

patients with AISC had UC and 2 IBDU. 40% of patients had simultaneous diagnosis of AILD and IBD, all presented with symptoms of bowel disease and abnormal GGT and/or aminotransferase activity (6/10 had PR bleeding). 15 (60%) patients were diagnosed with AILD and concomitant IBD after 19 months (mean time). In 7/15 gut symptoms improved since immunomodulators started but FC was raised, 3/15 had no gut symptoms but raised FC on screening and 5/15 developed bowel symptoms after liver diagnosis, in 3 of them FC was raised since liver diagnosis. Endoscopic features included pancolitis in 60% and ileitis in 20%. Histological features were more consistent with those of mild to moderate UC (78%). All patients diagnosed with AILD were started on steroids, 9/25 were already on Azathioprine before the endoscopic assessment for IBD.

Conclusions 20% of patients with primary diagnosis of AILD had IBD. 40% had simultaneous diagnosis; all had raised FC since AILD was identified. We recommend FC routinely in children with AILD for the early diagnosis of IBD. Colonoscopy should be considered in patients with symptoms of IBD and the ones with clearly elevated FC. The timing of the assessment is of paramount as immunosuppressive treatment can mask symptoms and change the disease activity.

P47 **SETTING UP A REGIONAL HOME CALPROTECTIN SERVICE DURING THE COVID-19 PANDEMIC OFFERING HOSPITAL-BASED TESTING TO LOCAL AND REGIONAL PAEDIATRIC IBD PATIENTS IN WESSEX**

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Background The first wave of the COVID-19 pandemic in the UK severely restricted our regional paediatric GI outpatient services affecting our ability to assess patients in hospital, further compounded by distance of travel of patients (An audit form 2019 showed 70% of patients endoscoped were from outside the local, rather than Southampton area). The issue was further compounded by some DGH's, who stopped offering the calprotectin test due to COVID-19 infection risk to the staff. Although home based calprotectin kits are also available, families using them have reported their use cumbersome and difficult to process tests at home. In addition, calprotectin results from other laboratories may be difficult to access. These limitations led to the development of a new regional service, in which samples taken at home are posted to the hub hospital laboratory (where the IBD clinic is based) for Calprotectin testing.

Aim To study the benefits of offering a service for posting faecal samples for calprotectin testing to a hub laboratory.

Methods Children (0–18 years) with IBD in the Wessex region, UK needing a calprotectin test were given postal faecal calprotectin packs (PFCP), either by hand in clinic or posted to their home. Each PFCP contained a labelled specimen bottle with immunology request form, bio-packaging box, sealable return bag (UN3373 compliant) with attached freepost label and instruction sheet. A Calprotectin cut off level of <200 was used as normal.

Results 63 patients (M=34, 54% & F=29, 46%) were given PFCP between 27th July & 5th of Nov 2020 with 52.4%

posted PFCP and 47.6% given PFCP by hand in the paediatric GI clinic. The patients resided at a mean distance of 41.6 miles (1 SD = 24.1 miles) as the crow flies from the hospital. A mean of 25 days (1SD = 10 days) were taken from posting/handling of PFCP to the lab test result being obtained.

The PFCP was returned by 50 patients (79.4% compliance) with a diagnosis of Crohn's disease 34.9%, UC 28.6%, IBDU 7.9%, oral ulcers 4.8% and 23.8% of patients referred for endoscopy with IBD like symptoms. 30% of the patients with IBD (15/50) posting the PFCP had an abnormal test result. This led to a change in management in 40% of the patients. In the patient group referred with suspected IBD only 1/15 patients had an abnormal calprotectin test. 70% of patients with a normal test were able to be reassured without further investigation.

Conclusion This is the first reported series, offering to a large region a robust method for samples to be taken at home and posted to a central hub laboratory for calprotectin testing during the COVID-19 pandemic. Test results were readily available, being performed in the same hospital site as the IBD clinic. Compliance with the new PFCP remains high with 80% using the new PFCP service, with value in early identification of patients who may not have much in terms of symptoms and avoidance of endoscopy in others with a normal calprotectin.

P48 **SHOCK COLON**

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Introduction Non-occlusive mesenteric ischaemia (NOMI) is rare in children. There are individual case reports of ischaemic colitis, with various underlying causes for the acute deterioration. The likely mechanism is hypoperfusion/reperfusion injury. The outcome tends to be poor. Potentially; because the initial hit to the whole system is so significant, or possibly because of the toxicity of the colonic insult. Promptness of colonic resection does not seem to improve survival.

In our institutions we recognised a series of critically ill patients with a similar pattern of colonic injury. The patients had a comparable clinical picture and outcome. Therefore, we hypothesised; a similar underlying pathophysiology might be responsible.

By collaborating, the expectation was that we would identify key learning points.

Aim We aimed to identify patterns in presentation and correlate these with, surgical and pathology findings. By studying our cohort and reviewing the existing literature, we hoped to identify a possible means of improving survival.

Subject and Methods We reviewed clinical notes, histology, radiology and laboratory results of 4 consecutive cases of idiopathic colonic gangrene associated with acute cardiovascular collapse. Patients presented over a 2-year period to our 2 institutions (both providing tertiary paediatric surgery). We reviewed the literature on young adults and children with ischaemic colitis and non-occlusive mesenteric ischaemia.

Results Four critically ill children (aged 1–14 years), requiring resection of ischaemic colon following sudden cardiovascular collapse, presented to our institutions over a 2-year period.

Three had a preceding history of recent illness; the other had been well prior to out of hospital cardiac arrest. The 3 who were unwell experienced: headache (1), cough (1) and polyuria and polydipsia (1) for up to 2 weeks prior to hospital attendance. None had abdominal or gastrointestinal (GI) symptoms in their initial symptoms, although all but 1 developed GI upset during their rapid deterioration phase. Three had cardiac arrest before colectomy. All developed abdominal distension after resuscitation. All had significant derangement of blood sugar on monitoring. All 4 received inotropic support before surgery. All 4 had total colonic ischaemia diagnosed during surgical intervention and on histology report. There was no other underlying disease on histology (bowel was ganglionic). No infective organism was isolated (specifically all were negative for clostridium difficile). All 4 died due to multi organ failure.

Summary and Conclusion From this case series we could not identify any specific condition that predisposed these 4 children to develop non occlusive mesenteric ischaemia and colonic injury. Therefore we could not clearly identify means of prevention.

All 4 had a sudden deterioration over less than 24 hrs, and all received inotropes before developing abdominal distension. In addition, 3 out of 4 had cardiac arrest and return of circulation before colectomy. These would support the hypothesis of hypoperfusion/reperfusion injury.

Even though all 4 patients had colonic resection as part of the resuscitation the outcomes were very poor leading to multi organ failure or cerebral ischaemia and death.

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SHOULD CHILDREN WITH COELIAC DISEASE BE SCREENED FOR TYPE 1 DIABETES MELLITUS IN ANNUAL BLOODS? AN AUDIT OF FOUR YEARS SCREENING ACROSS FOUR PAEDIATRIC CENTRES IN ENGLAND

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Introduction The genetic association of Coeliac Disease (CD) and Type 1 Diabetes Mellitus (T1DM) is well known. Although NICE does not include annual screening for CD in the T1DM guidance,¹ children with T1DM are routinely screened for CD in England. The incidence of children with CD on gluten free diet (GFD) developing T1DM appears to be small.² The value of screening for T1DM in CD patients is thus not known.

Methods A 4-year retrospective review was conducted of a case series of children with known CD attending outpatient clinic across 4 centres. Patients were diagnosed as per ESPGHAN guidelines. In these centres HbA1c is tested as part of the CD annual review to detect impairment of glucose metabolism (> 41 mmol/mol). Abnormal HbA1c was documented in patients with CD.

Results 345 children with CD who had HbA1c screening were identified. Children with T1DM diagnosed prior to developing CD were excluded from analysis. Six of the 345 patients

(1.7%) were identified with an abnormal HbA1c. Only 2/6 were confirmed as having T1DM (1 within 4 months of diagnosis); 2/6 had subsequent glucose tolerance tests that were normal, 1 patient had Turner's syndrome and was taking growth hormone, which has an impact on glucose metabolism, and 1 patient is undergoing further investigations for Type 2 Diabetes Mellitus (high BMI).

Discussion The findings confirm the conclusion of previous studies that showed that a new diagnosis of T1DM in known CD children is uncommon. The annual screening for T1DM in children with CD who have developed impaired glucose tolerance is questionable. There is no standard screening test for T1DM, and HbA1c as a screening test for T1DM is also not routinely used. The exact mechanism for expressing co-existing autoantigens that generate both autoimmune conditions is poorly understood, and it is not clear whether the GFD in CD plays a role.

REFERENCE

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SINGLE CENTRE EXPERIENCE OF ENDOSCOPIC BALLOON DILATATION FOR LUMINAL STRICTURES IN PAEDIATRIC PATIENTS WITH CROHN'S DISEASE

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Introduction/Background Intestinal strictures are a complication of Crohn's disease despite optimal medical management. Endoscopic balloon dilatation is frequently used for management of simple strictures in adults in comparison to the paediatric population. Therapeutic endoscopy is rarely performed in paediatric gastroenterology centres in the UK. Strictures in the duodenum, jejunum, ileal and colonic area are accessible by endoscopy and enteroscopy. Endoscopic balloon dilatation is a less invasive treatment option for management of short strictures and can defer surgical intervention.

Aim We aimed to evaluate the outcome of paediatric patients undergoing stricture dilatation over a 10-year period.

Subjects and Methods We retrospectively reviewed all paediatric patients with Crohn's disease who underwent endoscopic balloon dilatation at a tertiary paediatric gastroenterology centre in the last 10 years (2010 to 2020). Strictures were identified using magnetic resonance enterography (MRE) and also during endoscopy. Patients were booked for endoscopic balloon dilatation if they were symptomatic and had pre-stenotic dilatation on MRE or inability to pass colonoscopy into stenosed lumen at previous endoscopy. Both paediatric colonoscopy and single balloon enteroscopy was used for endoscopic balloon dilatation which was done under fluoroscopy guidance. Clinical and endoscopic data were collected from electronic patient records.

Results During the 10-year period 20 patients with Crohn's disease underwent endoscopic balloon dilatation. The mean age of diagnosis of Crohn's disease was 12.45 years (5–16.4 yrs) and the mean age at the time of the occurrence of first stricture was 14.2 years (10.9– 17.9 yrs). 65% patients were on biologics and 85% were on an