

beneficial. With its diagnostic and therapeutic capability DBE should be contemplated in small bowel disease in the setting of a multidisciplinary approach.

**Disclosure of Interest** None Declared.

#### PTU-038 PROLONGED OVERT OBSCURE GASTROINTESTINAL BLEEDING – A “REAL WORLD” EXPERIENCE

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**Introduction** Prolonged overt obscure gastrointestinal bleeding (OGIB) after an initial normal oesophagogastroduodenoscopy and colonoscopy can be difficult to manage. “Real-world” studies with all of the endoscopic (capsule endoscopy, device-assisted enteroscopy), radiological (radionuclide red cell scan, CT angiography and angiographic embolisation) and surgical interventions or therapies are lacking.

**Methods** We studied the investigation and treatment of such patients, requiring transfusion with  $\geq 1$  inpatient stay of 7 days between 2004 and 2012 at St. Vincent's Hospital and Epworth Eastern Hospital, Melbourne, Australia.

**Results** Twenty-eight patients presented at a median age of 67.5 years. The median blood transfusion requirement per patient from symptom presentation to diagnosis or census was 26 units. Anti-platelet and anticoagulation therapy was taken by 50% patients. Twenty-four had diagnoses made (21 small and 3 large intestinal). These included angioectasias in 8 patients (6 small and 2 large bowel) who were  $>65$  years and six of whom were taking anti-platelet therapy for cardiac disease; portal hypertensive enteropathy/ small bowel varices in four patients who were  $<60$  years; and small intestinal tumours in 5 patients (2 gastrointestinal stromal tumours and 3 carcinoid tumours), the latter of which needed surgery for diagnosis and treatment in all cases. Repeat gastroscopy allowed histoacryl glue injection of peri-anastomotic varices in one case and repeat colonoscopy permitted treatment of angioectasias in two elderly patients. Radionuclide red cell scans had the highest radiological diagnostic yield (51%) but were beneficial only in conjunction with other tests. CT angiography (diagnostic yield 30%) resulted in successful angiographic embolisation in 3/9 cases (a small intestinal angioectasia and bleeding associated with colonic diverticula and a pancreaticoduodenal artery pseudoaneurysm). Capsule endoscopy had the highest endoscopic diagnostic yield (53%). In two patients repeat examination was diagnostic (an angioectasia and a gastrointestinal stromal tumour). Antegrade double balloon enteroscopy had the best enteroscopic yield (31%). In 2 cases it allowed argon plasma coagulation of small intestinal angioectasias, which were missed by prior enteroscopy. Surgery had a diagnostic and therapeutic yield of 60%.

**Conclusion** Prolonged overt OGIB is difficult to manage. There may be clues to the underlying diagnosis from the history and clinical features. Capsule endoscopy is a good first-line test, which can guide enteroscopy. Similarly CT angiography can guide angiographic embolisation. Surgery is best as a last resort but is not always productive. Management should be individualised with consideration given to repeating investigations.

**Disclosure of Interest** None Declared.

#### PTU-039 SHOULD MR ENTEROGRAPHY BE THE PREFERRED SURVEILLANCE MODALITY COMPARED TO SMALL BOWEL CAPSULE ENDOSCOPY IN PEUTZ-JEGHER'S SYNDROME?

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**Introduction** Peutz-Jeghers syndrome (PJS) causes multiple hamartomatous polyp formation throughout the gastrointestinal tract. Large polyps within the small bowel (SB) may cause complications and morbidity including obstruction, bleeding, an increased risk of cancer and post surgical adhesional disease. Regular surveillance and removal of large polyps are important to prevent complications from occurring.

**Methods** The aim of our study was to assess the utility of SB capsule endoscopy (SBCE) compared with MR enterography (MRE) for the detection of small bowel PJS polyps.

We performed a retrospective review of all adult PJS patients under the care of the St Mark's Polyposis Registry between 2006–2012. Participants' MRE and SBCE findings, enteroscopy reports and case notes were reviewed. Polyps  $>10$  mm were regarded as clinically relevant. Large polyps ( $>15$ mm) resected at push enteroscopy (PE), double balloon enteroscopy (DBE) or intraoperative enteroscopy (IOE) were correlated in terms of size, location, number and need for resection with both MRE and SBCE findings.

**Results** 95 patient episodes involving 83 patients (median age 38yrs, 60% female) were included. SBCE was performed in 78 patient episodes, either alone ( $n = 29$ ) or prior to MRE ( $n = 49$ ). Reasons for MRE post SBCE were: previous study involvement ( $n = 19$ ), post-polypectomy reassessment ( $n = 10$ ), persistent symptoms ( $n = 9$ ) and confirmation of significant polyp findings ( $n = 11$ ). There was no significant difference between patients in whom  $>10$  mm polyps were detected (77 vs. 106 for SBCE and MRE, respectively;  $p = 0.124$ ). In 6 patients, large polyps ( $>15$  mm) not detected at SBCE, were identified at MRE. Endoscopic removal of large polyps was performed during 63 patient episodes. 22 patients episodes did not require polypectomy. DBE's were incomplete due to failure of deep intubation in 7 patients (19%) but 4 of these patients subsequently underwent laparoscopic assisted DBE and successful polypectomy.

Concordance with DBE findings for polyp size for SBCE vs. MRE was 61% and 79%, respectively ( $p = 0.18$ ). Concordance with DBE findings for polyp location for SBCE vs. MRE was 79% and 92%, respectively ( $p = 0.76$ ).

**Conclusion** MRE appears at least as effective as the current iteration of SBCE for small-bowel polyp surveillance in adults with PJS. MRE may be less prone to missing large polyps and more accurate in polyp size assessment and localisation and in post-polypectomy reassessment of the SB.

**Disclosure of Interest** None Declared.

#### PTU-040 FIVE YEAR OUTCOMES FOR PATIENTS UNDERGOING ENDOSCOPIC THERAPY FOR BARRETT'S RELATED NEOPLASIA FROM THE UNITED KINGDOM'S LARGEST SINGLE CENTRE EXPERIENCE

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**Introduction** The National Institute of Clinical Excellence (NICE) in the United Kingdom (UK) approved the use of Radiofrequency ablation (RFA) as minimally invasive endoscopic therapy for the treatment of Barrett's Oesophagus related neoplasia as an alternative to surgery in 2010. These high risk patients carry a 40–60% risk of progressing to Oesophageal Adenocarcinoma (OAC), survival from which is poor. Over the past 5 years combined endoscopic mucosal resection (EMR) and RFA have become the preferred intervention for the curative treatment of patients with BE related neoplasia.

**Methods** We report prospective data from one of the UK's largest academic tertiary centres for patients undergoing RFA for early neoplasia arising in BE between 2008–2013 at University College Hospital, London. Before RFA, visible lesions were removed by EMR. Patients then underwent RFA every 3 months until all visible BE was ablated or cancer developed (endpoints). Biopsies were taken at 12 months or when endpoints reached. Primary outcomes were clearance for dysplasia (CR-D) and BE and intestinal metaplasia (CR-IM) at 12 months. Long term durability for CR-D for those with favourable outcomes at 12 months was assessed.

**Results** Two hundred patients have undergone RFA since 2007 at our centre. Of these 145 have completed treatment. Most are male (83%), mean age 69 years (range 44–91). Baseline histology HGD in 86% and IMC in 14%. Mean length BE segment prior to RFA 6cm (range 1–20). Ten per cent patients in our cohort underwent RFA for residual neoplasia after unsuccessful Photodynamic therapy (PDT). Prior to RFA treatment, 50% of patients had EMR for visible lesions. After 2–3 RFA treatments (range 1–6) over 12 months, 80% (116/45) patients had achieved CR-D and 65% CR-IM (94/145). Pre-treatment PDT, EMR or histology did not influence outcomes. Three patients (2.5%) progressed to invasive OAC at 12 months and in total 8 (7%) progressed at most recent follow up. At 5 years 95% of patients who had dysplasia clearance at 12 months remain disease free (median follow up 20 months, IQR 9–32). Kaplan Meir survival statistics demonstrate at 5 years after successful treatment 75% and 77% of patients are likely to remain free of dysplasia and IM respectively.

**Conclusion** We report on the UK's single largest prospective series to date of patients undergoing endoscopic therapy for BE related neoplasia. Our outcomes compare favourably with those published around the world and from within the UK patient registry. These patients are high risk and require vigilant follow up even after successful treatment as predicted recurrence can occur in up to 25% of cases.

**Disclosure of Interest** None Declared.

**PTU-041 SUB-SQUAMOUS COLUMNAR NEOPLASIA AFTER SUCCESSFUL RADIOFREQUENCY ABLATION FOR BARRETT'S RELATED NEOPLASIA IS RARE BUT HIGHLIGHTS REQUIREMENT FOR LONG TERM FOLLOW UP IN THESE PATIENTS**

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**Introduction** Radiofrequency ablation (RFA) combined with endoscopic mucosal resection (EMR) has become the preferred treatment for BE related neoplasia. Success rates of 90% after treatment with a durability of up to 95% at 5 years are reported. The development of sub-squamous intestinal metaplasia (IM)

after successful RFA is recognised and has been reported to range from 0–30%. It's clinical significance remains unclear. However the development of sub-squamous neoplasia after successful treatment is limited to only a few cases world wide in the literature.

**Methods** We prospectively examine the incidence of sub-squamous neoplasia after successful RFA from one of the UKs largest academic tertiary centres for patients undergoing RFA for BE neoplasia between 2008–2013 at University College Hospital, London. Before RFA, visible lesions and nodularity were entirely removed by EMR. Thereafter patients underwent RFA every 3 months until all visible BE was ablated. Biopsies were taken at 12 months. After successful treatment patients were followed up 3 monthly for the first year, at 6 month intervals for the second year and annually thereafter. Biopsies were taken from 1cm below the neo z-line and from the previously treated BE segment using the Seattle protocol. Enhanced imaging endoscopic imaging was used in all cases.

**Results** At our institution 197 patients have undergone RFA since 2007 of which 145 have completed treatment. Eighty percent of patients (116/145) achieved CR-D at 12 months. At 5 years 90% of patients remain disease free (median follow up 20 months, IQR 9–32). There have been a total of 11 recurrences after successful RFA (median time to recurrence – 380 days, IQR 150–884). Four of these patients had sub-squamous high grade glandular dysplasia (HGD). All had had confirmed eradication of dysplasia and IM after the 12 month end of protocol biopsy. These sub-squamous recurrences occurred at 3, 7, 13 and 36 months respectively after eradication was confirmed. One of the four patients was found to have buried HGD on biopsy at the neo z-line and the area was subsequently treated with EMR. The other 3 cases developed visible lesions in neo-squamous mucosa proximal to the neo z-line. All were removed successfully with EMR and demonstrated buried HGD. All 4 cases remain in follow up with no neoplasia at most recent biopsy.

**Conclusion** Although rare, buried neoplasia after successful eradication with RFA can occur. Identification of these cases indicates the need for continued and vigilant surveillance following RFA, even after complete eradication of IM. Early recognition of recurrence can lead to treatment at an early stage.

**Disclosure of Interest** None Declared.

**PTU-042 APPROPRIATELY TRAINED REGISTRARS ARE AS GOOD AS CONSULTANTS IN ENDOSCOPIC MANAGEMENT OF MODERATE-SEVERE UPPER GASTROINTESTINAL HAEMORRHAGE**

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**Introduction** The South West Thames region operates a unique regional gastrointestinal service covering 4 hospitals. Registrar endoscopists are assessed and signed off as competent in providing endoscopic haemostatic therapy before taking their place on the GI bleed rota, and are supported by an on-call consultant. We aimed to evaluate if there were any operator-dependent differences in outcomes of endoscopic procedures performed in cases of moderate-severe upper gastrointestinal haemorrhage between consultants and registrars

**Methods** Data were recorded for all emergency OGDs performed at St. George's Hospital, between 01/01/13 and 30/06/