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BSG 2016 - Abstract Submission

Endoscopy (including video)

BSG16-ABS-1429

BLINDED COMPARISON OF MAGNETICALLY ASSISTED GASTRIC CAPSULE ENDOSCOPY AND CONVENTIONAL ENDOSCOPY IN RECURRENT AND REFRACTORY IRON DEFICIENCY ANAEMIA: A FEASIBILITY STUDY.

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Preferred presentation type: Oral or Poster

Introduction: Magnetically assisted capsule endoscopy (MACE) of the stomach has been demonstrated to be safe and feasible.¹ The aim of this prospective feasibility study was to compare the ability of MACE to recognise gastric landmarks compared to conventional flexible endoscopy in patients with recurrent or refractory iron deficiency anaemia.

Methods: Twenty patients with recurrent/refractory iron deficiency anaemia were enrolled between Jan-Nov 2015. After conventional oesophagogastroduodenoscopy, MACE was performed using MiroCam Navi (Intromedic, Seoul, Korea). Visualisation of major upper gastrointestinal landmarks was graded on a 1-5 scale (1=poor, 5=excellent), abnormalities were recorded. Primary outcome measure: gastric landmark recognition. Secondary outcome measures: pathology detection, patient tolerance.

Results: MACE achieved satisfactory visualisation (grade 4 or 5) in 11% for the gastro-oesophageal junction, 21% for the cardia, 16% for the fundus, 79% for the anterior wall of the gastric body, 79% for the posterior wall, 79% for the greater curvature, 84% for the lesser curvature, 95% for the antrum and 89% for the pylorus. 38 pathological findings were identified (*Table 1*). Patients experienced less pain, discomfort and distress during MACE compared to flexible endoscopy (p=0.0009, p=0.001 and p=0.006 respectively).

Table 1: Pathological findings detected during each procedure

Findings	MACE only	OGD only	Both MACE & OGD
Erythema	0	0	7
Bleeding	1	0	1
Hiatal hernia	0	9	2
Erosion(s)	4	3	3
Polyp(s)	0	1	2
Bile reflux	1	1	1
Metaplasia	1	0	0
Angioectasia	1	0	0
Total	8	14	16

Abbreviations: MACE=magnetically assisted capsule endoscopy, OGD=oesophagogastroduodenoscopy

Conclusion: MACE can visualise gastric landmarks, detect a variety of gastric pathology and is better tolerated than conventional endoscopy. Capsule identification of hiatal hernias is difficult and may improve with experience.² Better oesophageal visualisation is possible with other models and it seems likely that Mirocam Navi could be developed to this end. Proximal gastric views may be more reliable using a double ended capsule, better depth of illumination, and perhaps with control of capsule movement, all of which need further study before MACE becomes a viable alternative to conventional endoscopy.

- References:**
1. Hale MF, Drew K, Sidhu R, McAlindon ME. Does magnetically assisted capsule endoscopy improve small bowel capsule endoscopy completion rate? A randomised controlled trial. *Endosc Int Open*. 2016 Feb; 4(2):E215-21
 2. Marelli L, Jaboli FM, Jackson L, Palmer H, Erian G, Hamilton M, Epstein O. A pilot study comparing ESO-2 capsule endoscopy with conventional upper endoscopy for the assessment of uncomplicated heartburn and dyspepsia. *Frontline Gastroenterol* 201;4:96-101

Disclosure of Interest: None Declared