

0–5). CRBSI patients had significantly more PN infusions/week (7, range 2–7 vs 7, range 1–7; $P < 0.0001$), presence of enterocutaneous stoma (71.3% vs 27%; $P < 0.0001$), double-lumen CVC (24.1% vs 4.8%; $P < 0.0001$), tube feeding (38.9% vs 23.8%; $P < 0.05$) and less oral/enteral feeding (53.7% vs 77.8%; $P < 0.0005$) compared to patients with no episodes of CRBSI.

Motility disorder group showed highest risk of CRBSI (HR 2.1; [95% CI 1.84–3.21]; $P < 0.00001$), total episodes of CRBSI (61.3% vs SBS 31.8% and Ent 27.6%; $P < 0.0001$) and CRBSI rate/1000 catheter days (motility disorder 2.7/1000, SBS 1.17/1000, Ent 1/1000; $P < 0.0001$).

Log-rank survival analysis showed that frequency of PN infusion/week (HR 1.3; [95% CI 1.10–1.51]; $P < 0.0001$), enterocutaneous stoma (HR 3.9; [95% CI 1.95–7.76]; $P < 0.0001$), absence of ICV (HR 2.37; [95% CI 1.17–4.81]; $P < 0.05$), double-lumen CVC (HR 2.51; [95% CI 1.70–3.86]; $P < 0.01$), age under 5 years (HR 2.26; [95% CI 2.16–3.39]; $P < 0.000001$) and male sex (HR 2.51; [95% CI 1.64–3.86]; $P < 0.00001$) were significantly associated with higher CRBSI rate. Conversely oral/enteral feeding significantly reduced the risk of CRBSI (HR 0.54; [95% CI 0.47–0.98.]; $P < 0.001$). COX multivariate analysis showed that only enterocutaneous stoma, age < 5 years and double-lumen CVC were independently associated with a higher risk of CRBSI.

Conclusion Almost half of the children receiving home PN for IF do not develop CRBSI. Children with motility disorder are at highest risk of CRBSI. Moreover, the presence of enterocutaneous stoma, double-lumen CVC and age < 5 years significantly increase the risk of developing CRBSI. These risk factors should be considered in the management of home PN in children with IF.

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CLINICAL GENOMICS FOR THE DIAGNOSIS OF MONOGENIC FORMS OF INFLAMMATORY BOWEL DISEASE: THE 2020 ESPGHAN POSITION PAPER AND ITS IMPLICATIONS FOR UK SERVICE PROVISION IN 2021

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Background It is important to identify patients with monogenic IBD since management including response to biologics and surgery plus the role of stem cell transplantation may differ from classical IBD. We report on the 2020 Position paper of the PORTO group of ESPGHAN for the use of genomics to diagnose monogenic causes of IBD.

Methods Paediatric IBD specialists from the Paediatric IBD Porto group of the European Society of Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) and specialists from several monogenic IBD research consortia reached a consensus of standard of care. Our systematic literature review covered indications, technologies (targeted panel, exome and genome sequencing), gene panel setup, cost-effectiveness of genetic screening, and requirements for the clinical care setting.

Results Next-generation DNA sequencing technologies are recommended to diagnose monogenic causes of IBD in routine clinical practice, embedded in the setting of

multidisciplinary patient care. Routine genetic screening is not recommended for all IBD patients but instead genetic testing should be considered in the context of age of IBD onset (infantile IBD, very early onset IBD, paediatric or young adult IBD) and on further key criteria such as family history, relevant comorbidities and extraintestinal manifestations. Genetic testing is also recommended in advance of hematopoietic stem cell transplantation. We present a diagnostic algorithm that includes a gene panel of seventy-five monogenic IBD genes. We discuss how these recommendations can be implemented from 2021 onwards into the UK NHS health care system. Lastly, we present a UK-focused health care utilisation pathway highlighting the available UK clinical resources, clinical targeted panel sequencing and exome sequencing strategies in the UK, and regional immune validation pathways.

Summary Genomic technologies should be considered an integral part of patient care to investigate patients at risk for monogenic forms of IBD in the UK.

P16

DIAGNOSIS AND MANAGEMENT OF FUNCTIONAL GASTROINTESTINAL DISORDERS: A CLINICAL AUDIT

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Background Functional gastrointestinal disorders (FGIDs), now understood as disorders of gut-brain interactions, are a group of recurring gastrointestinal symptoms which after appropriate medical evaluation cannot be attributed to another medical condition. Clinical evaluation and management remain challenging. The recently updated Rome IV criteria are symptom-based guidelines enabling classification and prevalence estimates of childhood FGIDs.

Aims To determine the prevalence of FGIDs amongst children presenting to Alder Hey gastroenterology outpatient clinics according to Rome IV criteria. To compare Rome IV with clinical diagnoses and describe clinical management.

Methods The referral letters and case records of all children attending gastroenterology clinics in January 2019 were

Abstract P16 Table 1 Diagnoses according to Rome IV criteria and clinical assessment and clinical management

Rome IV diagnosis N definite/probable (%)	Clinical diagnosis N (%)	Clinical management N
IBS 24/3 (42.9)	IBS	11 (40.7) Dietary review/ modification 11
	Abdominal pain	6 (22.2) Anti-spasmodic 8 Stool softener/laxative 8
	Functional pain	3 (11.1) PPI 4 Symptom/stool diary 2
	Non-specific symptoms	2 (7.4) Psychological therapy/ review 2
	Cyclic vomiting	1 (3.7) Threadworm eradication
	Cow's milk allergy	1 (3.7) 2
	Gastritis/ constipation	1 (3.7) Anti-diarrhoeal 2 Probiotic 1
	None given	2 (7.4)

Functional constipation	9/4 (20.6)	Constipation	9 (69.2)	Dietary review/ modification 4
		GOR	1 (7.7)	Stool softener/laxative 4
		Cow's milk allergy	1 (7.7)	Symptom/stool diary 2
		Abdominal pain	1 (7.7)	PPI 1
		Possible polyp	1 (7.7)	Probiotic 1 Rifaximin 1 Anal sphincter Botox injection 1
Functional dyspepsia	9/0 (14.3)	IBS	3 (33.3)	Dietary review/ modification 5
		GOR	3 (33.3)	PPI 3 Anti-spasmodic 1
		Oesophagitis	1 (11.1)	
		Nausea, early satiety	1 (11.1)	
		Non-specific symptoms	1 (11.1)	
Functional vomiting	5/0 (7.9)	Oesophagitis	1 (20)	PPI 3
		IBS	1 (20)	Symptom diary 1
		Intermittent vomiting	1 (20)	Dietary review/ modification 1
		Chronic nausea	1 (20)	Psychological therapy/ review 1
		None given	1 (20)	Laxative 2 Anti-diarrhoeal 1
FAP-NOS	3/0 (4.8)	Constipation	1 (33.3)	Dietary review/ modification 3
		IBS	1 (33.3)	Stool diary 1 Laxative 1
		None given	1 (33.3)	
CVS	2/0 (3.2)	Cyclic vomiting	1 (50)	Laxative 2
		Abdominal pain, vomiting	1 (50)	
Rumination syndrome	1/1 (3.2)	Rumination syndrome	2 (100)	None 2
Abdominal migraine	0/1 (1.6)	Abdominal migraine	1 (100)	Dietary review/ modification 3 Anti-spasmodic 1
Functional nausea	1/0 (1.6)	Nausea and early satiety	1 (100)	Dietary review/ modification 1

IBS: Irritable Bowel Syndrome
 FAP-NOS: Functional abdominal pain - not otherwise specified
 CVS: Cyclic vomiting syndrome
 GOR: Gastroesophageal reflux
 PPI: proton pump inhibitor

reviewed. Patients were classified according to the Rome IV criteria and diagnoses assigned following clinical assessment, investigations, and follow-up, and clinical management, were recorded.

Results In total, 53/228 (27.6%) children had an FGID according to the Rome IV criteria. Sufficient information was available to make a definite FGID diagnosis using the Rome IV criteria in 44 (83.0%) cases. The most common diagnoses were IBS (27; 42.9%) and functional constipation (13; 20.6%); 10 children (18.9%) had two FGIDs. Clinical diagnoses and clinical management varied markedly within each Rome IV diagnosis (table 1).

Conclusion Use of the Rome IV criteria in routine practice is achievable and would likely better capture the clinical burden

of these common conditions through greater consistency in clinical diagnosis. In addition, use of the criteria would encourage quality improvement projects and research to better inform clinical management.

P17 DO NAFLD PATIENTS ENGAGE WITH ADDITIONAL WEIGHT MANAGEMENT SUPPORT BETWEEN APPOINTMENTS?

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Background and Aim With the exponential increase in diagnosis of non-alcoholic fatty liver disease (NAFLD) in children and young people (CYP) in the UK, the numbers of CYP attending tertiary NAFLD clinics continues to rise. Though there is no convincing evidence that pharmacological therapy can halt or reverse disease, there is strong evidence that 5–10% weight loss can improve or reverse the condition. From a liver surveillance perspective, appointments with bloods and imaging every 6–12 months are deemed sufficient, but are not adequate to support diet and lifestyle changes. The purpose of this study was to determine whether patients and their parents/carers engaged with input between appointments, and whether it improved weight loss.

Subjects and Methods All patients who attended NAFLD clinic requiring weight management support (January - August 2018) were offered follow up between appointments. A phone call or email was sent within six weeks of the appointment. Where phone calls were unanswered a message was left, and a letter sent if no answering service. If there was no response, no further contact attempts were made. Clinical, biochemical and anthropometric data were collected on all CYP who attended clinic; patients were reviewed 6–12 monthly. Diagnosis of NAFLD was made by paediatric hepatologist with biopsy or a combination of radiological and biochemical data on exclusion of all other known causes of liver disease. CYP were excluded if they attended another dietetic service regularly, were achieving sufficient weight loss, or weight management was not the primary reason for review. Body mass index (BMI) was calculated and converted to z-scores (WHO criteria).

Results During the study period 33 CYP (11F) were offered additional follow up; all agreed. Mean (SD) age was 15.0 (2.15) years at initial appointment. A phone call was requested by 17(52%) and 16(48%) preferred email. Contact was made with the parent/carer in 19 cases (58%) and 14(42%) directly with the CYP. Contact was made with 15(45%), nine (60%) by phone and six (40%) by email. Of those who received additional follow up five (33%) had a second contact and one (3%) a third contact. Mean (SD) follow up time was 37.9 (2.41) weeks. For the 24(73%) patients with both initial and follow up data, mean (SD) BMI z-score at initial appointment was 3.19(0.53) and follow up 3.23(0.62). There was no difference between responders/non-responders in BMI z-score change.

Summary and Conclusions Although all the CYP agreed to have additional follow up, only 45% responded. The preference for contact was via phone and with parent/carer. A limitation was that only one attempt was made to reach each