defined by a 50 point reduction in IBS-SSS. Data, expressed as mean ± standard error, were compared statistically before and after treatment using paired t-tests.

Results Young patients fulfilling Rome III diagnostic criteria for IBS (n=26, median age 16 (range –8) years, n=17 (65%) female, mean duration of IBS 5.3 ± 0.9 years, n=11 IBS-D, n=6 IBS-C and n=9 IBS-mixed) completed the hypnotherapy programme. Mean baseline IBS-SSS was 321.5 ± 16.0. After hypnotherapy, n=23/26 (88%) responded, with an overall mean reduction in IBS-SSS of -160.9 ± 15.4 (P<0.0001), and n=19/26 (73%) achieved the FDA recommended outcome of ≥30% reduction in abdominal pain scores. Hypnotherapy also improved; mean non-colonic symptom score by 102.1 ± 15.0 (P<0.0001), mean HADS-anxiety by -3.0 ± 0.8 (P=0.0007), mean HADS-depression by -2.1± 0.6 (P=0.002), and improved mean QoL score by +89.7 ± 13.1 (P<0.0001).

Conclusion These data, which form one of the largest reported series of gut-focussed hypnotherapy in children and adolescents with severe IBS, suggest that this treatment is even more effective in this group of patients than in adults. Hypnotherapy in severe childhood IBS patients may therefore have a role in preventing further suffering in adult life, reducing healthcare utilisation and related costs with wider socio-economic benefits. Furthermore, it allows many of them to return to full time education.

OWE-10 COGNITIVE BEHAVIOURAL THERAPY FOR IRRITABLE BOWEL SYNDROME: 24 MONTH FOLLOW-UP OF ACTIB TRIAL PARTICIPANTS

[1]Assoc Hazel Everitt*, [2]Sabine Landau, [2]Alice Sibelli, [1]Stephanie Hughes, [1]Gillian O'Reilly, [2]Sula Windgassen, [2]Rachel Holland, [1]Paul Little, [2]Paul McCrone, [1]Felicity Bishop, [2]Kim Goldsmith, [3]Nicholas Coleman, [4]Robert Logan, [2]Trudie Chlader, [2]Rona Moss-Morris. *[1]University Of Southampton, Southampton, UK; [2]Kings College , London, UK; [3]Southampton University Hospital, Southampton, UK; [4]Kings College Hospital, London, UK*

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Introduction The ACTIB (Assessing Cognitive behavioural Therapy (CBT) for IBS) randomised controlled trial (n=558) was a 3 arm multicentre trial which showed that telephone therapist-delivered CBT (TCBT) and web-based CBT (WCBT) with minimal therapist support were significantly more effective than treatment as usual (TAU) at reducing IBS symptom severity and impact at 12 months in adults with refractory IBS.

Methods A 24 month naturalistic follow-up of ACTIB participants. Participants were recruited from 74 primary care general practice (GP) surgeries and 3 secondary care gastroenterology outpatient clinics in the South of England and London, May 2014 to March 2016. 24 month data collection completed May 2018. TAU participants were given access to the WCBT website from 12 months. Co-primary outcome measures (IBS Symptom Severity Score (IBS SSS) and Work and Social Adjustment Scale (WSAS). Formal trial arm comparisons were Intention-to-treat analyses by multiple imputation to account for missing data.

Results 57.9% (323/558) of participants randomised were followed up to 24 months. Only 10 TAU participants chose to access WCBT.

Preliminary results Compared to TAU (IBS SSS score 198 at 24 months), IBS SSS scores were 40.5 (95% CI (15.0 to 66.0)) points lower (p<0·002) in TCBT and 12.9 (95% CI -12.9 to 38.8) points lower (p=0·3) in WCBT at 24 months. Assessing IBS-SSS responders (participants with a clinically significant IBS SSS change (≧50 point) from baseline to 24 months: 84/119 (70.6%) were responders in TCBT, 62/99 (62.6%) in WCBT and 48/105 (45.7%) in TAU.Compared to TAU (WSAS score 7.6 at 24 months) WSAS was 3.1 (95% CI 1.3 to 4.9) points lower (p<0·001) in TCBT and 1.9 (95% CI 0.1 to 3.7) points lower (p<0·04) in WCBT. Patient enablement (responders): TCBT compared to TAU OR 8.3 (95% CI 4.2 to 16.4) p<0·001), WCBT to TAU OR 3.3 (95% CI 1.8 to 6.0) p=0.001; Hospital anxiety and depression scale (HADS) TCBT to TAU 3.1 (95% CI 1.6 to 4.7) p<0.001 and WCBT to TAU (95% CI 2.7 (1.0 to 4.4) p=0.002.

Conclusions At 24 months sustained benefits were seen in both CBT groups compared to TAU, particularly on impact of IBS symptoms. Some previous gains were reduced compared to 12 month follow-up in the intention-to-treat analysis. Complete case analysis indicated those who had adhered to CBT treatments maintained large clinically significant gains in both symptoms and impact at 24 months. Increasing access to CBT for IBS could achieve long term-benefits for patients

OWE-11 THE PREVALENCE AND BURDEN OF ROME IV FUNCTIONAL COLORECTAL DISORDERS IN ULCERATIVE COLITIS

[1]Gaurav B Nigam*, [1]Jimmy K Limdi, [2]Shaheen Hamdy, [3]Dipesh H Vasant. *[1]Pennine Acute Hospitals; [2]Salford Royal Foundation Trust; [3]Manchester University Foundation Trust*

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Introduction Despite advances in Ulcerative Colitis (UC) therapies, many patients suffer refractory symptoms in the absence of active inflammation. For this group, treatment remains challenging, with a paucity of therapeutic options. In this prospective, ongoing study, we aim to determine the prevalence and burden of functional colorectal disorders in patients with quiescent UC using validated questionnaires.

Methods In a cross-sectional study, consecutive patients with UC attending Inflammatory Bowel Disease (IBD) clinics were invited to participate. Patients completed a series of validated questionnaires; including Hospital Anxiety and Depression Scale (HADS), the Rome IV diagnostic questionnaire for functional gastrointestinal disorders (FGIDs), an IBD-QoL score and the IBD-control questionnaire. Participants were requested to return a Faecal Calprotectin (FCP) within 2 weeks of completing questionnaires. Quiescent UC was defined as IBD-control 8 score ≥13 and IBD-control-VAS ≥85, and/or FCP levels ≤250 (where available, FCP data were used in preference to IBD-control to classify UC activity). Based on Rome IV diagnosis and UC disease activity (active or quiescent), patients were divided into groups and data compared using non-parametric tests.

Results Overall, n=97 UC patients (n=50 males, mean age 48 (range 1–2)) participated. 41/97, (42%) UC patients met the Rome IV diagnostic criteria for ≥1 FGIDs (irritable bowel syndrome n=26, functional constipation n=6 and faecal incontinence (FI) n=22). Disease activity data (IBD-control and/or FCP) were available for all patients, and based on these 61/97, 63% had quiescent UC. Within the quiescent UC group, 25/61 (41%) met the Rome IV diagnostic criteria for ≥1 FGIDs (irritable bowel syndrome n=14, functional constipation n=3 and FI n=13). Within the active UC group, those with co-existing FGIDs, compared to those without FGIDs,

had significantly worse median QoL scores (P=0.02), higher HADS-depression (P=0.005) and HADS-anxiety (P=0.05). By contrast, in those with quiescent UC, those with an FGID did not have different median HADS scores (depression P=0.15, anxiety P=0.62) or IBD-QoL scores (P=0.20), compared those without FGIDs.

Conclusion This study is one of the first to use Rome IV criteria in UC and confirms that the prevalence of FGIDs is high. Patients with active disease and overlapping functional symptoms appear to have worse QoL and more psychological distress compared to those with quiescent disease. Clinicians should therefore be vigilant to this functional overlap and treat both functional and inflammatory driven symptoms.

OWE-12 FUNGAL FUMES IN FAECES – HIDDEN CULPRITBEHINDPARKINSON'SDISEASE?AFAECAL METABOLOMICS STUDY

[1]Gerum Gashaw Gebeyehu*,[1]Eduardo De Pablo-Fernandez, [1]RachaelHough, [1]ChrisProbert, [1]Anton Emmanuel, [2]Tom Warner. *[1]UCL Queen Square Institute of Neurology, London, U K; [2]University of Liverpool, Liverpool, UK*

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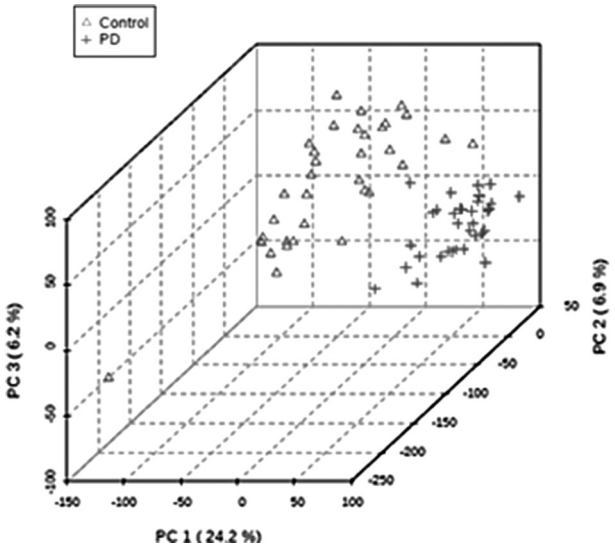
Introduction Accumulating evidence implicates the brain gut axis in the pathogenesis of Parkinson's disease (PD). Altered gut permeability may result in afferent vagal transport of an unknown antigen or toxin to the central nervous system, leading to the characteristic dopaminergic neurodegeneration. A study in fruit flies identified the possible role for fungal metabolites, for example 1-octen-3-ol, in a loss of dopamine activity. We investigated the hypothesis that such fungal metabolites might arise from the faeces. We present the results of an evaluation of the faecal metabolome by assessing volatile organic compounds (VOCs) in PD patients.

Methods Using solid phase micro-extraction and gas chromatography and mass spectrometry VOCs were extracted from faecal samples from 35 PD patients (69% male; age 67±8 years; disease duration 11±5 years) and 35 healthy controls (37% male; age 65±8 years). VOCs were identified using automated mass-spectral deconvolution and identification system software and the national institute of standards and technology library. Distinguishing compounds were identified using fold change and t-test and corrected for multiple comparisons; group associations were determined using principal components analysis (PCA) and dendrograms. Findings were compared among groups and correlated with main variables.

Results A mean of 63 VOCs were found from PD samples and 74 from controls ($p<0.007$). The abundance of VOCs in PD and all controls was compared: 33 differed, 7 of which persisted after correction for multiple comparison, including 2-octanone. PCA showed distinct clustering of groups by disease status (Figure 1). In PD, there was an increased abundance of 2-methyl-6-methylideneoct-2-ene, (6Z)-2,6-dimethylocta-2,6-diene and 7-methyl-3-methylideneocta-1,6-diene and a decreased abundance of cyclohexanecarboxylic acid and methyl pentanoate. Several of the VOCs which increased in PD were fungal metabolites. There was no differences in VOCs in patients compared by disease stage.

Conclusions Metabolomic characterisation in PD patients demonstrates a distinct profile to healthy controls and an increased abundance of fungal metabolites, suggesting a potential role of fungal dysbiosis in PD pathogenesis.



Abstract OWE-12 Figure 1

OWE-13 CONSEQUENCES OF USING THE ROME IV CRITERIA TO DIAGNOSE IRRITABLE BOWEL SYNDROME

[1,2]Christopher Black*, [1,2]Yan Yiannakou, [2]Lesley Houghton, [3]Alexander Ford. *[1]Leeds Gastroenterology Institute, St. James's University Hospital, Leeds, UK; [2]County Durham and Darlington NHS Foundation Trust, Durham, UK; [3]Leeds Institute of Medical Research at St. James's, University of Leeds, Leeds, UK*

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Introduction There are few studies examining implications of applying the Rome IV criteria for irritable bowel syndrome (IBS), in preference to the previous gold standard, the Rome III criteria. We conducted a cross-sectional survey of over 1000 individuals who self-identified as having IBS in order to examine this issue.

Methods We collected complete demographic, symptom, mood, and psychological health data from 1375 adult subjects in the UK community with IBS. We applied both the Rome III and the Rome IV criteria simultaneously to examine what proportion met each of these diagnostic criteria for IBS. We measured the level of agreement between the Rome III and Rome IV criteria, and assessed for presence of an alternative functional bowel disorder in individuals who no longer met diagnostic criteria for IBS with the more restrictive Rome IV criteria. Finally, we compared characteristics of individuals who met only Rome III criteria with those who met Rome IV criteria.

Results In total, 1080 (78.9%) of 1368 individuals with IBS met the Rome III criteria. In contrast, only 811 (59.1%) of 1373 individuals with IBS met the Rome IV criteria. Agreement between the criteria was only moderate (Kappa = 0.50). The reasons for not meeting the Rome IV criteria for IBS among those meeting the Rome III criteria are shown in Table 1. Of those people no longer meeting Rome IV criteria for IBS, 33 (11.5%) met Rome IV criteria for functional constipation, 118 (41.3%) functional diarrhoea, 68 (23.8%) functional abdominal bloating or distension, and 67 (23.4%) an unspecified functional bowel disorder. This meant that, of those individuals with Rome III IBS who did not meet the Rome IV criteria for IBS, only 11.5% were reclassified into another functional bowel disorder where licensed and evidence-based