Introduction Primary Sclerosing Cholangitis (PSC) is an incurable chronic immune mediated biliary disease that occurs in individuals with IBD. We have previously reported aberrant expression of the gut chemokine, CCL25 in the human PSC liver and the recruitment of CCR9 expressing gut derived T cells. In order to gain further insights into the consequences of aberrant CCL25 expression in the liver in PSC, we induced CCL25 in the murine liver and assessed biliary inflammation in-vivo.
Methods To clarify the functional role of CCL25 expression in the liver, we generated a murine liver specific knock-in of CCL25 expression and tested the effects on immune mediated cholangitis using the Ova-Bil model of antigen driven biliary injury. Immune cell phenotyping and isolation were performed using flow cytometry. Liver injury was assessed by ALT measurements and histopathology. pDC function was assessed ex-vivo in co-culture with naive transgenic TCR T cells
Results Ova-Bil x CCL25KI mice developed significantly less liver injury than *wt* Ova-Bil controls. Flow cytometry revealed increased numbers of $CCR9^+$ $pDCA\text{-}1^+$ plasmacytoid dendritic cells (pDC) in the Ova-Bil x CCL25KI livers. $CCR9^{-/-}$ x Ova-Bil mice developed significantly worse liver injury compared to *wt* Ova-Bil controls and severely lacked pDCs in the liver. Adoptive transfer of *wt* pDCs to $CCR9^{-/-}$ x Ova-Bil mice rescued the phenotype and reduced the degree of liver injury comparable to *wt* Ova-Bil controls. In vitro studies demonstrated the ability of liver-derived pDCs to induce regulatory T cells in a retinoic acid dependent manner as a possible mechanism by which $CCR9^+$ pDCs are able to control liver injury.
Conclusion Aberrant expression of CCL25 in the liver enhances recruitment of $CCR9^+$ pDCs and appears to be an attempt to limit the extent of hepatic inflammation in PSC. Regulatory effects of $CCR9^+$ pDCs appears to be at least in part mediated through the expansion of hepatic regulatory T cells.
Disclosure of Interest None Declared

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Endoscopy symposium: endoscopy in the management of obesity

OC-055 A NOVEL TECHNIQUE FOR FULL THICKNESS LAPAROENDOSCOPIC EXCISION OF COLONIC LESIONS: AN EXPERIMENTAL PILOT STUDY

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Introduction Introduction of a National Bowel Cancer Screening Program in England has resulted in an increasing number of patients diagnosed with endoscopically irresectable colonic polyps. A significant proportion of these patients is referred for hemicolectomy and is subject to a significant risk of morbidity and mortality. Therefore, a less invasive treatment option is required and to address this, we modified a previously reported full thickness laparo-endoscopic excision (FLEX) technique.
Methods Surgery was performed in five 70-kg pigs. A simulated colonic polyp was created by endoscopic injection of Spot® and the clearance margin delineated by circumferential placement of mucosal argon plasma coagulator (APC) marks. Full thickness eversion of the colonic wall, including the lesion, was achieved by endoscopic placement of prototype BraceBars (BBs). The everted section was excised using a linear laparoscopic stapler placed below the BBs. The first pig was terminated immediately and others were sacrificed 8 days after surgery.
Results The median procedure duration, defined from placement of mucosal APC marks to specimen excision, was 26 min (range 20–31 min). All excised specimens contained three pairs of BBs, included the APC marks and had a median diameter of 5.1 cm (range 4.5–6.3 cm). Postoperative recovery in survival animals was uneventful. Post-mortem evaluation demonstrated well-healed resection sites with no evidence of intra-abdominal infection or inadvertent organ damage. Endoscopic evaluation of anastomoses at post-mortem demonstrated a widely patent lumen without evidence of stenosis at excision sites. Histological examination of the anastomoses showed primary closure by mucosal abbutal and regeneration, with repair and restoration of submucosal continuity.
Conclusion This proof-of-concept study has demonstrated the feasibility and safety of a novel full thickness colonic excision technique that is now ready for translation as an alternative to hemicolectomy. The excision size will accommodate most colonic polyps that currently come to surgery. Accurate placement of endoscopic BBs ensures complete excision, reducing the risk of residual disease and recurrence, while laparoscopic overview avoids collateral damage. The ability to preserve mesenteric vasculature and colonic length is likely to result in less morbidity and mortality, better functional outcomes and the approach should reduce treatment costs.
Disclosure of Interest None Declared

OC-056 LONG-TERM TRENDS IN COMORBIDITY AND RISK SCORES AND THEIR INFLUENCE ON OUTCOMES OF UPPER GASTROINTESTINAL BLEEDING

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Introduction The prevention of upper gastrointestinal bleeding (UGIB) can be facilitated by understanding the changes in environmental and socio-pathological factors; these might not become obvious in short-term studies. We, therefore, aimed to study the changes in comorbidity and risk scores and their influence on the outcomes of UGIB over a 14-year period.
Methods We analysed the clinical characteristics of all patients presenting with UGIB to a single institution, 1996–2010. The Charlson's comorbidity and the complete Rockall scores were analysed, together with patients' drug use and 30-day mortality. Trends with time were assessed using logistic regression analysis with year of presentation as a continuous predictor variable. Regression coefficients were expressed as odds ratios (OR), representing the relative change in odds of death or other binary dependent variables over a time interval of one year.
Results A total of 2669 patients were included. The Charlson score increased significantly with time ($P < 0.001$), the odds of a high (3+) score increasing at a relative rate of 4.4% a year (OR = 1.044, 95% CI 1.022–1.065). No significant trend with time was noted for age ($p = 0.09$), haemoglobin level ($P = 0.47$) or Rockall score ($P = 0.94$). The overall 30-day mortality was 4.9% and this showed no relationship with time ($P = 0.28$). However, when adjusted for the increasing comorbidity, the odds of death within 30 days decreased significantly at a relative rate of 4.5% per year [OR = 0.955 (0.914–0.997); $P = 0.038$]. Trends in the prevalence of taking potentially damaging and protective drugs are shown in Table-1, below. The rise in use of aspirin, other anti-thrombotic drugs and SSRIs [with pro-UGIB activity] was paralleled by a rise in the use of PPIs [protective activity] and beta-blockers, ACE inhibitors, and statins [being able to affect mortality.