

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 ( $\geq 20$  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 ( $\geq 20$  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

1. Kirton E, *et al.* High incidence of positive hydrogen breath tests for small intestinal bacterial overgrowth using lactulose compared to glucose. *Gut* 2019;**68**(Suppl 2):A1–A269.
2. Rezaie A, *et al.* Hydrogen and Methane-Based Breath Testing in Gastrointestinal Disorders: The North American Consensus. *The American journal of gastroenterology* 2017;**112**(5):775–84.
3. Association of Gastrointestinal Physiologists (AGIP) Proposed Standardised Testing Protocol for Hydrogen/Methane Breath Testing (HMBT) to Assess Small Intestinal Bacterial Overgrowth (SIBO) and Carbohydrate Malabsorption (2019)

## P266 PREVALENCE OF LACTOSE MALABSORPTION IN COELIAC DISEASE AND SYMPTOM CORRELATION

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**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.

## P267 REDEFINING THE DIAGNOSIS OF TYPE 1 REFRACTORY COELIAC DISEASE USING URINE GLUTEN IMMUNOGENIC PEPTIDES

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**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

**Abstract P266 Table 1** Prevalence of Lactose malabsorption

	Villous Atrophy (Marsh 3a or above)		No villous atrophy (Marsh 0-II)		Villous atrophy vs no villous atrophy	
	Positive LHBT	Positive Lactase test	Positive LHBT	Positive Lactase test	Positive LHBT	Positive Lactase test
Potential new diagnosis of CD (n=50)	17.9% (n=7)	53.8% (n=21)	0.0% (n=0)	45.5% (n=5)	p=0.32	p=0.74
Established CD (n=23)	0.0% (n=0)	75.0% (n=3)	21.1% (n=4)	10.5% (n=2)	p=1.00	p=0.02
Total (n=73)	16.3% (n=7)	55.8% (n=24)	13.3% (n=4)	23.3% (n=7)	p=1.00	p<0.01