

posts in 1 year (UC: 68.6 [47.5] vs CD: 42.2 [29.6], $p=0.12$) or in the number of words per post (UC: 449 [149] vs CD: 475 [263], $p=0.76$) between groups. Overall, there was no difference in the mean [SD] readability (FRES) scores (UC: 71 [7.0] vs CD: 67.9 [11.0], $p=0.39$): reportedly, easily understood by students aged between 13 and 14 years. No differences were seen in the median number of comments or links per post between groups. Overall, the majority of posts detailed personal experiences of IBD, with no differences between groups (UC: 51% [326/642] CD: 53% [264/499], $p=0.51$). Active disease was more frequently coded as a precipitant reason for making an entry in UC 25% [159/642] vs CD 17% [84/499], $p=0.001$. Patients with CD more frequently made entries in order to offer IBD related advice, including recent research advances, than patients with UC (UC: 4% [26/649] vs CD: 24% [118/499], $p<0.0001$): whereas patients with UC were more likely to use entries for non-IBD related social networking (UC: 24% [153/642] vs CD 14% [72/499], $p<0.0001$). In total, only 6% (63/1141) of posts referred to psychological distress, with no differences between groups.

Conclusion The content of blogs differs according to disease type, but relatively few bloggers refer to psychological distress in their posts. Online platforms, such as a blogs, may however be a new way of providing patients with IBD psychological support.

Competing interests None declared.

OC-160 TELEMEDICINE SYSTEMS IN IBD MANAGEMENT—ARE PATIENTS READY?

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Introduction Inflammatory bowel disease (IBD) is a chronic condition characterised by periods of exacerbations and remission, requiring regular medical follow-up. IBD frequently affects patients of working age and the need for life-long follow-up can have significant personal and societal economic implications. Telemedicine systems, could reduce this burden and have been shown to be successful and highly accepted by patients with other chronic diseases.¹ We aimed to assess the potential technologies by which telemedicine might be employed in our population of IBD patients and the level of patients' acceptance of telemedicine systems in their management.

Methods Patients attending the specialist IBD outpatient clinic were surveyed over a 6-week period. Demographic data, access to technology and acceptance of telemedical systems for the management of their disease were assessed.

Results 52 IBD patients (48%) responded and completed the survey. 52% had a diagnosis of UC; 48% Crohn's disease. 58% were female. 85% of patients were aged 18–65 years and English was the first language in 86%. 94% of patients had home access to the internet. 56% owned smartphones and 52% used apps regularly. 46% of patients regularly used web video calling. 85% of patients wanted electronic access to their personal health data. 65% and 54% of patients preferred text or email respectively, to be used for reminders of disease monitoring investigations. 65% would choose telephone follow-up, while only 38% would select web based follow-up. 42% of patients indicated they would undertake web supported self-management of their IBD.

Conclusion IBD patients are of working age and have access to web based and smartphone technologies that could be used in the management of their IBD. IBD patients desire e-health access and the use of technology for communication regarding their disease management as well as web-based monitoring and self management of their IBD. Patients with IBD are ready for telemedicine systems to be employed as an adjunct in the management of their disease.

Competing interests None declared.

REFERENCE

1. **Mclean S**, Protti D, Sheikh A. Tele healthcare for longterm conditions. *BMJ* 2011;**342**:d120.

Inflammatory bowel disease free papers

OC-161 INVESTIGATION OF THE ACTION OF HISTONE DEACETYLASE INHIBITORS IN EX VIVO AND IN VITRO MODELS OF INFLAMMATORY BOWEL DISEASE

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Introduction The management of inflammatory bowel disease (IBD) has evolved rapidly with anti-TNF α agents and the more appropriate use of immunomodulators. Despite this, a large therapeutic gap remains to be filled. Histone deacetylase (HDAC) inhibitors (HDI) preserve acetylation of core histones which prevents chromatin from condensing thus facilitating gene transcription. HDI have been approved for the treatment of sub-cutaneous T-cell lymphoma and recent work has shown that HDI may have a protective anti-inflammatory effect in murine models of UC (Tao *et al* 2007). We hypothesise that HDI have anti-inflammatory effects in human IBD and aim to investigate this using a human ex vivo model of IBD.

Methods Carefully phenotyped patients with active UC (n=7) and CD (n=10) undergoing lower GI endoscopy had 8 pinch biopsies ($\approx 3\text{ mm}^2$) taken for these experiments. Biopsies were cultured ex vivo at an air liquid interface for 8 h \pm FK228 or SAHA. Additionally, gut fibroblasts isolated from resection tissue were used to model mucosal plasticity in vitro \pm TNF- α and FK228 and a monocytic cell line (U937) was differentiated in vitro with GMCSF \pm FK228. Supernatants, RNA and tissue were collected for analysis by qRT-PCR, mesoscale assay, western blotting and histology.

Results Nanomolar levels of FK228 significantly reduce mRNA expression and protein secretion of Th1 and Th2 cytokines and pro-inflammatory mediators (IL-8, MMP-1, -3, -9 and -12) in the ex vivo UC and CD biopsy models. Data suggest that FK228 can decrease mRNA expression of Th1 and Th17 signalling molecules in the ex vivo models. FK228 significantly decreases IL-8, MMP-3 and MMP-12 mRNA expression as well as IL-8 and MMP-3 protein secretion by gut fibroblasts and decreases GMCSF induced MMP-12 protein production by U937 cells.

Conclusion This human ex vivo biopsy culture model is relevant for pre-clinical study of drug action in IBD as it utilises small amounts of tissue in a human system. FK228 produces significant anti-inflammatory effects at low doses by reducing cytokines and MMPs in this model. FK228 is able to act upon specific cells found in the gut such as lymphocytes, fibroblasts and monocytes to elicit anti-inflammatory effects. Based upon our initial findings, further investigation of the role of FK228 in IBD is warranted.

Competing interests None declared.

OC-162 THE ROLE OF MICRORNAs MIR-31 AND MIR-155 IN THE DEREGULATION OF THE IL-13 PATHWAY IN ULCERATIVE COLITIS

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