We describe our experience in the endoscopic management of migrated PS.

Methods A retrospective review of all ERCPs at our tertiary unit from January '13 –February '19 was performed to identify cases of migrated PS.

Results Twelve patients were identified; 10 received PS placement at other UK hospitals, 1 abroad and 1 at our unit. PS indications were prophylaxis of post-ERCP pancreatitis (PEP) in 9 and following pancreatic endotherapy in 3 (one for sphincter dysfunction, one for ductal stricture and one for cyst drainage). The migrated PS were 5 cm (n=11) or 7 cm (n=1) long with diameter of 3Fr (n=1), 5Fr (n=10) and 7Fr (n=1). Seven were straight and 5 single pigtail. 9 PS migrated after reported correct placement (of which 6 (67%) were straight). Two were inadvertently deployed within the pancreatic duct (PD); in one case there was no information regarding placement. The site of PS migration was within the pancreatic head (n=3), body (n=3) and tail (n=6).

After MDM review one patient was referred directly for surgery where a PD stricture precluded endoscopic access. Endoscopic removal was attempted in 11 patients and successful in 9 (82%). 7 patients required two procedures. The median interval from stent placement to retrieval was 5 weeks (range 2–20). All patients had a previous pancreatic sphincterotomy. Techniques used for successful retrieval were: stent grabbers (n=3), extraction balloon/stent grabbers (n=1), snare/stent grabbers (n=2) and pancreatoscopy with SpyBite™ forceps (n=3). Endoscopic removal was unsuccessful in 2/11 patients where pigtail stents had hooked into a side branch. In all cases a 5 cm/5Fr prophylactic PS was placed post retrieval and 8 received rectal diclofenac (one contraindicated). Mild post-ERCP pancreatitis (PEP) occurred in one case.

Conclusions Endoscopic retrieval of proximally migrated PS was successful in 82% of patients. Migrated PS retrieval is challenging, and should only be attempted by endoscopists experienced in pancreatic endotherapy following case review within a specialist MDM. The mechanism of migration is unclear and spontaneous proximal migration of an appropriately placed single pigtail PS is unlikely to occur. Apparent migration in these cases most likely arises from incorrect deployment, potentially due to difficulty distinguishing the stent from the pushing device, emphasising the need for caution during PS placement. The optimal retrieval technique depends upon PS type, position, and PD anatomy. In our experience use of an extraction balloon alone was never successful. Failure of endoscopic retrieval was highest with pigtail stents and those >2 cm from the papilla.

PTH-022 ENDOSCOPIC RESECTION OF NON-AMPULLARY DUODENAL POLYPS: A RETROSPECTIVE SINGLE CENTRE EXPERIENCE

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Introduction Current literature estimates that complete endoscopic resection (ER) of duodenal adenomas can be achieved in 79–100% of cases, but complication rates are high and adenoma recurrence is encountered in up to 37% of cases (Basford & Bhandari, 2012). We present our retrospective experience.

Methods Data from the electronic patient record was analysed for all patients who underwent duodenal polyp resection from June 2013 were included (excl. familial polyposis cases). Procedures were performed by either one of two endoscopists with experience in endoscopic resection. Accepted definitions of technical success, major adverse events and recurrence were used.

Results 31 patients (15F; mean age 67.9 ± 10.4 y) were included. The mean polyp size was 38.8 ± 23.6 mm, with most (n = 26) located within D2. More than half were laterally spreading lesions (n=16). The main method of resection was with piecemeal EMR (n=24), with 5 removed by en-bloc EMR and 2 by ESD. Histology revealed tubular adenoma low grade dysplasia (n = 12), tubulovillous adenoma with low grade dysplasia (n = 11) and neuroendocrine tumour (n = 3). ER was successful in 28/31 cases (90.3%). Mean size in 3 incomplete resections was 93 mm, with 1 patient referred for surgery, 1 repeat ER and 1 did not proceed due to a more pressing medical diagnosis.

3/31 had peri-procedural complications: endoscopically-treated perforation in 2 (6%) and minor bleeding in 1. 2/31 patients (6%) experienced delayed bleeding, with one patient requiring a repeat OGD but no intervention and the other requiring transfusion of packed red blood cells and observation in hospital. There was no procedure related mortality. At time of writing 4 patients had not yet had surveillance OGD and to date 5 patients (20.8%) had recurrence all treated endoscopically.

Conclusion ER of duodenal polyps is feasible and safe. Our single centre experience is on par with what is published in the literature in regards to technical success and adverse events. A prospective analysis would be of value to guide patient selection, optimal treatment and surveillance protocols.

PTH-023 THE INCIDENCE & INVESTIGATION OF IRON DEFICIENCY ANAEMIA IN PATIENTS PRESENTING WITH ACUTE CORONARY SYNDROME

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Introduction Co-presentation with anaemia and acute coronary syndrome (ACS) is common. Anaemia is an independent risk factor for poor outcomes after ACS. Bleeding is the most common non-cardiac complication of ACS therapy. There are few studies existing on these patients. In this retrospective study we reported the incidence and characteristics of anaemia in patients presenting with NSTEMI (n=55) or STEMI (n=58) between 2015 and 2016 to a large tertiary centre.

Methods Patients were identified using an ICD10 code-based search. Data were collected from electronic patient notes and the pathology system. Endoscopy reports one year prior to and after the ACS were reviewed.

Results 45% patients with NSTEMI and 28% STEMI were anaemic at presentation with ACS. This was a microcytic anaemia in 36% patients. Iron saturations were tested or a recent result was available in 29% patients and ferritin was tested in 19% patients. These tests were more frequently performed in patients who had NSTEMI. When tested, iron saturations were low in 76% patients and ferritin was low in 29%.

Abstract PTH-023 Table 1 Endoscopic investigations & findings

Investigation	Performed <1 year before ACS (n = 113)	Performed <1 year after ACS (n = 113)	Overall Incidence of significant findings
Gastroscopy	10%	19%	28%
Lower GI investigations (Colonoscopy, sigmoidoscopy or CT pneumocolon)	11%	17%	32%

Only a minority of patients had endoscopic investigations for anaemia (table 1). Significant findings (ulcers, active bleeding or cancer) were found at 28% gastroscopy more commonly in patients with STEMI (45%). Significant findings (polyps, cancer, proctitis) were found at 32% lower GI investigations. No endoscopic complications occurred.

69% STEMI and 27% NSTEMI patients had coronary stenting. 81% patients were discharged on dual antiplatelet therapy and 16% on anti-coagulation. 1-year outcome data were available for 99/113. Crude mortality was 24%. 7.1% patients developed overt GI bleeding during admission or in the year after ACS.

Conclusions Anaemia is common in patients presenting with ACS. Adequate gastrointestinal investigations were only performed on a minority of these patients but when completed showed a high incidence of iron deficiency and important findings at endoscopy. This patient group has a significant risk of both bleeding and ischaemia and could benefit from complete investigation of their anaemia.

PTH-024 NOVEL CAPSULE ENDOSCOPE WITH 3D RECONSTRUCTION AND LESIONS SIZE CALCULATION: FIRST STUDY WITH MIROCAM MC4000

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Introduction Lesions detected at capsule endoscopy currently can only be viewed by a 2D image and size estimated by subjective image perception. The MiroCam MC4000 uses stereo matching technology to enable reconstruction of selected images in 3D format to enable size calculation. The aim of this study was to assess the reliability of this novel capsule to reconstruct 3D images, and its ability to accurately calculate lesion size within a phantom model.

Methods The MC4000 capsule was mounted on a modified plastic shaft with the receiver circuitry system attached. In-vitro measurements at various distances were undertaken on a phantom model with static 2D and 3D lesions with sizes between 5–25 mm. In addition, dynamic movements resembling capsule movement through the bowel was performed. The ability to reconstruct images in a 3D format, in addition to the accuracy of the size calculations within $\pm 10\%$, was assessed.

Results All lesions within the phantom model were successfully reconstructed in 3D format. For static lesions the MC4000 capsules estimated measurements correlated highly with the known sizes (table 1, 2D lesions).

The effective distance for accurate size measurement for the MC4000 capsule was 10 mm to 25 mm. In total 2D & 3D objects, 5 mm to 20 mm in size, were measured with an overall accuracy of 88.4% within this effective distance.

Abstract PTH-024 Table

2D Lesion Size (mm)	Distance between lesion and capsule (mm)					Mean% error of all distances
	5	10	15	20	25	
5	5.73	6.28	5.82	4.65	3.29	
10	10.32	10.79	10.54	9.81	9.12	
15	15.46	16.59	16.17	15.82	14.56	
20	X	19.29	18.85	17.61	16.33	
Mean% Error	6.96	10.14	5.96	-3.85	-16.07	8.59

X: Target cannot be measured because it is bigger than the effective area or cannot be measured within the effective area.

There was statistically significant correlation between 2D and 3D lesion size and measured size for each distance (correlation coefficient 0.98–1, $p < 0.049$).

Conclusions The MiroCam MC4000 capsule provides reconstructive technology with good size calculations. This novel function may allow more accurate interpretation of lesions identified during capsule endoscopy either for index lesions or when looking for follow up lesion sizes. Further adjustment to the software may be required to bring accuracy to an optimum level to allow further in-vivo studies.

PTH-025 AN ANALYSIS OF FACTORS LEADING TO A DELAY IN DIAGNOSIS OF UPPER GASTROINTESTINAL CANCERS

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Introduction Delay in diagnosis of Upper Gastrointestinal (UGI) cancer may lead to worse patient outcomes. Several studies have published experience of post endoscopy cancers, with rates ranging between 4.6% – 21.6% in Western studies (Menon and Trudgil, 2014). Our study aimed to identify the incidence of a delay in diagnosis of UGI cancer, investigating the underlying cause, including endoscopic 'misses'. This will identify reversible factors, which may improve our patient outcomes.

Methods A retrospective analysis was undertaken on all patients diagnosed with UGI cancer at King's College Hospital (KCH) between 2011 – 2018 inclusive. Patients who were seen by a gastroenterologist, GI surgeon or had an endoscopy within the last 36 months were screened. Each case was discussed to determine whether a delay had occurred, or a cancer had been missed on endoscopy. Any delay in diagnosis was investigated to identify a root cause.

Results 276 patients were diagnosed with UGI cancer in the time period, with 28 (11.3%) seen in the last 36 months. In 16 of these cases (5.8%) a delay in diagnosis was identified (mean 187 days, range - 21–1,106). In 11 cases (4.0%) the delay was less than 12 months. The factor leading to a delay in diagnosis were: post-endoscopy cancer (n=10), inadequate investigation (n=3) and delayed investigation (n=3). The missed cancer rate