Dietary nutrients can modulate mucosal immune responses, certain nutrients via epithelial EEC signalling pathways and others via direct effects on lamina propria.

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ADWE-06 IMPACT OF THE NORTH AMERICAN CONSENSUS ON HYDROGEN AND METHANE BREATH TESTING FOR SIBO

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Introduction The North American Consensus (NAC) document on breath testing published in 2017 was a first attempt to standardise the diagnostic test for small intestinal bacterial overgrowth (SIBO), including two key recommendations in terms of substrate dosing. The recommended use of 10 g lactulose and 75 g glucose differed from many practices in the UK which used 16 g of lactulose and 50 g of glucose previously, therefore we adopted these new dosing parameters and retrospectively compared these data to those acquired in the previous 3 months.

Methods Data from 536 patients were analysed and distinguished into subgroups dependent on substrate-10 g lactulose (n=200), 16 g lactulose (n=200), 75 g glucose (n=82) and 50 g glucose (n=54). Unpaired t-tests were used to determine statistical significance of the results.

Results Patients in the higher dose groups for glucose and lactulose had significantly more SIBO positive results (as determined by a rise >10 ppm above baseline in hydrogen in 60 min post ingestion) than those in the lower dose groups (lactulose p=0.0279, glucose p=0.0427). There was no significant difference in methane between groups (p>0.05 for both).

The change in glucose and lactulose dose did not have any significant effect on number of patients recording symptoms throughout the test (bloating, nausea or abdominal pain) (p>0.05 for both), however recorded severity of bloating was significantly higher in patients administered 16 g lactulose than those administered 10 g (p=0.0415).

With the 10 g lactulose dose, patients with a positive SIBO test experienced significantly more bloating and nausea than negative patients (bloating p=0.0467, nausea p=0.0327), but this difference was not observed in the 16 g lactulose group (p>0.05 for both). Symptoms were equivalent in the glucose groups.

Conclusions Glucose (75 g) yields a higher proportion of positive results for SIBO than 50 g without an increase in symptoms. As glucose is absorbed in the proximal small bowel these are likely to be true positives.

16 g of lactulose yielded significantly more positive results than 10 g, but as higher lactulose doses have been shown to reduce intestinal transit time it is possible that these may represent false positive test for SIBO. This is supported by the fact that 16 g of lactulose induced equivalent symptoms in SIBO positive and negative patients whereas 10 g only increased symptoms in SIBO positive patients.

These findings broadly support the parameters outlined in the NAC document for SIBO testing.

ADWE-07 HOW MANY CAPSULE ENDOSCOPY CASES CAN BE READ BEFORE ACCURACY IS AFFECTED?

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Introduction The interpretation of Small Bowel Capsule Endoscopy (SBCE) requires a high level of concentration. An abnormality may be present on just a few of the many thousands of images presented for interpretation. It is unknown whether fatigue affects the accuracy of SBCE reporting or how many SBCE can be read in one session.

Methods 32 participants (16 Experienced readers and 16 Novices) were invited to participate in this study. Each was asked to read 6 consecutive pre-selected SBCE cases, these were presented in a random order. All readings took place using the single view mode, with readers able to choose the frames per second viewed from a pre-defined range. Fatigue was measured subjectively using a Likert scale and objectively using a computer based Psychomotor Vigilance Test (PVT). These measures were performed at prior to commencing the study and after every second capsule read. Accuracy in lesion detection was determined by comparison with a gold standard reading, derived from the non-consecutive readings of two experienced readers. Accuracy was plotted against reading order.

Results In keeping with published data, high intra-observer variability amongst the participants was observed. Experienced readers demonstrated a mean correct detection rate of 48.3% (SD:16.1), compared to 21.3% (SD:15.1) amongst Novices. The accuracy of Experienced readers declined after interpreting just a single SBCE case (p=0.01) and plateaued thereafter. Novice readers demonstrated no significant change across time points, with a trend towards improvement, perhaps indicating skill acquisition during the study. The mean reading time to read a single SBCE case was 32 mins. When analysed with respect to reading order a statistically significant reduction in reading time was observed (p=0.05). Reading times were on average 25% faster when reading Case 6 compared to Case 1, representing a mean reduction of 9 mins and 36 secs (range 9–11 mins). Reading at higher frame rates was associated with a reduction in accuracy, which was most pronounced amongst Novice readers. No significant relationship between subjective fatigue or PVT and correct lesion detection was demonstrated. **Conclusions** This is the first study to demonstrate that accuracy in SBCE declines after reading a single capsule study. This phenomenon should be considered when reading high risk cases or when a SBCE case has been reported as normal, despite high clinical suspicion.

ADWE-08 FACTORS INFLUENCING PARENTERAL NUTRITION AND GLUCOGAN LIKE PEPTIDE-2 ANALOGUE SUITABILITY IN TYPE THREE INTESTINAL FAILURE

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Introduction Short bowel syndrome (SBS) is a leading cause of intestinal failure (IF) and the need for long term home parenteral nutrition (HPN). Understanding the anatomical features and nutritional requirements of this sub set of patients within