

an IBS symptom questionnaire, the Hospital Anxiety and Depression Scores (HAD), and WHO-QoL questionnaire. The Primary outcome was a reduction in total cost over the follow up period. Secondary outcomes were a reduction in HADS and an increase in WHO-QoL

**Results** 24 patients have been enrolled into the clinic to date. The first 5 patients have been analysed. There were 22 fewer contacts after COGS attendance (inpatient, outpatient, emergency department, and day case). Follow up was between 5 and 7 months. This was a reduction of 4.4 contacts per patient (0.6 – 0.9 contacts per patient per month) Overall costs were £8,392 lower, equivalent to £1,678 saving per patient (£240 – £336 per patient per month). Individual WHO-QOL-BREF results have shown up to a 23 point increase. Staff reflections can be summarised as a growing confidence in the power of listening and acceptance of incremental gains in symptoms.

**Conclusions** We have demonstrated that a novel multidisciplinary approach to patients in gastroenterology is cost effective, leads to increased staff satisfaction and have preliminary data showing improved patient reported outcomes.

#### PWE-081 HYDROGEN BREATH TESTING: HIGH INCIDENCE OF SMALL INTESTINAL BACTERIAL OVERGROWTH DIAGNOSIS USING LACTULOSE VERSUS GLUCOSE

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**Background** A hydrogen breath test is an inexpensive, non-invasive and safe diagnostic test used to investigate intestinal disorders, including suspected Small Intestinal Bacterial Overgrowth (SIBO). The recent publication of the North American Consensus statement<sup>1</sup> suggests a rise  $\geq 20$  ppm of hydrogen within 90 min as an ideal threshold for a positive test to suggest the presence of SIBO following ingestion of glucose or lactulose. As lactulose is a non-digestible disaccharide, it is possible that such a rise during a lactulose test is due to fermentation in the colon, rather than an indicator of SIBO. A small retrospective audit was undertaken to investigate how many patients with a positive lactulose test for SIBO had a subsequent positive glucose test.

**Methods** Adult patients who had previously attended for a lactulose hydrogen breath test which established the presence of hydrogen-producing bacteria and met the diagnostic criteria for SIBO were included in this audit. All patients attended for a glucose hydrogen breath test within 6 weeks of their lactulose breath test, and had not received antibiotic therapy during this time period. After a baseline reading, patients provided a breath-hydrogen sample every 15 min for 60 min post ingestion of a glucose solution. Further breath hydrogen samples were then taken every 30 min for 180 min. Results were analysed to determine the number of patients who met the diagnostic criteria for SIBO ( $\geq 20$  ppm rise in hydrogen above baseline within 180 min).

**Results** 18 patients (11F, 7M) were included in this small audit. 2 patients (F) were found to be positive for SIBO, whereas 16 patients (9F, 7M) were concluded to be negative,

as they did not demonstrate a significant rise in expired hydrogen ( $\geq 20$  ppm above baseline) within 180 min. 11.1% of patients included in this audit had SIBO confirmed with a glucose hydrogen breath test, despite all having a positive lactulose test using the criteria suggested in the North American Consensus paper.

**Conclusion** Based on the lactulose results alone, the majority of patients in this audit (88.9%) would have been reported as having a SIBO, despite a negative glucose test. Using lactulose alone as a substrate to diagnose SIBO may therefore provide a false positive result, potentially leading to misdiagnosis and inappropriate use of antibiotics.

#### REFERENCE

1. 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):77–4.

#### PWE-082 THE ART OF COMBINING CLINICAL INTUITION AND NUCLEAR MEDICINE IN DIAGNOSING BILE ACID MALABSORPTION

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**Introduction** NICE DG7 (2012) highlights the problems of SeHCAT scanning in the diagnosis of Bile Acid Malabsorption (BAM) for patients presenting with IBS-D. 2018 BSG guidelines for the investigation of chronic diarrhoea recommend both SeHCAT scanning (for the diagnosis of BAM) and colonoscopy (for diagnosis of microscopic colitis), which can occur in up to 25% and 10% of cases of IBS-D, respectively. Nocturnal symptoms and incontinence are 'hallmark' symptoms for microscopic colitis. This retrospective study evaluates the use of SeHCAT scanning at a London teaching hospital and explores if similar 'hallmarks' exist for BAM.

**Methods** The patient cohort was identified by searching the CRIS database from inception to Oct 2018 whilst clinical data was extracted from the electronic patient record system. SeHCAT scans were performed using <sup>75</sup>Se-hemofolec acid taurine capsules at a dose of 0.4MBq and 0.3mSv. Gamma counts were recorded 3 hours and then 7 days post capsule administration using a camera detecting the 27–80keV photo peak and retentions of <15% were considered abnormal. Data collected included demographics, clinical presentation (abdominal pain, diarrhoea, bloating, incontinence, urgency, nocturnal symptoms) and relevant past medical history. Multivariate analysis of symptoms was performed using a generalised linear model with elastic net and K fold cross validation. Patients with terminal ileal resections or IBD were excluded from subsequent analysis.

**Results** From Jan 2013 to Oct 2018, 524 patients underwent a SeHCAT scan (65% female, mean age 51) and the rate of testing increased sequentially from 26 per annum to 124 per annum over five years. Detailed statistical analysis of symptom cluster failed to identify any 'hallmark', but nevertheless 49.8% of patients had abnormal tests, 56.7% of which were requested by 4/16 consultant gastroenterologists. Sixty-four patients developed diarrhoea following a laparoscopic cholecystectomy (n=2476) of whom 41 (64%) had positive scans.