hepatic flexure in the left lateral position, transverse colon in the supine position and the hepatic flexure and descending colon in the right lateral position). Colonic segments were precisely defined using biopsy sites as markers, aided by a Scopeguide imager. Segments were cleansed and examined for at least 2 minutes during which air was insufflated to distend the colon. After each segment was examined the colonoscope was reinserted and the same segment was re-examined in the alternative position. Luminal distension was rated on a validated 5 point scale, ranging from 1 = completely collapsed to 5 = maximal distension. Ordinal and categorical data were compared with the Mann Whitney U test and Fisher's exact test respectively.

Results This is an interim analysis of 65 patients (mean age 62, 38 male). 30 patients were initially examined in the supine position and 35 patients with position change. Distension scores were higher in the right colon when examined in the left lateral position (mean = 3.9 vs. 3.5 $p < 0.001$), and in the left colon when examined in the right lateral position (4.4 vs. 3.6, $p < 0.001$) (see table 1). The proportion of patients with scores of 4–5 (adequate) were higher in the right colon when examined in the left lateral position (42/65 vs. 27/65, $p = 0.014$) and in the left colon when examined in the right lateral position (59/65 vs. 34/65, $p < 0.001$). There was no significant carry-over effect in any of the examined segments.

Abstract PTU-019 Table 1 Distribution of distension scores with each colonoscope withdrawal strategy

Withdrawal position	Distension score				
	1	2	3	4	5
Right colon					
Supine	0	5	33	19	8
Left Lateral	0	0	22	26	16
Descending colon					
Supine	0	2	29	29	5
Right lateral	0	0	6	26	33

Conclusion Position change improves suboptimal distension of the right and left colon. Further analysis of this study will clarify whether position change also improves polyp detection.

Disclosure of Interest None Declared

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PTU-020 PRE-ENDOSCOPIC INTRAVENOUS PROTON PUMP INHIBITION AND THE OUTCOMES OF ACUTE UPPER GASTROINTESTINAL BLEEDING

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^{1,2}* A S Taha, ²E Saffouri, ¹C McCloskey, ¹T Carigen, ³W J Angerson. ¹Medicine, University Hospital Crosshouse, Kilmarnock; ²Medicine; ³Surgery, University of Glasgow, Glasgow, UK

Abstract PTU-020 Table 1 Odds ratios (95% CI) for outcomes of UGIB, with vs. without pre-endoscopic PPI use, before and after adjustment for other factors in a logistic regression model

Outcome	Un-adjusted	Adjusted for Age	Adjusted for Age & Blatchford Score	Adjusted for Age, Blatchford & Charlson Scores
Transfusion	2.11 (1.41–3.16); $P < 0.001$	1.87 (1.24–2.84); $P = 0.003$	1.16 (0.69–1.97); $P = 0.57$	1.08 (0.63–1.84); $P = 0.78$
Length of Stay > 6 Days	1.48 (1.00–2.19); $P = 0.052$	1.24 (0.81–1.89); $P = 0.33$	0.98 (0.63–1.53); $P = 0.94$	0.99 (0.63–1.65); $P = 0.97$
30-Day Mortality	1.80 (0.74–4.38); $P = 0.20$	1.57 (0.64–3.87); $P = 0.33$	1.16 (0.46–2.96); $P = 0.75$	1.34 (0.50–3.59); $P = 0.56$

Introduction Proton pump inhibitors (PPIs), when given following endoscopy for acute upper gastrointestinal bleeding (UGIB), can reduce the need for blood transfusion and surgery; little is known about their benefit when used in the period before endoscopy.

We therefore aimed to investigate the outcomes of UGIB in patients given intravenous PPIs before their endoscopy.

Methods A total of 404 patients with UGIB were included; 202 received intravenous omeprazole for a median of 1 day (IQR 0.25–2) before endoscopy and 202 did not, this treatment being at their physician's discretion. Omeprazole was given either in bolus doses of 40-mg bid ($n = 103$; 51%), or as an infusion of 8-mg/hour after a loading dose of 80-mg ($n = 99$; 49%). After endoscopy, omeprazole was continued intravenously or orally in patients found to have ulcers/erosions in their oesophagus, stomach, or duodenum. Patients' clinical details were noted including their Charlson comorbidity and Blatchford risk scores. Three major outcomes were measured: need for blood transfusion; hospital stay > 6 days; and death within 30 days. The Mann-Whitney test, Chi-squared test and logistic regression were used as appropriate

Results The two groups were comparable with respect to their gender, smoking, alcohol intake, and use of NSAIDs, aspirin, anti-thrombotic and other drugs. The treated group was older and had higher Blatchford and Charlson scores. However, when these factors were adjusted for, as shown in Table-1, below, no significant differences were noted between patients who received pre-endoscopic PPI and those who did not in terms of need for blood transfusion, length of hospital stay, or 30-day mortality.

Conclusion The administration of intravenous PPI before endoscopy did not affect the outcomes of acute upper gastrointestinal bleeding in this retrospective study. This is relevant to the appropriate management of this common condition.

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PTU-021 3D RECONSTRUCTION IN CAPSULE ENDOSCOPY: A FEASIBILITY STUDY

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¹* A Koulaouzis, ²A Karagyris, ³E Rondonotti, ¹J N Plevris. ¹Centre for Liver & Digestive Disorders, Royal Infirmary of Edinburgh, Edinburgh, UK; ²National Institutes of Health, National Library of Medicine, Bethesda, United States; ³Gastroenterology Unit, Ospedale Valduce, Como, Italy

Introduction Three-dimensional (3D) imaging in small-bowel capsule endoscopy (SBCE) is not currently feasible due to hardware limitations. However, there has been increasing use of software algorithms to enable 3D reconstruction in this setting. The aim of this study was to explore a) whether innovative software offers accurate 3D reconstruction of monocular images and b) if its application leads to enhanced lesion visualisation in SBCE.

Methods Feasibility study; first, a phantom was designed to test the accuracy of 3D reconstruction by comparing images of red, yellow and white phantom models to their 2D counterparts. Thereafter, a total of 192 SBCE images (84 PillCam®/108 MiroCam®;

Abstract PTU-021 Figure 1

vascular: $n = 50$; inflammatory: $n = 73$; protruding structures/lesions: $n = 69$) were reviewed with the aid of a purpose-built 3D reconstruction software. Seven endoscopists rated visualisation improved or non-improved (compared to original 2D images) (**Figure 1**). Finally, the following sub-group analyses were performed: type of finding (vascular vs inflammatory vs protruding), colour of finding and SBCE equipment used (PillCam® vs Mirocam®).

Results Overall, phantom experiments showed that the 3D reconstruction software was accurate in predicting the protruding or non-protruding nature for 90% of red, 70% of yellow and 45% of white phantom models. Furthermore, it offered enhanced visualisation for 56% of vascular, 23% of inflammatory and < 10% of protruding structures/lesions ($P = 0.007$, 0.172 and 0.008 , respectively). Lastly, when the images were categorised according to the predominant colour of the lesion, 3D software application enhanced 29/54 (53.7%) of red, 12/55 (21.8%) of white, 5/29 (17.3%) of red+white and 5/54 cases (9.2%) of lesions with colour similar to that of the surrounding mucosa, $P < 0.0001$.

Conclusion Application of a 3D reconstruction software in SBCE leads to image enhancement for a significant proportion (56%) of vascular, but less so for inflammatory and protruding lesions. Its integration, as adjunct tool, in CE reviewing software is desirable.

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PTU-022 DOMPERIDONE IMPROVES COMPLETION RATE IN SMALL BOWEL CAPSULE ENDOSCOPY

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¹S Dimitriadis, ²A Koulaouzidis, ²S Douglas, ²J N Plevris. ¹Department of Internal Medicine, St. Vinzenz-Hospital, Düsseldorf, Germany; ²Centre for Liver & Digestive Disorders, Royal Infirmary of Edinburgh, Edinburgh, UK

Introduction The completion rate of small bowel capsule endoscopy (SBCE) has been reported as 81.3–84.8%.¹ Aside luminal narrowing, incomplete SBCE can be due to delayed gastric emptying,

intestinal dysmotility and/or capsule battery life. Prokinetic agents are used to increase completion rate (CR) and theoretically diagnostic yield. Domperidone, an antidopaminergic agent, has not been widely used in SBCE; ^{2,3} unlike Metoclopramide, it lacks extrapyramidal adverse effects.

Methods Retrospective study; to assess gastric transit time (GTT), small-bowel transit time (SBTT) and the CR of SBCE when using domperidone. Furthermore, we aimed to compare the CR of 2 different SBCE systems (MiroCam®, PillCam®). Consecutive SBCE examinations (period 2008–2012) from a tertiary referral centre in Scotland were analysed; domperidone was not administered to the first 203 patients, but was given orally to the subsequent 449, reflecting changes in clinical practise.

Results In the aforementioned period, a total of 652 SBCE examinations were performed [265 (40.6%) men and 387 (59.4%) women]; 385/652 (59%) were performed with PillCam® and 267 (41%) with Mirocam®. The most common indications for SBCE were obscure gastrointestinal bleeding, anaemia, Crohn's disease (known or suspected) and abdominal pain. In 449/652 (68.9%) liquid domperidone (5 mg) was administered for capsule ingestion, while in 203 (31.1%) the capsule was ingested without any domperidone.

In our series, the overall CR of SBCE was 86.7%. The 2 SBCE systems showed equivalent CR (PillCam® 87.5%, MiroCam® 85.4%; $P = 0.43$). The use of domperidone increased CR (88.6% vs 82.3%, $P = 0.027$). A higher CR was noted when domperidone was used with PillCam® in contrast to MiroCam® (82.2% vs 92.5%, $P = 0.002$ and 83.3% vs 85.5% respectively, $P = 0.8$). Furthermore, the median GTT and the median SBTT did not differ between the two groups (GTT/SBTT with Domperidone 27.0'/222.0' and without 30.5'/228.0', respectively; $P = 0.436/P = 0.477$). The median age of patients who received domperidone was higher compared with patients who did not receive (58y vs 48y, $P = 0.009$), although CR was not affected by the age (complete: 55y, incomplete: 61y, $P = 0.331$).

Conclusion The use of Domperidone increases the CR of SBCE with PillCam®, although it does not affect the GTT and SBTT and should be routinely used to improve CR in SBCE with PillCam®.