IgA and IgG anti-TTG to increase sensitivity. There is a huge variation in the normal range of IgA TTG with the upper normal limit varying from 2.9 to 19.

The survey results were presented (AH) at the annual regional network meeting generating an active discussion amongst the attending immunologists, paediatricians, dieticians and specialist nurses, with these conclusions.

- The huge variation in normal levels, with lack of standardisation in TTG testing, is an issue in the region, as highlighted nationally.
- The Immunologists highlighted variations even within the same serological test, when using different batches requiring labs to conduct regular quality control checks.
- A network consensus followed with regards to provision of dietary review for all patients (particularly <10X serologic levels), to ensure adequate gluten intake before consideration of biopsy.

Conclusions pCD is a lifelong condition requiring an accurate diagnosis. The clinicians and immunologists continued to be challenged despite following the correct pathways and guidance. This study highlighting the strengths and benefits of a joint regional collaborative approach to help overcome some of these difficulties.

G42

LONG TERM SAFETY AND EFFICACY OF SINGLE DOSE PARENTERAL IRON IN CHILDREN WITH INFLAMMATORY BOWEL DISEASE IN A LARGE TERTIARY CENTRE

¹C Toh, ²R Hubbard, ²P Rao. ¹Faculty of Medicine, Dentistry and Health, University of Sheffield, Sheffield, UK; ²Department of Gastroenterology, Sheffield Children's Hospital, Sheffield, UK

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Background Iron-deficiency anaemia is a common complication amongst children with inflammatory bowel disease (IBD). Although single-dose parenteral iron (PIN) preparations are an easily available treatment for children, there are still concerns surrounding its adverse reactions.

Aims The primary aim of this study was to evaluate the safety, side effects and efficacy of IV iron maltoside 1000 (Monofer) at 6 weeks, 3 months, 6 months and 1 year after treatment in children with IBD. Also, to look for any evidence of iron overload.

Methods A comprehensive search was performed using the hospital's IBD database to identify patients who have been given PIN from 2012 to 2016. Primary indication, underlying diagnosis, dose of iron, adverse reactions and laboratory values were among the parameters recorded. Dose calculations were based on the Ganzoni formula. PIN was used only if oral iron therapy is ineffective, not tolerated, not advisable or iron-deficiency anaemia with haemoglobin levels of <100 g/L. Repeated measures ANOVA was conducted for statistical analysis.

Results A total of 29 patients were identified. The median age was 14 and median weight was 33.4 kg. Two patients did not have the full data set. Repeated-measures ANOVA conducted on 27 patients showed that mean haemoglobin differed significantly between time points [F (4, 104)=29.416, p<0.001]. Residuals were approximately normally distributed. Post-hoc tests using the Bonferroni correction revealed that mean

haemoglobin increased significantly by 6 weeks and remained stable thereafter (p<0.001).

Only one patient had an acute type 1 allergic reactions (not anaphylaxis). Two patients had hair loss at 3 months post-infusion which were unlikely to be secondary to iron overload. None of the patients had dysmetabolic iron overload syndrome (DIOS). All children had normal LFTs and GGTs with no evidence of diabetes, chronic fatigue or hepatosplenomegaly in their follow up.

Conclusion PIN appears to have sustained efficacy in the treatment of iron deficiency anaemia in children with IBD. Iron status increased significantly at 6 weeks and sustained till 1 year post-infusion. The immediate reaction rate was 3.7% and none of the remaining patients had any side effects including any evidence of DIOS.

G43(P)

DIFFICULTIES IN COMPLYING WITH THE BSPGHAN GUIDELINES FOR DIAGNOSIS AND MANAGEMENT OF CELIAC DISEASE (2013)

¹C Mitchell, ¹A Thakur, ^{1,2}N Onyeador, ¹I Bilal. ¹General Paediatrics, Ashford and St Peter's NHS Foundation Trust, London, UK; ²Paediatric Gastroenterology, St George's University NHS Foundation Trust, London, UK

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Aims To audit our paediatric department's practice of diagnosis and management of celiac disease, comparing it to the BSPGHAN and Coeliac UK guidance published in 2013, to review and consider improvements to our current practice.

Method Collection of data from 2015–2017 including all patients aged <18 years old with a positive tissue transglutaminase (tTG). Electronic records were used to gather information regarding other serological tests (endomysial antibodies (EMA)), genetic tests (HLA DQ2/DQ8), and biopsy results; as well as time-to-follow up with both the dietician and clinician.

Results Of the 55 children with a positive tTG there were sufficient data to include 40. 10/40 were asymptomatic; 30/40 symptomatic, and the ratio of females to males was 3.4:1.

This audit demonstrated that 67.5% were diagnosed according to the national guidelines, and for those cases where the guidance was not adhered to it was most commonly because a biopsy had not been performed (see table 1 below).

Abstract G43(P) Table 1

No genetic investigations	2
No genetic investigations or inadequate serology	1
Inadequate serology and no biopsy where indicated	2
No biopsy performed where indicated	6
Investigated on a gluten-free diet	2

Only 17% of patients were seen by the dietician within 2 weeks following diagnosis, and only 40% within 6 months. 77% were seen by a clinician at 12 months but only 47% had a repeat tTG at this appointment. Finally, only 20% of those eligible were transitioned to adult services.

Conclusion Clinicians face many difficulties when diagnosing celiac disease. Most notably convincing families to return to a gluten-containing diet prior to further investigations; and

encouraging families to consider a biopsy in asymptomatic patients. However, there are many occasions when serological tests have been omitted by clinicians, probably due to a lack of awareness.

Improvements are needed to reduce the length of time from diagnosis to dietician follow up, and follow up at 12 months needs to include repeat tTG assessment.

Finally, increased awareness is needed on the national policy to transition celiac patients to adult secondary care.

G44(P) BIOELECTRIC IMPEDANCE VECTOR ANALYSIS (BIVA) AND CLINICAL OUTCOME IN HOSPITALISED CHILDREN

^{1,2}S Roche, ¹NE Lara-Pompa, ³S Macdonald, ⁴K Fawbert, ⁵JE Valente, ⁴S Hill, ¹JCK Wells, ¹MS Fewtrell. ¹Childhood Nutrition Research Centre, UCL Great Ormond Street Institute of Child Health, London, UK; ²St Hughs College, University of Oxford, Oxford, UK; ³Dietetics Department, Great Ormond Street Hospital for Children NHS Trust, London, UK; ⁴Gastroenterology Department, Great Ormond Street Hospital for Children NHS Trust, London, UK; ⁵General Paediatrics Department, Great Ormond Street Hospital for Children NHS Trust, London, UK

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Aims Bioelectric impedance analysis (BIA) is a widely used, simple bedside technique, but clinical use is limited by the need to convert raw measurements to body composition, using equations that are potentially inappropriate. The use of the raw bioelectric impedance vectors (BIV), resistance (R), reactance (Xc) and phase angle (PA) – suggested to indicate body fluid, cell mass and cell health respectively – may be an alternative for monitoring disease progression/treatment. However, clinical experience of BIV in children is limited and previous studies have not standardised for age. We investigated predictors of BIV and their ability to predict clinical outcomes in children with complex diagnoses admitted to a children's hospital.

Methods R, Xc and PA were measured using BODYSTAT Quadscan 4000 on admission in 70 children aged 4.6–16.8 years (mean 10.0). R and Xc were indexed by height (H) and BIVSDS generated for age and sex using data from healthy children. Potential predictors (activity, wheelchair use, steroid treatment, enteral/parenteral nutrition); and clinical outcomes (greater-than-expected length-of-stay (LOS), complications (unplanned transfer to ICU, increased artificial nutrition, infection requiring antibiotics)) were recorded at discharge.

Results Mean R/HSDS was significantly higher (0.99 (SD 1.32)) and PASDS significantly lower (−1.22 (1.51)) than the population mean, with a wide range for all BIVSDS. No significant predictors of BIVSDS were identified. BIVSDS were not significantly different in patients with or without adverse outcomes although R/HSDS was higher in children with increased LOS (mean difference mean difference 0.42 (95% CI=−0.26 to −1.11) or complications (mean difference 0.49 (95% CI −0.34 to 1.33)).

Conclusion This group of complex patients had abnormal mean BIVSDS suggestive of reduced hydration and poor cell health. However, factors considered as clinical predictors showed no significant association, and BIVSDS were not significantly related to clinical outcomes; possibly reflecting the necessary use of generic predictors and outcomes in this heterogeneous population. Children with adverse outcomes showed a trend towards higher R/HSDS, suggesting lower hydration. Further investigation in specific patient groups, including those

with acute fluid shifts and using disease-specific outcomes, may help to better define the clinical role of BIV.

G45(P) AN AUDIT OF WEANING PREMATURE INFANTS AT CORRECTED AGE AND ASSOCIATED ORAL FEEDING OUTCOMES

S Russell, L Cairns, J Simpson, E Gentles. Neonatal Intensive Care Unit, Royal Hospital for Children, Glasgow, UK

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Aim To assess feeding outcomes when weaning infants born <32 weeks gestation at 4–6 months corrected age (CGA).

Background There is limited evidence to support weaning pre-term infants at 4–6 months CGA. Developmental Supportive Care is an integral part of treatment for premature infants at our site and we consider oral feeding to be a developmental skill. Our approach is to advise weaning at 4–6 months CGA, in line with other developmental skills. This is in contrast to the Consensus statement on weaning preterm infants produced in 2011. BLISS have recently (2017) updated their weaning guidelines and our audit provides evidence to support this. Our audit was carried out to ensure practice is associated with good oral feeding outcomes.

Method Data for 69 infants born <32 weeks gestation was collected using a specific proforma from August 2010 to October 2012, by a Speech and Language Therapist at developmental clinic.

Results 91% (63 infants) had not started weaning by 4 months CGA (i.e. by 17 weeks CGA). Of the 9% (6 infants) who had started weaning, median age was 14.5 weeks CGA (range: 13–16 weeks CGA). In the 63 infants weaned at CGA there were no reported problems in progression through textures up to 12 months CGA.

Conclusion In our cohort no increase in feeding related problems or aversions was identified in those weaned at 4–6 months CGA. We feel this supports our current weaning advice and highlights the importance of our Developmental Care programme. We acknowledge sample size is small and recognise that larger prospective data collection with a broader range of feeding related outcomes is required.

G46(P) OUTCOME OF CHILDREN WITH INFLAMMATORY BOWEL DISEASE AFTER SURGERY

N Kevlani. Paediatrics and Neonatology, Paras HMRI, Patna, India

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Aim To investigate the outcome after surgery in children with inflammatory bowel disease (IBD).

Method Case notes of patients who had surgery for IBD between November 1999 and January 2011 at a tertiary hospital in the UK were reviewed. Data related to relapses, acute readmissions, weights and heights one year before and up to a maximum of three years after surgery were collected. Mean Standard Deviation scores (SDS) were calculated for weights and heights. Outcomes were analysed using the paired t test.

Results 38 patients were eligible for the study. Of these case notes were available for 31 patients. 61% (n=19) had Crohn's Disease (CD) and 39% (n=12) had Ulcerative Colitis (UC).