.

**Discussion** Sticking to accepted criteria for stool collection and/or to defined clinical features, increasing the yield of stool cultures.

#### PO-0132 ACID REFLUX INTO THE OESOPHAGUS AND EXERCISE: A PROSPECTIVE STUDY IN CHILDREN

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**Background and aims** It has been reported that gastro-oesophageal reflux (GOR) can be induced by exercise, as described in adult subjects; studies in children are lacking. We sought whether the presence of acid in the oesophagus may increase with exercise and its potential relationship with atopy and lung function in children.

**Methods** We recruited 45 patients (M/F: 30/15) aged  $11 \pm 2.7$  years with reported exercise-induced respiratory symptoms; subjects were asked for frequency of gastrointestinal symptoms. All patients did lung function before and after 24-h gastro-oesophageal (GO) pH monitoring; they also underwent exercise testing (treadmill) before removing GO catheter. GO-pH was also analysed for 6 min intervals before, during and after exercise. The gastro-oesophageal reflux disease (GORD) was defined as a 24-hour reflux index (IR)  $\geq 4.5\%$  and/or symptom index  $\geq 50\%$ . Total serum IgE levels were also assessed.

**Results** GORD was found in 11/45 (24.4%) of our patients; these children had also a higher IR score during exercise than patients without GORD ( $7.1 \pm 18.5$  vs  $0.5 \pm 2.3$ ,  $p < 0.05$ ). A fall of GO-pH was recorded during exercise, greater in children with GORD as compared with those without ( $17.2 \pm 42.2$  vs  $0.9 \pm 6.4$ ,  $p = 0.03$ ). The exercise-induced fall in GO-pH was associated with frequent gastrointestinal symptoms and correlated with IgE levels and baseline FEV<sub>1</sub>% (IgE:  $r = -0.37$ , FEV<sub>1</sub>%;  $r = -0.31$ ,  $p < 0.05$  for both).

**Conclusions** Our results suggest that oesophageal acidity increase with exercise, particularly in atopic children with frequent gastrointestinal symptoms and low baseline respiratory function.

#### PO-0133 GASTROESOPHAGEAL REFLUX IN INFANTS AND OSTEOPATHIC MANIPULATIVE TREATMENT: AN ALTERNATIVE THERAPY?

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**Background and aims** Several study have been reported that modifying vagus nerve control of transient lower esophageal sphincter relaxation can induce improvement of gastroesophageal

reflux disease (GERD). Our aim was to evaluate the efficacy of osteopathic treatment (OMT) in infants with GERD.

**Methods** We enrolled 40 infants (M/F:24/16), age ranged 1–18 months (median 4 month) attending for persistent reflux. Each patient performed I-GERQ-R questionnaire and ultrasonography of the gastro-esophageal junction before and after treatment. The ultrasound score was 0 to 3 on the basis of severity of reflux (number of reflux episodes in 10 min). Moreover each patient did an osteopathic treatment consisting in an extensive physical examination, to evaluate TART parameters (T = tissue texture changes; A = asymmetry; R = restriction of motion; T = tenderness). Then, a specific therapeutic intervention was chosen, treating only the parts of the body presenting greater TART modifications.

**Results** All the somatic dysfunctions observed before OMT (at the scale 32/40 patients, the condyles 36/40 patients, the occipito-mastoid suture 36/40 patients; the stomach 22/40 patients, the small epiploon 30/40 patients) disappeared after treatment. The average score of I GERQ-R questionnaire before and after treatment was  $22.7 \pm 4.7$  and  $17.2 \pm 4.5$  respectively ( $p < 0.05$ ). In 29 (72.5%) patients we found an improvement of ultrasound parameters (mean score before and after treatment was  $1.7 \pm 0.8$  and  $0.7 \pm 0.7$  respectively;  $p < 0.05$ ).

**Conclusion** OMT could be considered as an alternative treatment in infants with gastroesophageal reflux. Further data are needed to confirm our hypothesis.

#### PO-0134 COW'S MILK PROTEIN ALLERGY: ORAL FOOD CHALLENGE BEFORE 12 MONTHS OF AGE?

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To characterise the cases of cow's milk protein allergy (CMPA) followed in our GI Outpatient Clinic and determine how much parents save on extensively hydrolyzed milk (EHM) when oral food challenge (OFC) is performed <12 months (M).

CMPA patients observed between October2010-October2013 were included in this retrospective study based on Service's CMPA protocol: OFC >6 M, except at parents' request. Calculations: each package of EHM costs 20€ and has 102 doses and of infant formula (IF) costs 10€ and has 181 doses, according to each infant's nutritional needs. Statistical analysis: Mann-Whitney test.

Sixty-four children were included; 59% females. The median age of onset was 3 M (0.43–12 M). Most frequent symptoms were cutaneous ( $n = 37$ ) and gastrointestinal ( $n = 27$ ). IF was the main dairy product that triggered symptoms (64%;22% with hypoallergenic formula). Family history of atopy was positive in 63%;54% had atopic disease, namely atopic dermatitis (82%). Measurement of cow's milk-specific IgE was performed in 33;24 with positive results. Fifteen of 20 children with information about the use of IF in maternity had the first dose of CMP at that time. The first OFC was positive in 45%, and was performed at a median age of 10 M (3–39 M). Forty children had their OFC <12 M and in most cases ( $n = 25$ ) it was negative. Performing the OFC <12 M, each infant with a negative result spared 326€ on EHM. Tolerance was achieved at a median age

of 12 M (3–84 M). Children with bloody diarrhoea acquired tolerance earlier, median age 8 M (5–23 M), than the group with cutaneous symptoms, median age 14 M (4–84 M),  $p = 0.005$ .

It's safe and beneficial, both for children and parents, to perform OFC from 6 to 12 M.

**PO-0135 A PRELIMINARY STUDY OF THE CONSUMPTION OF FRUIT DRINKS IN 1–5 YEAR OLDS IN THE NORTH EAST OF ENGLAND AS A CONTRIBUTOR TO PRESCHOOL OBESITY**

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**Background** Sugar Sweetened Beverages contribute to obesity in older children but whether highly calorific Fruit Drinks (FD) contributes to preschool child obesity is unknown. We therefore quantified the beverage intake of preschool children and their parent's knowledge of the sugar content.

**Methods** Parents of children aged 1–5 years attending three North East England Acute and Outpatient Paediatric centres over six months completed questionnaires. Volume and types of beverages consumed, recommended daily intake (RDI) and parental knowledge of calorie content of three popular FDs were collected. FD calories, as a percentage of RDI, were calculated and compared with the child's BMI.

**Results** 304 questionnaires were analysed. 61% reported daily FDs with 33% exceeding their RDI. 28% were overweight or obese with the proportion rising from 24% in the under twos to 31% in the older children. Mean FD calorie intake as% of RDI was 5.5% with no association to increased BMI ( $p = 0.32$ , Mann Whitney U). Children in the lower and higher BMI centiles constituted the largest groups drinking >10% Fruit Drink RDI. Parents (99%) had no knowledge of their child's calorie intake or RDI with 76% unable to identify the highest calorie FD.

**Conclusion** No association between Fruit Drink intake and obesity was found.

61% of children drank Fruit Drink daily with 33% in excess of RDI.

Overweight and underweight children constituted the largest groups drinking >10% RDI of Fruit Drinks

Parents were unaware of their children's calorie intake, RDI or FD calorie content.

**PO-0136 INCREASED RISK OF VITAMIN B12 NUTRITIONAL DEFICIENCY IN LONG-TERM TREATED PATIENTS WITH PHENYLKETONURIA AND HYPERFENYLALANINEMIA**

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The aim of this study was to assess the prevalence of nutritional deficiency of vitamin B12 in long-term treated patients with

phenylketonuria (PKU) and hyperphenylalaninemia (HPA), together with parameters of vitamin B12 and metabolic control. **Methods** In 51 patients aged 3–48 years (28 children, 23 adults) was examined levels of active vitamin B12 in serum, folate concentration in blood, plasma homocysteine and methylmalonic acid concentrations in urine.

**Results** We found a statistically significant difference between the levels of folate in the blood among patients with PKU and HPA ( $p = 0.046$ , Mann Whitney U test). This difference was also statistically significant for adults with HPA and PKU ( $p = 0.004$ , Mann Whitney U test). There was a statistically significant difference in the proportion of normal homocysteine concentrations in plasma in the overall evaluation of both groups ( $p = 0.023$ , chi-square test). This difference was also statistically significant in adults with HPA and PKU ( $p = 0.032$ , chi-square test). In the group of adults we detected a statistically significant difference in the concentrations of active vitamin B12 in the blood as in the evaluation of the concentration and the proportion of patients with normal levels ( $p = 0.031$ , Mann Whitney U test,  $p = 0.006$ , chi-square test).

**Conclusions** In the analysed group of patients we demonstrated that our patients are at risk of vitamin B12 nutritional deficiency and the risk increases with age.

**PO-0137 WITHDRAWN**

**PO-0138 STRESS INDUCED GASTROINTESTINAL BLEEDING IN A PAEDIATRIC INTENSIVE CARE UNIT : WHICH RISK FACTORS SHOULD NECESSITATE PROPHILAXIS ?**

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**Objective** To determine the frequency and the risk factors of stress induced gastrointestinal bleeding (GIB) in critically ill children and to investigate the effect of prophylaxis.

**Setting** 14-bedded, tertiary care PICU

**Methods** Records of 182 children admitted consecutively from December 2012 to May 2013 were retrospectively reviewed. 136 patients were eligible. The age ranged from 40 days to 18 years. Diagnosis, demographic data, risk factors, administration of prophylaxis, drugs used in medication, presence and degree of GIB and complications were recorded.

**Results** The male-female ratio was 1.3. Mean age was 5.9. Mean PRISM III score was 12.2 and 49.3% had PRISM score  $\geq 10$ . Most frequent diagnosis was infectious diseases. Sixtyone (44.9%) children received prophylaxis in which antacids was used in 28(45.9%), sucralfate in 18(29.5%), proton pump inhibitors (PPIs) in 51(83.6%) and 5 (8.2%) received H2 receptor antagonist. The incidence of GIB was 15.4% ( $n = 21$ ), in which 66.7% ( $n = 14$ ) were mild, 23.8% ( $n = 5$ ) were moderate, 4.8% ( $n = 1$ ) was significant and 4.8% ( $n = 1$ ) was massive. In children who received prophylaxis 17 (27.9%) cases developed GIB. Mechanical ventilation were found to be the only risk factor significantly associated with stress induced GIB. Also; mechanical ventilation and trauma was strongly significant ( $p <$