Joint neuro-gastroenterology/motility and young persons section symposium "The trials and tibulations of FGD in young adults"

OC-070 DIETARY SUPPLEMENTATION WITH FODMAPS INCREASES FASTING COLONIC VOLUME AND BREATH HYDROGEN IN HEALTHY VOLUNTEERS: A MECHANISTIC STUDY USING MRI

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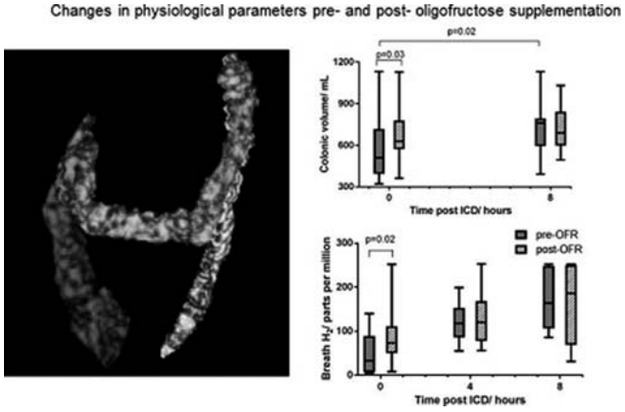
Introduction Indigestible fermentable carbohydrates, grouped as FODMAPs, have been proposed to induce gastrointestinal symptoms. Some, such as oligofructose (OF), are prebiotics and modify the microbiota. The metabolic activity of the microbiota affected transit time in a mouse model.[1] This study hypothesised that dietary supplementation with OF would shorten whole gut transit time (WGTT) and improve the capacity of the microbiota to metabolise a FODMAP challenge.

Methods The study was an open-label case series. 16 healthy volunteers underwent fasting MRI to assess colonic volume [2] and the position of 5 transit markers ingested 24 h earlier from which WGTT could be calculated.[3] Breath hydrogen (H_2) and methane (CH_4) were also measured. Subjects then consumed an inulin challenge drink (ICD): 500 ml water containing 40 g inulin. Inulin is fermented in the colon and known to increase H_2 and colonic volume.[4] After ICD subjects could sip water and were given a low FODMAP lunch but no other food was allowed. 8 h post-ICD MRI was repeated. Breath measurements were repeated 4 and 8 h post-ICD. Subjects then supplemented their usual diet with OF (gift from BENEO, Germany), 5 g twice daily, for a week. Fasting and post-ICD measurements were then repeated. Dietary questionnaires were completed for the weeks preceding MRIs to assess dietary fructan intake.

Results Median [IQR] given unless stated as mean [95% CI]. Fasting colonic volumes (510 ml [400–710]) increased by mean 94 ml [12 – 177, p = 0.03] after OF. Fasting H_2 (33 ppm [9–87]) increased by mean 39 ppm [6 – 71, p = 0.02]. WGTT (34 h [10 – 45]) increased by 19 h [-9 – 42] but this increase did not reach significance (p = 0.09, Wilcoxon). Colonic volumes post-ICD were similar across weeks (mean 726 ml [667–785]). The change from baseline was significant in week 1 but not week 2 due to the difference in fasting volumes. There was no difference between weeks 1 and 2 in H_2 at 4 or 8 h after ICD. CH_4 did not change. Dietary fructan intake was similar in both weeks (mean < 8 g/ day).



Abstract OC-070 Figure 1

Conclusion OF increased fasting colonic volumes by 18%. H_2 also rose. This may reflect increased bacterial mass with increased capacity for fermentation. The suggestion that OF slows WGTT is surprising and warrants further investigation. MRI can complement research on the microbiota to describe its impact on gut physiology.

REFERENCES

1 Kashyap P *et al. Gastroenterology* 2013;144(5):967–77
2 Chaddock G *et al. Neurogastroenterology and Motility* 2013
3 Pritchard S *et al. Neurogastroenterol Motil* 2013
4 Murray K *et al. Am J Gastroenterol* 2013

Disclosure of Interest None Declared.

Pathology section symposium

OC-071 SCREENING FOR ANAL PRE-CANCER IN HIV POSITIVE AND NEGATIVE MEN WHO HAVE SEX WITH MEN (MSM) AND RENAL TRANSPLANT RECIPIENTS: EARLY EXPERIENCE FROM A MANCHESTER BASED PROSPECTIVE STUDY

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Introduction The UK National Screening Committee has suggested that screening for anal intraepithelial neoplasia (AIN) in populations at high-risk of anal squamous cell carcinoma may be of benefit, but that further information is needed. In these groups the risk of developing anal cancer is increased up-to 100-fold.

Methods ANALOGY is an ongoing prospective cohort study addressing the feasibility and acceptability of anal screening in high-risk groups, based on liquid based cytology (LBC), HPV testing and high-resolution anoscopy (HRA). High-risk patients aged over 25 with no previous history of anal pre-cancer or cancer who are HIV+ men who have sex with men (MSM), HIV- MSM, HIV+ women with a gynaecological neoplasia history or transplant recipients who are 2-years post-procedure were all recruited. All participants had baseline LBC, HPV typing and HRA at recruitment and at 6-months, with a diagnostic biopsy being taken for participants with an abnormal HRA, referral for colorectal opinion was sought in high-grade AIN (HGAIN 3) on biopsy or HSIL on LBC. Data are presented for participants recruited from March 2013.

Results To date, 173 participants have baseline data;78 HIV+ and 25 HIV- MSM, 4 HIV+ women, 42 male and 24 female transplant recipients. Overall 65.8% (114/173) were HPV positive of whom 34.2% (39/114) were HPV 16 positive (30 HIV+