PTH-050 DO ANTITHROMBOTIC MEDICATIONS AFFECT THE OUTCOMES OF ACUTE UPPER GASTROINTESTINAL BLEEDING?

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Background There is a widespread use of antithrombotic (AT) medications in primary and secondary prevention of cardiovascular disease in recent years, particularly since the introduction of direct oral anticoagulants (DOACs).

The aim of our study is to determine clinical predictors of adverse outcome in patients with non-variceal upper GI bleeding comparing the patients who were on AT drugs to those who were not any.

Methods All patients admitted to the bleeding unit with a primary diagnosis of upper GI bleeding between 01/05/2015 to 15/09/2017 were identified. Variceal bleedings were excluded in this study. Patients' demographics, AT prescriptions, co-morbidities, admission time and blood results on the day of admission were collected. Outcomes of the study included 30-day mortality, endoscopic therapy, blood transfusion, re-bleeding (from the same admission) and duration of hospital stay. The relationship between the variables and clinical outcomes were examined.

Results 291 patients (Median age: 71, IQR: 59–81, male: 66.7%) were analysed and peptic ulcer bleeding was the commonest cause of bleeding (56.7%). 94% of endoscopies were performed within 24 hours of admission. Endoscopic treatment and blood transfusion were required in 49% and 59% respectively, whilst 13% of cases required further radiological/surgical interventions. Re-bleeding rate was 7.5%, median length of stay was 6 days (IQR 4–11), and all-cause mortality rate was 8.9%.

The number of patients on NSAIDs/Aspirin, Clopidogrel/Ticagrelor, Warfarin, and DOACs were 99, 26, 33, and 16 respectively. There was no statistically significant difference in all clinical outcomes in patients on ATs versus those not on any. After logistic regression analysis, raised C-reactive Protein (CRP, $p=0.003$) and co-morbidities ($p=0.038$) were significant predictors of 30-day mortality. Male gender ($p=0.021$) was a significant predictor of need for endoscopic treatment. Bleeding with a fall in haemoglobin (Hb, $p<0.005$) was a significant predictor for need for blood transfusion. Finally, endoscopy undertaken within 24 hours of admission ($p<0.005$) and normal Hb ($p=0.015$) shortened the duration of admission with statistical significance, while prolonged prothrombin time ($p=0.026$) and raised CRP

($p=0.034$) correlated significantly with prolonged duration of hospital stay.

Conclusion We found no significant difference in all clinical outcomes in patients on different ATs compared to patients who are not. Out-of-hours admissions did not have any significant influence on clinical outcomes either.

PTH-051 EYE GAZE-CONTROLLED ROBOTIC FLEXIBLE ENDOSCOPY: A FEASIBILITY STUDY

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Introduction A gaze-controlled robotic endoscope is innovative technology with myriad potential applications in the rapidly advancing field of flexible endoscopy. Improvements to the current flexible device to allow examination of the gastrointestinal tract whilst minimising procedural discomfort and complications are desirable.

Methods Users are able to control endoscope movements without handling the device. A flexible gastroscope (Karl Storz 13801 PKS) was attached to a UR5 6 axis robotic arm (Universal Robots), mounted onto a rail and placed on top of a surgical table. Two cogwheel shaped dials were 3D printed and placed onto the up/down and left/right wheels on the head of the gastroscope (Figure 1a). Robotization of these controls was achieved by using two motors (DYNAMIXEL RX-24F) to steer the distal tip.

This system allows users to operate a robotised flexible endoscope using eye gaze control. Gaze interaction with the screen was based on a 3D gaze framework we developed with the synergy of conventional wearable eye-tracking glasses, a motion capture system and fixed in space RGB-D cameras for 3D reconstruction of the environment. The eye gaze technology was calibrated for each user prior to the task.

The distal tip of the gastroscope was controlled using eye gaze technology. The UR5 robot was used to enable shaft rotation. This was initiated by fixed head movements left and right rotating the shaft clockwise/anticlockwise. Linear movements of the gastroscope were triggered using a joystick handle (up for forward movement, down for endoscope withdrawal). Pause and automatic retroflexion of the endoscope are achieved by moving the joystick left and right respectively.

Users were asked to navigate an endoscope through an UGIT model (Chamberlain group) simulating a diagnostic

Abstract PTH-051 Figure 1 (a) 3D printed dials (b) study set-up

gastroscopy using gaze control and targeting ten points scattered through the stomach (Figure 1b).

Results Four expert endoscopists and one novice used gaze control to successfully navigate a gastroscope through the simulated UGIT. All were able to independently intubate the oesophagus and accurately locate ten targets placed in the fundus, body, antrum and pylorus of the stomach without touching the endoscope.

Conclusions Gaze control endoscopy is a feasible concept. It allows ergonomic, user-friendly and intuitive control whilst maintaining the benefits of a flexible endoscope.

PTH-052 DOES THROAT SPRAY IN COMBINATION WITH INTRAVENOUS SEDATION/ANALGESIA FOR ELECTIVE GASTROSCOPY INCREASE RESPIRATORY COMPLICATIONS?

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Introduction Safe sedation practice is a recognised cornerstone of high-quality endoscopy. There are concerns that local anaesthetic throat spray (TS) in combination with intravenous sedative and analgesic agents (ISAAs) can precipitate respiratory complications, specifically, aspiration pneumonia. Current BSG standards for upper gastrointestinal endoscopy recommend 'caution should be exercised' in using agents combined with TS but acknowledges the paucity of evidence for this, with the few relevant studies being performed several decades ago.

Methods A retrospective, two-centre cohort study was performed. Only diagnostic, outpatient gastroscopies (OGDs) performed 2013–2018 were reviewed. Patients residing in a postcode region (definite or possible) outside of the catchment of the two centres were excluded from final analysis. Endoscopy reports and electronic patient records were reviewed to identify all patients who presented to hospital within 30 days of their procedure to determine the underlying reason for this.

Results 5,803 OGDs met the inclusion criteria. 148 (2.6%) patients presented to hospital within 30 days of procedure, 17 (0.3%) were due to potential respiratory complications (pneumonia, respiratory tract infection and infective exacerbation of COPD). Choice of drug included: TS 3163 (54.5%); TS+midazolam 1508 (26%); TS+fentanyl 28 (0.5%); TS+dual agent 382 (6.6%) and non-TS 722 (12.4%). Only TS and TS+analgesic/sedative groups were compared. There was no significant difference in the rate of respiratory complications between the two groups ($p=1.0$, two-sided Fisher's Exact Test). 12/17 respiratory complications occurred in the TS group. Procedure discomfort scores were similar in this group when compared to the TS and additional agent group.

Conclusions While safe sedation practice should remain the cornerstone of management and clinicians should continue to exercise caution in patients with respiratory comorbidities, inpatients and therapeutic procedures, the combination of TS

+ISAAs does not increase the risk of respiratory complications following elective diagnostic OGD.

PTH-053 VENTING PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (VPEG): SIX YEAR EXPERIENCE FROM A TERTIARY REFERRAL CENTRE

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Introduction Chronic nausea, vomiting and pain are all well recognised to negatively impact on health-related quality of life. In patients with gastrointestinal obstruction, gastric decompression via venting gastrostomy can offer symptomatic relief. However, the benefits must be considered against the risks associated with the invasive procedure, especially in malignant disease with a limited prognosis. Data on this important and largely uncharacterised cohort are sparse. We describe this population and outcome data from our specialist centre over a six-year period.

Methods Patients undergoing vPEG insertion between 2012–2018 were prospectively identified from a designated PEG database. Data were extracted from medical records with last follow-up November 2018. Analysis was descriptive. Caldicott Guardian approval was granted.

Results Nineteen patients (male $n=11$, female $n=8$) were identified; mean age 59.9 years (range 18–90). Fourteen had malignant obstruction secondary to locally advanced or metastatic cancer from upper gastrointestinal ($n=8$, 57%), colorectal ($n=5$, 36%), or gynaecological ($n=1$, 7%) sites. Five had benign obstruction from post-operative complications ($n=3$, 60%), gastric outlet obstruction ($n=1$, 20%), or connective tissue sequelae ($n=1$, 20%). Tube insertion was successful in eighteen (95%) patients, discussed hereafter. There were no procedure related complications of bleeding, perforation or peritonitis (as defined on CT or requiring surgery). No patients had post-procedure pain significant enough to require CT imaging within the first seven days. However, one patient (5.6%) with malignancy sustained a confirmed perforation during secondary placement of a jejunal extension tube for feeding. In three benign cases (60%) versus zero malignant cases, the gastrostomy had been removed during the follow-up period. Benign indications were associated with better survival outcomes compared to malignant disease (mean 795 days/ range 107–1917+ and 60.4 days/ range 2–258, respectively). From data available ($n=10$), all patients reported resolution or improvement of nausea, vomiting or pain.

Conclusions Our data supports the use of vPEG as a safe and effective palliative intervention in both benign and malignant gastrointestinal obstruction. A defined strategy for the assessment of such patients is lacking and development of an agreed clinical pathway may streamline and improve patient care. Important such considerations would include up-to-date imaging to delineate anatomy, and prior gastric decompression with a wide bore nasogastric tube to reduce the risks of aspiration and peritonitis.