A METABOLIC PROFILING STUDY OF A MURINE COLITIS MODEL THAT SPECIFICALLY LACKED PRDX4 IN THE INTESTINAL EPITHELIUM

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Introduction A non-invasive, IBD-specific biomarker would be clinically useful. We have reported the changes in volatile organic metabolites (VOM) in human IBD. Human studies are limited by the variation in diet and the unpredictability of the disease. Animal models have been established to study many aspects of IBD. We report the first study of VOMs in murine DSS-colitis.

Methods C57Bl/6 female mice at 9–10 weeks old were administered 4.25% dextran sulphate sodium (DSS) in their drinking water for 5 days in order to induce colitis. Clinical parameters of body weight loss, stool consistency and presence of rectal bleeding were assessed daily. Mice were culled at days 0 (n = 11), 5 (n = 11), 8 (n = 11) and 11 (n = 8); colonic, caecal, small bowel contents, mid-large bowel and distal small bowel tissue were taken. VOM profiles for each were analysed using SPME with a CAR/PDMS/DVB fibre and gas chromatography-mass spectrometry. Histology of the distal colon confirmed the presence of colitis; this was graded from none to mild or moderate/severe.

Results Typical clinical and histological features of colitis commenced on day 5, were maximal at day 8 and mice showed signs of recovery between days 8 and 11. The VOM results showed clear separation between the different stages of the disease. A PCA biplot revealed that butanal, propanal, methyl propionate, ethyl acetate, ethyl propionate and 2,3-butanedione were responsible for the main separation between day 0 and day 5/8 of colitis.

Conclusion A high proportion of adults with stable IBD are being managed solely by GPs. General Practitioners’ lack of knowledge, confidence and resources in caring for patients with IBD inevitably occurs when managing an infrequently seen condition. Managing IBD and inadequate finances were identified as detrimental to GPs independently managing this patient group. Shared-care with hospital IBD services was preferred (82%).

Disclosure of Interest None Declared.

References
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their General Practitioner (GP). There is, however, limited knowledge as to how UK GPs manage this patient group and whether GP-led care meets IBD Standards. This study aimed to identify factors influencing long-term follow-up of adults with IBD by GPs; achieved through examining GPs’ knowledge of management and IBD, including exploration of future IBD-care models.

Methods A non-probability, convenience sample of 34 Senior Partner GPs and 130 Colleague GPs was recruited from 37 surgeries within Southampton City Primary Care Trust. Pre-piloted, closed and open-response e-questionnaires were administered to GPs asking questions on demographics, epidemiology, knowledge and management of IBD. Univariate and bivariate descriptive analyses with 90% confidence intervals were utilised. Conditional analysis content was applied to open question responses.

Results Cumulative questionnaire response rate was 50% (n = 82/164); 58% of GPs were male, with 19 mean years (SD 9.10) practicing medicine and 13 (SD 9.41) as a GP. Estimated IBD prevalence was 471:100,000. General Practitioners consulted with 2.8 adult patients (0.7%/total patients) with IBD/month and 59% independently managed those with established IBD. Short consultation times, insufficient knowledge and confidence in managing IBD and inadequate finances were identified as detrimental to GPs independently managing this patient group. Shared-care with hospital IBD services was preferred (82%).

Conclusion A high proportion of adults with stable IBD are being managed solely by GPs. General Practitioners’ lack of knowledge, confidence and resources in caring for patients with IBD inevitably occurs when managing an infrequently seen chronic condition; raising clinical governance concerns. Low exposure to this patient group questions cost-effectiveness of IBD inevitably occurs when managing an infrequently seen condition. Managing IBD and inadequate finances were identified as detrimental to GPs independently managing this patient group. Shared-care with hospital IBD services was preferred (82%).

Disclosure of Interest None Declared.

PWE-109 A METABOLIC PROFILING STUDY OF A CHEMICALLY-INDUCED MOUSE MODEL OF INTESTINAL INFLAMMATION

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Introduction Peroxiredoxins are a family of highly conserved antioxidant proteins. Beside its role in the reduction of peroxides, Peroxiredoxin-4 (Prdx4) has been shown to play a role in the modulation of pro-inflammatory signalling cascades. Our group has previously demonstrated that Prdx4 is expressed in the intestinal mucosa and upregulated upon stimulation with the bacterial cell wall component muramyl-dipeptide (MDP). In addition, siRNA-mediated downregulation of Prdx4 increased MDP-induced NF-kB signalling. We therefore generated a murine Prdx4-knockout model to address the relevance of Prdx4 in the intestinal immune response in vivo.

Methods In this study, two different Prdx4-knockout mouse lines were used: A constitutive Prdx4-/- knockout strain, in which global Prdx4 expression was deleted and a conditional mouse line that specifically lacked Prdx4 in the intestinal epithelium (Prdx4Cre/ARCMIC). Intestinal inflammation was induced by administration of dextran-sodium-sulfate (DSS) in the drinking water of Prdx4-/-, Prdx4Cre/ARCMIC and respective littermate control...