"downstream" RALDH enzymes. These data imply that RA availability is regulated differently in mice and man, with expression of RDH10 providing an important control point in humans.

**Competing interests** None declared.

## PWE-258 THIOPURINE MONITORING IN INFLAMMATORY BOWEL DISEASE PATIENTS AT A DISTRICT GENERAL HOSPITAL

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**Introduction** Thiopurines are an unlicensed but recognised therapy for Inflammatory Bowel Disease (IBD). These drugs interfere with cell signalling and have significant side effects including leucopaenia, pancreatitis and hepatotoxicity. Therefore routine monitoring of blood is mandatory. Our Trust has guidelines (based on BSG guidelines) for the monitoring of Thiopurine therapy. Patients are monitored by a IBD Nurse specialist using a simple electronic database.

**Methods Objective**: To determine the effectiveness of the IBD Nurse database in ensuring that patients on Thiopurines are monitored according to Trust guidelines. A total of 900 patients with IBD attend our gastroenterology clinics. Of these 204 are on Thiopurines. Trust guidelines recommends weekly blood test monitoring for the first month starting Thiopurines. This is followed by monthly for the next 3 months and every 3 months subsequently. Patients latest blood results were collected over a two consecutive days in July 2011 for 204 patients. Patients more than 7 days late for blood tests were considered non-compliance with the guideline.

**Results** 182 (89%) patients were having their bloods monitored as per trust guidelines. However 22 patients (11%) were being monitored incorrectly, with a median of 68.5 (32.25–269.25) days overdue. 16 of these patients have a diagnosis of Crohn's Disease, the remaining six have Ulcerative Colitis. 14 (7%) patients had either deranged liver function tests or were neutropaenic.

**Conclusion** The current manual database is reliable as the majority of thiopurines patients were being monitored as per hospital guideline. However, 7% of abnormal blood results may not be recognised promptly and no action was taken. An automated database with automated reminder to patients who passed their blood test due date and electronic notice to the doctor responsible for the patient is needed to reduce the potential risk of harm to the patients.

**Competing interests** None declared.

## REFERENCE

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## PWE-259 THE EFFICACY OF METHOTREXATE IN CROHN'S DISEASE: A CLINICAL PERSPECTIVE

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**Introduction** Methotrexate (MTX) has been shown in clinical trials to be effective in the induction and maintenance of remission in Crohn's Disease (CD). It is predominantly used in patients intolerant of, or whose disease is refractory to, thiopurine treatment. It was our aim to examine, in a clinical setting, the efficacy and side-effect profile of MTX in patients with CD.

**Methods** A retrospective audit was performed by casenote review of all patients with CD attending the clinical investigations unit at Ninewells Hospital to commence parenteral MTX during the period 1 January 2007 to 31 December 2010. A total of 53 patients were identified, for whom casenotes were available in 52 (26 male/26 female). Intramuscular MTX treatment was initiated at a dose of 25 mg once weekly for 16 weeks, followed by oral MTX at a dose of 15 mg once weekly. Clinical response by physician's global assessment was recorded at 3, 6 and 12 months. Clinical response was defined as complete response (absence of IBD symptoms or complete healing of fistulae); partial response (symptomatic improvement but ongoing symptoms); or no response (no improvement or deterioration from baseline). Relapse was defined as deterioration in symptoms necessitating additional medical or surgical intervention.

**Results** Median age of starting MTX was 32 (range 15–73). 51 of 52 patients had previously received thiopurine treatment. 12-month follow-up data were available for 48 patients. 34 patients were taking steroids at the time of initiating MTX. At 12 months, complete response was reported in 8 patients (17%), partial response in 6 patients (13%), no response in 21 patients (44%) and drug withdrawal due to side effects in 13 patients (27%). Relapse was reported in 17 patients (35%). 10 patients (21%) required additional medical therapy (steroids or biological therapy). Surgical intervention was required in seven patients (15%). Steroid withdrawal at 1-year, without recourse to biological or surgical therapy, was reported in only 11 of 34 patients (32%). MTX-associated side effects were reported in 25 patients (48%). Reported side effects included: LFT abnormalities (9), nausea (8), lymphopenia (5), lethargy (3) and mouth ulceration (1). Monitoring of FBC/LFTs was performed at 97% of scheduled weekly intervals for patients receiving parenteral MTX and at 74% of scheduled monthly intervals for patients on oral MTX.

**Conclusion** In this cohort, the clinical effectiveness of MTX in the induction and maintenance of remission of CD was limited. Only 29% of patients had either a complete or partial response to therapy at 1-year. The clinical effectiveness of MTX was limited by side-effects in 27%. On the basis of these results we should re-consider the position of MTX in the management of CD.

**Competing interests** None declared.

## PWE-260 OPTIMAL C REACTIVE PROTEIN CUT-OFF POINT FOR PREDICTING HOSPITALISATION IN PATIENTS WITH MODERATELY ACTIVE CROHN'S DISEASE

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**Introduction** To identify high risk patients among patients with moderate Crohn's disease (CD), we explored the association between C reactive protein (CRP) concentration and hospitalisation risk for patients with moderately active CD and identified the optimal CRP cut-off point as a marker to predict CD-related hospitalisation. CRP is a well-studied and commonly used laboratory marker of inflammation in CD.[1] The relationship between CRP and hospitalisation risk given the same Crohn's Disease Activity Impairment (CDAI) score in patients with moderate CD has not been studied.

**Methods** Data from CHARM, a 56-week (wk), randomised, placebo-controlled trial of adalimumab maintenance therapy, were analysed. All patients received adalimumab during a 4-wk, open-label induction period; patients were then randomised to adalimumab or placebo for a 52-wk double-blind period. For this analysis, only patients who were randomised to placebo at Wk 4 and had

moderate CD, defined as CDAI ≤300 at Wk 4, were analysed. A Cox model was applied to analyse the association between Wk-4 CRP concentration and the probability of having a CD-related hospitalisation during the 52-wk double-blind period. Wk-4 CDAI score, Wk-4 steroid use, age, sex, weight, body mass index, and prior anti–tumour necrosis factor use were also adjusted in the model. Patients were censored if they switched to open-label adalimumab or dropped out. A receiver operating characteristic (ROC) curve was used to identify the optimal CRP cut-off point to best predict the 52-wk CD-related hospitalisation rate.

**Results** The analysis population included 214 patients randomised to placebo with Wk-4 CDAI ≤300. An elevated Wk-4 CRP concentration was associated with a greater chance of CD-related hospitalisation (HR=1.24; p=0.002). The ROC curve identified a CRP concentration =1.41 mg/dl as the dichotomising point (area under the curve=0.68; sensitivity=0.58; specificity=0.80). Risk of CD-related hospitalisation during the double-blind period was 3.4 times greater for patients with CRP concentrations ≥1.41 mg/dl at Wk 4 vs patients with CRP concentrations <1.41 mg/dl (p=0.015), with control for CDAI and other covariates.

**Conclusion** Early CRP concentration represents a moderate to good marker to predict CD-related hospitalisation for patients with moderately active CD given the same CDAI score. CRP concentration of 1.41 mg/dl was the optimal cut-off point for predicting long-term CD-related hospitalisation.

**Competing interests** J-F Colombel Consultant for: Abbott, Speaker bureau with: Abbott, W Sandborn Grant/Research Support from: Abbott, Consultant for: Abbott, E Louis Speaker bureau with: Abbott, Conflict with: Abbott, R Panaccione Grant/Research Support from: Abbott, Consultant for: Abbott, Speaker bureau with: Abbott, Conflict with: Abbott, R Thakkar Shareholder with: Abbott, Employee of: Abbott, M Castillo Shareholder with: Abbott, Employee of: Abbott, M Yang Shareholder with: Abbott, Employee of: Abbott, T Finney-Hayward Shareholder with: Abbott, Employee of: Abbott, J Chao Shareholder with: Abbott, Employee of: Abbott, P Mulani Shareholder with: Abbott, Employee of: Abbott.

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### PWE-261 HAVE YOU HEARD OF THE TRUELOVE AND WITTS CRITERIA? ACUTE SEVERE ULCERATIVE COLITIS MANAGEMENT BY FY1 DOCTORS

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**Introduction** Acute severe ulcerative colitis (UC) is a serious illness that requires prompt hospitalisation and is associated with significant morbidity. It requires intensive monitoring, specialist intervention and a multidisciplinary approach throughout the duration of the illness with timely and appropriate medical and surgical interventions to avoid complications. Our aim was to evaluate the Foundation Year 1 (FY1) doctor's knowledge and understanding of this potentially life threatening emergency.

**Methods** We approached FY1 doctors with an example case of acute severe UC and a questionnaire asking several questions regarding the diagnosis and management of acute severe UC 5 months into their training in 2011.

**Results** 48 FY1 doctors completed the questionnaire during a medical teaching session. Only 25% had heard of the Truelove and Witts criteria as a tool for assessing the severity of UC. When asked regarding the criteria, 77.08% recognised stool frequency as one, 72.91% heart rate, 62.5% temperature, 41.67% haemoglobin and 35.42% erythrocyte sedimentation rate (ESR) as part of it. 58.33% of those asked diagnosed the example case as an acute severe UC, however only 43.75% stated that they would request daily abdominal x-rays as part of their management plans. 62.5% of those asked knew intravenous corticosteroid therapy was mainstay of the initial treatment. 72.92% answered correctly regarding the use of thromboprophylaxis as standard therapy in the management of the condition and 79.17% said they would regularly check the serum potassium level during the course of the presentation.

**Conclusion** This study highlights the lack of knowledge and understanding of the diagnosis and management of acute severe UC by the FY1s. We would recommend a more structured approach to teaching regarding the condition at all levels of training during planned sessions. Protocols for admission and management of acute UC and local acute medicine hospital guidelines may aid education and bridge gaps in knowledge.

**Competing interests** None declared.

# General liver II

### PWE-262 PREVALENCE OF HARMFUL, HAZARDOUS OR DEPENDENT DRINKING IN HOSPITAL INPATIENTS ON A SINGLE DAY USING AUDIT QUESTIONNAIRE

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**Introduction** Deaths from alcoholic liver disease have increased dramatically. Currently, 24% of UK adults are said to drink in a harmful or hazardous manner. The government strategy to combat alcohol mortality (NICE PH24)[1] includes widespread screening using validated questionnaires such as AUDIT (Alcohol Use Disorders Identification Test).[2] Previous studies in hospitals have been with selected patients & and it is not clear how many patients in hospital are high risk drinkers. We performed a "snap shot" study of all inpatients at a single hospital on a single day using the AUDIT questionnaire to assess prevalence of high risk drinking and the feasibility of such widespread screening.

**Methods** All adult inpatients on a single day at Peterborough City Hospital were asked to participate. Two consultants, a nurse specialist and 30 clinical medical students used the AUDIT questionnaire to assess patients for harmful, hazardous or dependent drinking. The AUDIT questionnaire consists of 10 questions with a maximum score of 40. A score of 0–7 indicates low risk, 8–15 indicates harmful drinking, 16–19 indicates hazardous drinking and >20 indicates dependent drinking. Patients scoring >8 were then offered a brief intervention.

**Results** Of a total of 490 patients, AUDIT scores were obtained on 380 (78%); 110 (22%) could not be assessed because of confusion or illness. The age range was 17–99 years (mean 69). Scores ranged from 0/40 to 38/40. Of 380 inpatients who were assessed, 40 (10.5%) scored > or equal to 8/40 indicating harmful, hazardous or dependent drinking. 1.6% (6/380) scored >20 (dependent drinking), 7.4% (28/380) scored 16–19 (hazardous drinking) and 1.6% (6/380) scored 8–15 (harmful drinking). 89.5% (340/380) were low risk (score 0–7). Patients at risk (scoring 8 or above) were distributed across hospital wards and included 17% of females on the maternity ward, 13% on an orthopaedic ward and 12% on the respiratory ward.

**Conclusion** We have demonstrated that 10.5% of adult hospital inpatients are drinking in a harmful, hazardous or dependent manner. They were scattered throughout the hospital and not in any particular speciality. This prevalence is lower than the 24% in the UK population, perhaps due to the higher age of hospital patients. 22% of patients could not be assessed on the day of the study. However, our results suggest that the AUDIT questionnaire is a useful tool to identify patients at risk of alcohol related problems and is a feasible undertaking.

**Competing interests** None declared.