remission and greater reductions in inflammatory biomarkers. Recruitment to HICKORY continues in a randomised, placebo controlled induction cohort and a randomised maintenance phase is ongoing.

Abstract PWE-071 Table 1 Lower ES at week 14 was associated with higher SF and RB remission rates (N=130)

	Improvement in ES from BL (%) n=57			No Improvement from BL (%) n=73	
	ES=0 n=10	ES=1 n=21	ES=2 n=26	ES=2 n=15	ES=3 n=58
Week 14					
RB=0	90	81	62	33	36
RB=1	10	19	27	40	41
RB≥2	0	0	12	27	22
SF=0	30	33	8	7	2
SF=1	60	33	23	27	22
SF≥2	10	33	69	67	76

PWE-072 PHARMACY TECHNICIAN IN THE IBD TEAM MAINTAINS PATIENT SAFETY WHILST FREEING UP PHARMACISTS AND PHYSICIANS

Anja St. Clair Jones*. *BSUH NHS Trust, Brighton, UK*

10.1136/gutjnl-2018-BSGAbstracts.204

Introduction We previously demonstrated that incorporating a pharmacist into the Inflammatory Bowel Disease (IBD) team releases doctors' time and improves the consistency and safety of drug monitoring and counselling. We now take the next logical step, by recruiting a pharmacy technician to do the routine drug monitoring and other duties under the supervision of the specialist pharmacist, thereby freeing up clinicians time. We present the outcome of this 3 month pilot.

Methods

- Provide a blood monitoring service for immunosuppressant therapies of 524 patients on thiopurines and 419 patients on biologics
- Manage the weekly ordering of infusion medication and manage infusion preparation in the pharmacy-led infusion clinic
- Collate current patient information, IBD scores, faecal calprotectin (FCLP) and blood results for the multidisciplinary virtual biologic and immunosuppressant clinic (VBIC) review
- Manage shared care protocols (SCP)
- Ensure comprehensive patient records, identify funds released

Result

- A total of 260 patients were monitored of which 63 patients (24%) needed to be contacted to provide the blood test
- 48 referrals (18.4%) were made to the gastroenterology pharmacist:
- 27 patients (10.3%) due to drug levels outside therapeutic ranges or antibodies
- 9 patients (3.5%) had deranged liver function tests
- 5 patients (1.9%) had leucopenia
- 7 patients (2.6%) had either raised FCLP levels or anaemia
- Biological medication for 259 patients (average of 20 patients per weekly clinic) was dispensed, ensuring cold chain

procedure and accurate stock control. Using the Aseptic Non-Touch Technique (ANTT) infusions were prepared, maximising vial sharing, releases nursing staff to undertake cannulation and pharmacists to monitoring and review patients

- 42 VBIC patients were asked to provide a FCLP sample and bloods 2 weeks prior to VBIC. IBD scores were collected during a phone call
- A total of 17 SCP were sent to patient GP's
- All data was entered on the in house database for easy review by the MDT

Conclusions A competent pharmacy technician can safely take over the majority of the drug monitoring and infusion preparation, previously done by our pharmacist. Released funds of £13 K (lower staffing cost) and cost savings £36 K (vial sharing) per year are projected.

This represents an increased cost saving, freeing up nursing time and releasing the pharmacist to deal with identified problems and advanced roles within the team (e.g. outpatient clinics, prescribing, helpline queries, counselling patients, TDM) which in turn releases clinicians' time (ECCO 2015 Abstract P306). In addition this audit has identified the on-going need for active monitoring of the medications as 1/5 of patients had abnormal results and 1/4 had to be chased up to undertake monitoring at the appropriate interval.

Liver

OWE-012 NATIONWIDE POPULATION-BASED EVALUATION OF MORTALITY AND CANCER-RISK IN YOUNG PATIENTS WITH ULCERATIVE COLITIS/PRIMARY SCLEROSING CHOLANGITIS

^{1,2,3,4}Palak Trivedi*, ⁴Jemma Mytton, ⁴Felicity Evison, ¹Sivesh Kathir Kamarajah, ³Jessamy Reece, ^{3,4}Tariq Iqbal, ³Rachel Cooney, ²Fiona Thompson, ⁵Martine Walmsley, ^{1,2}James Ferguson, ^{1,2}Gideon Hirschfield. ¹University of Birmingham, Birmingham, UK; ²Liver Unit, University Hospitals Birmingham NHS Foundation Trust, Queen Elizabeth Hospital, Birmingham, UK; ³Dept. of Gastroenterology, University Hospitals Birmingham NHS Foundation Trust, Queen Elizabeth Hospital, Birmingham, UK; ⁴Centre for Rare Diseases, Institute of Translational Medicine, University of Birmingham, Birmingham, UK; ⁵PSC Support, UK

10.1136/gutjnl-2018-BSGAbstracts.205

Introduction Advancing age is proposed as a risk factor for mortality in primary sclerosing cholangitis (PSC) (Trivedi*Weismuller* et al. Gastro. 2017). However outcomes against a matched control population need evaluation. Our aim was to provide data-driven prioritisation of unmet need by comparing pts. with ulcerative colitis (UC) and coexisting PSC vs an age-matched cohort with UC alone in a stratified outcomes' analysis.

Method A population-based study was performed via linkage to the national Hospital Episode Statistics registry, which records every adult (>18 y of age) hospital attendance, admission or clinic event within England since 2006. Across the entire registry we captured all incident cases of UC alone (group 1); and UC with an established diagnosis of PSC, or UC diagnosed with PSC subsequently (group 2). Case finding/definition was as per Jess et al (Gastro 2012), by applying ICD10 codes for UC overall (inclusion K51), UC/PSC more specifically (inclusion K51 +K83.0) and excluding other causes of liver injury (K70–77, K80.3/4, B16–19). Cases were captured till 03/2015; follow-up ending 1y thereafter. Event rates (colectomy, colorectal cancer [CRC], liver

Abstracts

transplantation [LT]/death, and all-cause mortality) were stratified according to age strata at UC diagnosis.

Results Over 10 years, 1 28 694 incident UC cases were identified (annualised incidence/100,000 population: 23.8 in 2006; rising to 25.1 in 2015). Of this group, 2124 were diagnosed with PSC at some point (incidence in 2006 and 2015: 0.29 and 0.4, respectively). Observing the UC cohort in entirety, we observed 210 1st LT (206 in group 2), 9413 individuals who came to colectomy, 1,208 CRC cases, and 11 177 pt. deaths. The leading cause of mortality was coronary disease (1%) in group 1; whereas liver-related death (5.9%), cholangiocarcinoma (4.6%) and CRC (1%) predominated in group 2. The incidence rate ([IR]/1000-pt.yrs.) was greater in the UC/PSC group for colectomy (17.3 vs 13.7), CRC (5.6 vs 1.5), LT/death (38.5 vs 15.1), and all cause mortality (26.4 vs 15.1); $p < 0.001$ for all. Time-dependent Cox regression validated the negative impact of PSC onset for each endpoint (time-dependent adjusted hazard ratio: 1.62, 3.31, 2.47 and 1.62, respectively; $p < 0.001$ for all). Compared to UC alone, the standardised incidence ratio (SIR) for CRC was greatest in UC/PSC of young presenting age (<40 y.); a 7-fold increase (figure 1A). This contrasted to pts. diagnosed above age 40 (SIR ~4). Although absolute mortality rate was elevated in older ages (figure 1B) it was in young pts. with UC/PSC that the contrast vs UC alone was most evident for 5 year. (1.6% vs 0.4%) and 10 year. survival (3.6% vs 0.6%); a 4 and 6-fold increase, respectively. Indeed, standardised mortality (SMR) was the greatest for patients diagnosed age ≤ 40 years., and plateaued with older age at diagnosis (figure 1C).

Abstract OWE-012 Figure 1 a) standardised incidence rate of all clinical events b) absolute mortality rates c) standardised mortality rate over time per age group

Conclusion In pts. diagnosed aged ≤ 40 years. with UC, development of PSC is associated with 6-fold increase in mortality and 7-fold increased risk of CRC. Within IBD cohorts, those diagnosed at a young age with PSC have a heightened and disproportionate unmet need for life-prolonging therapies.

OWE-013 DEVELOPING AN AUTOMATED INTELLIGENT LFT (iLFT) DIAGNOSTIC ALGORITHM – IMPROVED OUTPUT FOR LESS TRIBULATION

^{1,2}Paul Brennan*, ^{1,2}Emma Robinson, ²Michael Miller, ³Kathleen Boyd, ²Ellie Dow, ^{1,2}John Dillon. ¹University Of Dundee, Dundee, UK; ²NHS Tayside, Dundee, UK; ³University of Glasgow, Glasgow, UK

10.1136/gutjnl-2018-BSGAbstracts.206

Introduction Liver Function Tests (LFTs) are commonly abnormal, however; the diagnostic approach to individuals with deranged LFTs is variable, with lengthy processes and an increasing number of referrals to tertiary services and sub-optimal investigation of many patients. The aim of the project was to improve diagnostic proficiency, improving quality of investigation, reducing overall costs to practitioners and patients and reducing secondary care referrals.

Methods The project developed a functional automated 'intelligent LFT' (iLFT) system.

This algorithm uses the combination of diagnostic criteria for liver disease, an investigation ordering and reporting system, and the tracked blood sciences system. iLFT produces a diagnosis or description of the abnormality with staging information and suggestions for further management. In general allowing allocation to 3 broad outcomes series of outcomes; a) diagnosis requiring complex treatment or advanced liver disease, b) a diagnosis of early or simple liver disease, c) where a clear diagnosis is not made; the GP receives staging and prognostic information including referral criterion.

A step wedge design trial was conducted in 6 GP practices (covering 30 000 patients). Patients with LFTs measured in the previous 6 months with abnormalities were retrospectively used as controls. During the intervention period (6 months); GPs requested the iLFT option and those patients with abnormal LFTs were assessed.

Results Of 719 patients recruited, (Controls=490; intervention group=229) the iLFT system increased the diagnosis liver disease from first test abnormal LFT cohorts from 16% to 56%. The adjusted (for the step wedge design) difference in rate of liver disease diagnosis was a highly significant increase of 43% (95% CI 27%, 59%)

Health economic analysis showed an incremental care-equivalent ratio (ICER) of £284 and over a patient lifetime increased quality adjusted life years and saving the NHS (or equivalent healthcare providers) an average £3216 per patient – an unequivocally dominant strategy.

Conclusions iLFT increases liver disease diagnosis, improving quality of care and is unequivocally cost effective. These outcomes can be achieved with minor changes to working practices and existing lab infrastructure and ultimately aim to Result in appropriation of individuals being managed in the most apposite clinical infrastructure.