subtypes of IPCL patterns. Such a validated system could be used *in vivo* to alert endoscopists to the presence of ESCN and direct planning of appropriate EET.

ADTH-08 ROBOT MAGNET-CONTROLLED UPPER GASTROINTESTINAL CAPSULE ENDOSCOPY: NON-INVASIVE INVESTIGATION WITH EXCELLENT PATIENT TOLERANCE

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Introduction Gastroscopy (OGD) is invasive and not always well tolerated. The NaviCam® (Ankon Technologies Co. Ltd., Shanghai, China) combines capsule endoscopy technology with external robot magnetic control. Operator joysticks command the robot to steer the capsule within the stomach. Real-time visualisation is displayed on two workstation monitors. When compared to OGD, the NaviCam® has already demonstrated high sensitivity and specificity for identifying focal gastric lesions.[1] The focus of this study was to grade imaging quality and patient tolerance of the NaviCam®.

Method Patients with dyspepsia were recruited. Patients swallowed 100 mls of water (containing 10 mls simethicone) 15 min prior to 1L of water followed by the NaviCam®. Clarity of views and adequacy of gastric distension were assessed (1, poor; 2, reasonable; 3, good), as was completeness of views of the oesophagogastric mucosa (1,>75% obscured; 2,>50% obscured; 3,<50% obscured; 4,<25% obscured; 5, 100% visualised). Patient tolerance scores were collected (worst-best=0–10). All patients subsequently had OGD and tolerance scores were compared to those of the NaviCam®.

Results Eighteen participants were included (mean age 53 ±16.1 years, 27.8% male). The NaviCam could be held stationary within the stomach (resisting peristaltic waves) and could cartwheel over rugal folds to a chosen proximal location using a preset programme activated by a 'shoot' button on the joystick. Mean examination duration was 25±3.4 mins. Mean clarity (2.3±0.7) and distension scores (2.9±0.3) were good. Complete views (5±0) for all areas of the gastric body (greater and lesser curvature, anterior and posterior wall) and distal stomach (antrum and pylorus) were achieved. Views of the oesophagus (4.3±1.3) and proximal stomach (cardia, 4.9 ±0.2; fundus 4.8±0.3) were also good. Duodenal images were not assessed real-time (but are provided after the capsule traverses the pylorus). Tolerance scores for anxiety, discomfort and pain were all lower with MACE compared to OGD (2.2 ±1.4 vs 5.8±3, 1.3±1 vs 4.9±3, 2.4±2.4 vs 3.4±2.5, respectively; $p<0.05$ for all). Tolerance scores for undesirable symptoms associated with upper gastrointestinal (GI) endoscopy, namely gagging, choking and bloating were also more favourable with MACE compared to OGD (1.4±1.6 vs 5.4±3.3, 1.3 ±1.2 vs 4.8±3.3, 1.2±0.5 vs 2.9±2.0, respectively; $p<0.05$ for all).

Conclusion The NaviCam® demonstrates excellent oesophagogastric views. The NaviCam® is extremely well tolerated compared to OGD and patients experience significantly fewer undesirable symptoms associated with upper GI endoscopy.

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ADTH-09 CAPSULE ENDOSCOPY HAS BETTER DIAGNOSTIC YIELD THAN GASTROSCOPY IN RECURRENT IRON DEFICIENCY ANAEMIA

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Introduction Repeat upper gastrointestinal (GI) examination and small bowel capsule endoscopy should be considered in iron deficiency anaemia (IDA) when recurrent/refractory. Magnetically assisted capsule endoscopy (MACE) using a handheld magnet to steer the MiroCam Navi (Intromedic Ltd., Korea) capsule around the stomach followed by passive small bowel transit might satisfy both requirements as a single procedure.

Methods MACE was performed in patients with recurrent/refractory IDA who were due gastroscopy (OGD). Total (upper GI and small bowel) and upper GI diagnostic yields and patient tolerance of the two modalities were compared. Assuming a diagnostic yield of 25% and 55% for OGD and small bowel capsule endoscopy (SBCE) respectively in recurrent/refractory IDA, 41 patients were needed to achieve 80% power and 5% two-sided significance. McNemar's test was used to measure differences in paired proportions. To allow for withdrawal, 50 patients were recruited. MACE mucosal visualisation was also assessed.

Results OGD was performed within 2 days (IQR=13) of MACE in 49 patients (one failed to attend for OGD; median age 64 years (IQR=13), 39% male). Combined upper and mid-gut examination using MACE and passive SBCE yielded pathology in more patients than OGD alone (32 vs 6 (CI, 0.37 to 0.69); $p<0.0001$). Comparing only upper GI examination (proximal to D2), MACE identified more total lesions than OGD (88 vs 52, $p<0.0001$). If only lesions recognised as sources of IDA are included (oesophagitis, altered/fresh blood, angioectasia, ulcers and villous atrophy), a difference remains (20 vs 10; $p=0.04$). Small bowel (distal to D2) pathology was present in 24 (49%) patients (angioectasia (n=15), erosions (n=6), polyp (n=1), active bleeding (n=1), small bowel varices (n=1) and diverticulae (n=1)), considered to cause IDA in 11 (22%) patients who had no upper GI cause. Median scores (worst-best=0–10) for pain (0 vs 2), discomfort (0 vs 3) and distress (0 vs 4) were significantly lower for MACE than OGD respectively ($p=0.0001$ for all). Visualisation of gastric regions differed significantly ($\chi^2=209.5$, $p<0.05$, Kruskal-Wallis H test). Better rank visualisation scores of ≥350 were seen for the greater and lesser curve, anterior and posterior body, antrum, pylorus and D2 while lower for the oesophagus (222), GOJ (103), cardia (267), fundus (189) and D1 (198).

Conclusions Combined upper GI and small bowel examination with the MiroCam Navi yields more pathology than OGD alone in patients with recurrent/refractory IDA. MACE also has better diagnostic yield than OGD in the upper GI tract and was better tolerated.

ADTH-10 EFFICACY AND SAFETY OF 1L-PEG AND ASCORBATE BOWEL PREPARATION NER1006 VERSUS 2L-PEG WITH ASCORBATE

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