PTU-044 SMALL BOWEL BACTERIAL OVERGROWTH IN COELIAC DISEASE: A CAUSE OF PRESENTING SYMPTOMS?

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Introduction The relationship between small intestinal bacterial overgrowth (SIBO) and coeliac disease is poorly understood. SIBO is recognised as a cause of persisting symptoms in patients with treated coeliac disease. However, there are very few data on SIBO in untreated coeliac disease. We aimed to assess the prevalence of small bowel bacterial overgrowth in untreated coeliac disease, and to compare with non-coeliac controls.

Methods Data were collected from consecutive patients with a new diagnosis of coeliac disease, and non-coeliac controls having glucose hydrogen-breath test (GHBT) for gastrointestinal symptoms. All subjects had GHBT performed on a normal, gluten containing diet. A subset of coeliac patients was retested after 6 months on a gluten-free diet (GFD). Concurrent serology (endomysial antibody (EMA) and tissue transglutaminase (tTG)), symptoms, biochemical data (B12, folate, iron, haemoglobin), and duodenal histology were recorded from the coeliac group. None had antibiotics in the 4 weeks prior to testing. A positive result was a rise in hydrogen of at least 20ppm, or methane of 12ppm, over the baseline for each gas.

Results 43 patients with untreated coeliac disease were identified, 13 male, median age 47 years (range 18–75). They were compared against 43 age and sex matched non-coeliac controls. In the coeliac group 8/43 (18.6%) had a positive result compared with 4/43 (9.3%) controls (p=0.35). Those with coeliac disease had similar baseline values of hydrogen (9.6 ppm ± 8.8) compared with non-coeliacs (11.1 ppm ± 6.7).Peak hydrogen values in coeliacs were significantly lower (12.6 ppm ± 13.6) than in non-coeliacs (28.3 ppm ± 51.6). In the coeliac group, 4/8 with a positive result had a significant rise in methane but not hydrogen. Positive result in the coeliac group was not associated with age, sex, tTG level, presenting complaint, or histological features. 12 patients, including 3 with a positive methane result

were retested on GFD. All three were persistently methane positive but the absolute peak methane levels had fallen from a mean of 64 ppm to a mean of 49 ppm. There was no significant difference between the peak level of hydrogen before (7.2 ppm ± 4.2) or after (8.8 ppm ± 5.3) gluten-free diet. Likewise there was no significant change in peak levels of methane before (19.5 ppm ±) or after (16.9 ppm ±) gluten-free diet.

Conclusion 18.6% of patients presenting with new diagnosis coeliac disease may have SIBO which could contribute significantly to the symptom profile. Clinicians should be mindful of SIBO as a cause of presenting symptoms as well as persisting symptoms in coeliac disease.

Competing interests None.

Keywords bacterial overgrowth, Coeliac Disease.