VARIATION IN SPECIALIST GASTROENTEROLOGY SERVICES FOR PATIENTS WITH CYSTIC FIBROSIS IN THE UK

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Introduction Cystic fibrosis (CF) is a common genetic disorder affecting 10,500 people in the UK. While pulmonary manifestations are often most severe, CF also affects the liver, intestines, and pancreaticobiliary system, leading to a considerable burden of gastrointestinal (GI) disease. However, the provision of GI services within UK CF centres has not been extensively studied.

Methods This work examined the models of GI care delivered to adults and children with CF in the UK. An online survey was distributed to CF clinicians and centres in December 2019.

Results Forty-nine responses were received from 42 UK CF centres (20 adult; 22 paediatric) caring for over 8,000 patients. Adult centres were larger with a mean of 263 patients (range 90–600), compared to 140 patients (range 6–365) in paediatric centres. GI symptoms requiring investigation or treatment were common, affecting 60% of patients in adult centres, and 30% of patients in paediatric centres.

Twenty-eight centres (57%) made CF-GI referrals to the general gastroenterology service, 13 (26%) had a named gastroenterologist to which they referred, and three centres had a gastroenterologist within the CF team. For inpatient GI review, 30 centres (61%) referred to the general GI service, with only eight centres having access to a named gastroenterologist with CF interest. Eleven centres (22%) reported no access to face-to-face inpatient review. Only 9% of respondents had a dedicated CF-GI clinic, and formal joint working with the CF team only occurred in two centres. Two-thirds of units lacked specific CF bowel cancer surveillance guidelines.

While 47% of respondents said that their service provided good/excellent GI care, 23% reported that they were unable to provide adequate GI care for patients. Respondents stated that increased gastroenterologist interest and expertise in CF would help improve GI services, as would more coordinated working practices, including joint CF-GI clinics, MDTs, and teaching. Respondents identified barriers to service improvement including limited clinician time, a lack of specific funding, and the challenges of clinic capacity and infection control.

Conclusions Patients living with CF have a substantial need for specialist GI care. There is considerable unwarranted variation in GI provision between UK CF centres. We propose the development of inter-specialty service standards that highlight successful models of care, and identifying ring-fenced funding for CF-GI services via specialist commissioning budgets could improve patient care. In addition, we plan a tandem survey this Spring of gastroenterologist confidence in CF-GI management.

HIGH INCIDENCE OF POSITIVE HYDROGEN BREATH TESTS FOR SMALL INTESTINAL BACTERIAL OVERGROWTH USING LACTULOSE: FOLLOW-UP


Introduction A small audit previously conducted within our department and presented at the BSG 2019 questioned the ‘North American Consensus’ recommendation of using a rise in hydrogen of ≥20 ppm within 90 minutes as the positive threshold for Small Intestinal Bacterial Overgrowth (SIBO). We previously reported a high positive result rate using lactulose compared to glucose if the rise in hydrogen of ≥20 ppm within 90 minutes was adhered to when lactulose was administered. A follow on audit has been undertaken.

Methods Adult patients attending the GI Physiology department for a glucose hydrogen breath test between April 2019-February 2020 were audited. All patients included in the audit had received a ‘positive’ SIBO test using lactulose (rise within 90 minutes) ≤6 weeks prior. The new AGIP 2019 guidelines were adhered for both tests. After a baseline sample was taken, 75 g of glucose in 300 mL of water
was ingested by the patient. Breath samples were taken every 15 minutes for the first 90 minutes post-ingestion, and then every 30 minutes for at least 120 minutes. Results were analysed to determine the number of patients who met the diagnostic criteria for SIBO (≥20 ppm above the baseline).

**Results** 27 patients were included in this audit (19F, 8M). 3 patients (F) were found to be positive for SIBO, and 24 patients (16F, 8M) were found to be negative for SIBO, as there was no significant rise in expired hydrogen (≥20 ppm above baseline within 180 minutes).

**Conclusions** Only 11.1% of audited patients were diagnosed with SIBO following a glucose hydrogen breath test, despite a previous ‘positive’ lactulose breath test following the ‘North American Consensus’ recommendation. Interestingly, this is identical to the audit performed last year. The results of these two audits suggest that a lactulose test alone should not be relied upon to diagnose SIBO, due to the high false positive rate, and should be followed by a glucose hydrogen breath test to confirm the suspected diagnosis if a rise in lactulose is seen within 90 minutes.

**REFERENCES**

**P266 PREVALENCE OF LACTOSE MALABSORPTION IN COELIAC DISEASE AND SYMPTOM CORRELATION**
Sarah H Coleman*, Anupam Rej, Elisabeth MR Baggus, David S Sanders. Academic Unit of Gastroenterology, Royal Hallamshire Hospital, Sheffield Teaching Hospital NHS Foundation Trust, Sheffield, UK

10.1136/gutjnl-2020-bsgcampus.340

**Introduction** Coeliac disease (CD) is a frequent cause of secondary lactose malabsorption. Many methods are available for the diagnosis of lactose malabsorption. The aim of this study was to assess the prevalence of lactose malabsorption in individuals with CD, as well as symptom correlation with test results.

**Methods** Patients were prospectively recruited between February 2018 and October 2019. Individuals with a potential new diagnosis of CD (positive IgA-EMA/IgA-TTG) or established CD had a duodenal biopsy to assess for lactose malabsorption (Lactose Intolerance Quick Test [LIQT], BIOHIT Oyj, Helsinki, Finland) at time of gastroscopy. Subsequent to this, individuals had a lactose hydrogen breath test (LHBT). Symptoms around the time of gastroscopy were assessed, to allow assessment of symptom correlation with lactose malabsorption (e.g. abdominal pain, bloating, diarrhoea, borborygmi).

**Results** 97 patients were prospectively recruited; out of these 24 had a LHBT suggestive of small intestinal bacterial overgrowth (SIBO) and were excluded. Of the remaining 73 patients (n= 54 female, median age = 47 years), 50 patients had a potential new diagnosis of CD and 23 had established CD. The total prevalence of a positive duodenal lactase test was 43.8%, compared to 15.1% for a positive LHBT. The prevalence of lactose malabsorption was significantly higher in individuals with villous atrophy compared to those without, when using the duodenal lactase test (p<0.01). Table 1 highlights the prevalence of lactose malabsorption in each group. There was no significant correlation between symptoms compatible with lactose intolerance detected by either LHBT or duodenal lactase test (p=1.00).

**Conclusions** The prevalence of lactose malabsorption was higher in individuals with CD using the lactase test compared to the LHBT. The prevalence of lactose malabsorption was significantly higher in those with villous atrophy (VA) compared to those without. Although symptom correlation was poor there may be value in using LIQT when assessing CD patients with persisting symptoms.

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<tr>
<th>Abstract P266 Table 1 Prevalence of Lactose malabsorption</th>
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<tr>
<td>Villous Atrophy (Marsh 3a or above)</td>
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<td>--------------------------------------</td>
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<tr>
<td>Positive LHBT</td>
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<tr>
<td>Potential new diagnosis of CD (n=50)</td>
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<td>Established CD (n=23)</td>
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<td>Total (n=73)</td>
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**P267 REDEFINING THE DIAGNOSIS OF TYPE 1 REFRACTORY COELIAC DISEASE USING URINE GLUTEN IMMUNOGENIC PEPTIDES**

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10.1136/gutjnl-2020-bsgcampus.341

**Introduction** Refractory Coeliac Disease (RCD) is defined as ongoing symptoms or signs of malabsorption with associated villous atrophy (VA) despite strict adherence to a gluten free diet (GFD). However, assessment of dietary adherence is challenging. The utility of urine gluten immunogenic peptides (GIP) in patients with RCD1 was assessed for the first time in the literature.

**Methods** 2553 patients with coeliac disease (CD) were reviewed at Sheffield Teaching NHS Foundation Trust between 1998 and 2019. 5.1% (n=103) of patients had RCD, with 64.1% (n=66) of these being classified as RCD1, and 35.9% (n=37) being classified as RCD2 complicated coeliac disease (CCD). From the RCD1 cohort, 22 patients (33.3%) were successfully treated with budesonide, with 44 patients (66.7%) having ongoing VA. All of these patients...