Conclusions Short segment Barrett's can be difficult to assess accurately. In our analysis, cases that did not meet the criteria for Barrett's diagnosis on endoscopy, had segment < 1cm or an atypical Z line.

We have shown a potential 49% reduction in unnecessary gastroscopies, which could result in avoidance of unnecessary health and procedural anxiety for patients, and cut waiting lists and associated costs.

In addition, we suggest that patients with previous suspected Barrett's should be evaluated on dedicated surveillance lists, by endoscopists with expertise in Barrett's assessment.

PTU-53 EFFICACY AND SAFETY OF ENDOSCOPIC AMPULLECTOMY IN THE UK

Sujith Sasidharan Nair*, Mohamed Abdelrahim, Lazaros Varytimiadis, Asma Al-Kandari, Patrick Goggin, Professor Pradeep Bhandari. *Queen Alexandra Hospital, Portsmouth Hospital University Trust, Portsmouth, UK*

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Introduction Endoscopic ampullectomy is a minimally invasive technique of treating non-invasive lesions involving the ampulla of Vater and offers an alternative to major surgical intervention. In this study, we describe the safety and outcome of this procedure from a single large tertiary unit in the UK.

Methods Data were prospectively collected on an electronic database. Parameters related to ampullectomy outcome and complications were retrospectively analyzed.

10 to 20 mm snare sizes were used in these patients. ENDOCUT Q effect 2 was used. All patients were given indomethacin suppositories. Submucosal injection was performed only where the ampullary lesions spilled over to the duodenal mucosa.

Results A total of 48 cases were included in this analysis, between 2009 and 2021. The mean age was 62.4 years. Female represented 55.3% of patients. Mean duration of follow up was 118.29 weeks (27 months). 29 (60.4%) lesions were pure ampullary, and the remaining involved the duodenal wall as well. Lesions ranged from 5 to 80mm in size, with average size of 22.2 mm. 6 patients (12.5%) had familial adenomatous polyposis FAP. Pre resection histology confirmed HGD in one patient (2%), and neuro-endocrine tumor NET in one case (2%). Post resection histology showed focal adenocarcinoma in 2 patients (4.1%).

Prophylactic PD stenting was performed in 31 cases (64.5%) of which one patient developed pancreatitis. Out of the 17 cases (35.4%) who did not have PD stenting, none developed pancreatitis. Adjunctive APC used in 11 cases (22.9%), and submucosal injection in 28 cases (58.3%). En-bloc resection was achieved in 16 (33.3%), while piecemeal in 32 cases (66.6%). Recurrence observed in 12 out of 48 cases (25.0%). Piecemeal resection was significantly associated with higher risk of recurrence ($P = 0.0404$). Early bleeding (including intra-procedural and bleeding within 24 hours of procedure) happened in 6 patients (12.5%), delayed bleeding (after 24 hours) in 2 cases (4.1%), all were successfully treated endoscopically. Only 1 patient (2%) had Pancreatitis, and one patient developed ampullary stenosis post procedure. There was no report of perforation, need for emergency surgery or 30-day mortality in this series.

Conclusion

- Endoscopic ampullectomy seems safe and effective in expert hands

- The recurrence rate observed in this series was 25%, all of them treated with further endoscopic therapy
- Piecemeal resection was significantly associated with higher risk of recurrence, all managed with further endoscopic therapy
- If indomethacin suppositories are universally used, prophylactic pancreatic stenting may not be needed as the risk of pancreatitis is very low

PTU-54 EARLY PROOF OF CONCEPT STUDY OF A NOVEL ULTRASONIC MEASUREMENT DEVICE FOR UPPER GI ENDOSCOPY

^{1,2}Israa Bondaqa*, ¹Simon Toh, ²Raymond Lee, ²Martino Pani. ¹Portsmouth Nhs Trust, Dept of Upper GI Surgery, Portsmouth, UK; ²University of Portsmouth, Faculty of Technology, Portsmouth, UK

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Introduction Measurement of the distance of an endoscope tip from mouth guard is estimated visually in the dark by the endoscopist. To improve the precision and ease of measurement, we developed a prototype device that attaches to any endoscope externally so that this measurement can be displayed on-screen in real-time for recording and review.

Methods A prototype ultrasonic measurement device that clamps to the endoscope outside the patient was devised and tested by an experienced and novice endoscopist with multiple repeated measurements made of a fixed Z line at 39cm. Paired measurements were made with the endoscopist's own done by usual visual inspection. The device measures how much of the endoscope is outside the patient to calculate the distance of the scope tip within the patient. This study was performed in a Koken EGD simulator (*GTSimulators, Davie, Florida, USA*)

Results Fifteen paired measurements each were performed by both endoscopists with the results summarized in this table (Table 1.):

There were no significant differences in the measurements made by the device compared with either endoscopists. The device did not impede endoscopy in any way, The initial study guided improvements in the design and data processing to reduce variability.

Conclusions This early proof of concept feasibility study has encouraged us to develop a workable prototype device that we will test in a series of upper GI endoscopies in patients (ScopeMeasure Study IRAS Ref 20/SC/0387). This device will be compatible with any endoscope and will be reusable within a disposable sterile sleeve. We hope that automated

Abstract PTU-54 Table 1

	Mean (Range) cm	Median (1SD) cm	Paired student t-test (2 tailed)
Experienced endoscopist results	39.1 (39-39.5)	39	p=0.183
Device Results	40 (37-46)	39 (2.5)	
Experienced endoscopist results	39.1 (39-39.5)	39	P=0.167
Device Results	38 (34-43)	38 (2.6)	

on-screen display of measurements during endoscopy will make it easier, and encourage more endoscopists to record with more precision the location and size of any landmarks or lesions found.

PTU-55 BILIARY STONE CHARACTERISTICS DETERMINING DIFFICULTY AT CONVENTIONAL ERCP AND NEED FOR CHOLANGIOSCOPY-ASSISTED LITHOTRIPSY

¹Akhilesh Mulay*, ¹Tareq El-Menabawey, ¹Simon Philpotts, ¹David Graham, ¹Harry Martin, ²Amrita Sethi, ¹George Webster. ¹University College London Hospital, London, UK; ²Columbia University Medical Centre, New York, USA

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Introduction Stone clearance at ERCP is suboptimal, with NHS data suggesting 52% of ERCPs for stones are repeat procedures.¹ Cholangioscopy-assisted lithotripsy is recommended for treating difficult bile duct stones (ESGE guidelines), but the characteristics of difficult stones are poorly defined, and patients may be undergoing conventional ERCP with limited chance of stone clearance. We sought to determine these characteristics and explore decision making in biliary endoscopy.

Methods 53 biliary endoscopists independently assessed 20 cholangiograms with biliary stones (16 ERCPs, 4 MRCPs). Using Likert-type questionnaires each image was graded in 3 areas; 'grading of stone difficulty', 'confidence of clearance with conventional ERCP methods' and 'likelihood of needing cholangioscopy-assisted lithotripsy'. Images were objectively assessed according to stone characteristics: 'largest stone size', 'stone number', 'presence of stricture distal to stone', 'size of stone relative to distal duct size'. Univariate analyses were performed to determine the effect of these characteristics on endoscopists' questionnaire responses.

Results Largest stone size significantly affected endoscopists' grading of difficulty, confidence of clearance with conventional ERCP methods and likelihood of needing cholangioscopy ($p < 0.01$ for all, Kruskal-Wallis (KW) test). As stone size increased, particularly >15 mm, endoscopists rated them as more difficult, were less confident with conventional methods and were more likely to need cholangioscopy. Presence of stricture distal to stone significantly affected responses to all 3 areas ($p = < 0.01$ for all, χ^2 test), as did size of stone relative to distal duct ($p = < 0.01$ for all, KW test). The presence of a stricture distal to a stone, and a larger stone relative to distal duct showed a clear trend in more difficult ratings, less confidence with conventional methods and a greater likelihood of requiring cholangioscopy. Stone number significantly affected responses to all 3 areas ($p = < 0.01$ for all, KW test), however the presence of only one stone led to more difficult ratings, less confidence with conventional methods and an increased likelihood of using cholangioscopy.

Conclusions Larger stone size, the presence of a stricture distal to a stone, a larger stone relative to the size of the distal duct and fewer stones result in endoscopists grading stones as more difficult and being more likely to use cholangioscopy. The result for stone number is unexpected and warrants further analysis. Our results suggest that pre-procedure stone characteristics may allow stratification of patients for advanced ERCP techniques.

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PTU-56 UPPER GASTROINTESTINAL BLEED (UGIB); HEMOSPRAY, AN ESSENTIAL TOOL IN THE ARMAMENTARIUM

Siva Selvan*, Vignesh Balasubramaniam, Dhanoop Mohandas, Shailesh Karanth. *Queen Elizabeth Hospital King's Lynn, King's Lynn, UK*

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Introduction Upper gastrointestinal bleed (UGIB) is a common presentation to the emergency department and accounts for approximately 50,000 - 70,000 admissions per year in the UK. Peptic ulcer disease (PUD) remains the most common cause of UGIB in the UK. Hemospray (Cook Medical, Winston-Salem, NC, USA) is an inert powder developed for endoscopic haemostasis. We aim to appraise the outcomes for UGIB where hemospray was used during the initial endoscopic therapeutic intervention.

Methods In this retrospective study from March 2018 to December 2020, cases of severe UGIB intervened with hemospray during primary presentation were identified via HICCS, an online database of endoscopy procedures. A detailed analysis of the demographics and outcome measures relating to the procedure, anatomical site of intervention, re-bleeding, and 30-day mortality were collected and interpreted.

Results 20 patients with severe UGIB were identified, where hemospray was used to control the bleeding when other modalities such as Adrenaline injection, Endoclip and Gold probe application failed to stop the bleeding. Among this population, the mean age was 73 years, ranging between 61 to 98 years. There were 14 male patients (70%) in this cohort. Majority of the therapeutic intervention site was at the duodenum ($n = 14$) accounting for 70% of the patients, followed by stomach in 25% ($n = 5$) and oesophagus ($n = 1$) in 5%. Causes for the severe UGIB were duodenal ulcer in 12(60%), gastric ulcer in 2(10%), gastric malignancy in 2(10%), Dieulafoy lesion in 1(5%), metastatic duodenal tumour in 1(5%), Angiodysplasia in 1(5%) and severe reflux oesophagitis in 1(5%). Hemospray was successful in achieving initial haemostasis in all cases except in one case of massive haemorrhage with poor view of the bleeding site in duodenum where the bleeding could not be stopped. Following initial hemostasis, re-bleed occurred in 4 out of 19 patients (21%) who were then managed with best supportive care as treatment escalation was not considered appropriate due to comorbidity. 7 patients (35%) died within 30 days of the procedure out of which four occurred due to re-bleed and three patients died due to other medical causes.

Conclusions In our experience, Hemospray has proven to be an effective therapeutic intervention in achieving haemostasis in cases of severe UGIB when other endoscopic therapies fail to stop bleeding.

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