

Introduction There are no agreed endoscopic signs for the diagnosis of villous atrophy (VA) in coeliac disease (CD), necessitating biopsies and for both diagnosis and exclusion. Here we evaluated the role of near focus Narrow Band Imaging (NF-NBI) for the assessment of villous architecture in suspected CD with development and further validation of a novel NF-NBI classification.

Methods Patients with symptoms/investigations warranting duodenal biopsy were prospectively recruited between September 2017 to August 2018. Six paired NF-white light (NF-WLE) and NF-NBI images with biopsy (2 from the first part of the duodenum, 4 from the second) were obtained from each patient. Histopathology grading used Marsh-Oberhuber classification (M-O). Images were reviewed for quality and biopsy orientation. Separate images were used for development of the classification, training and validation steps. A modified Delphi process was performed on images and video recordings by 3 endoscopists to define NF-NBI characteristics (included if kappa > 0.6). 13 blinded endoscopists (5 expert, 8 non-expert) underwent a short training module on the proposed NBI classification and evaluated paired (NF-WLE/NF-NBI) images.

Results 100 consecutive patients were recruited and n=97 completed the study (66F, 51.2±17.3 yrs). TTG positive n=17/89. Prevalence of M-O VA (3a/3b/3c) in D1 and D2 biopsies was 52/194 (27%) and 70/388 (18%) respectively. After image quality and biopsy orientation review; 548 paired images remained. 498 paired images developed the classification; 3 descriptors: Villous shape, vascular discrimination, crypt phenotype proposed the classification. 13 endoscopists evaluated 50 paired images each (D1:20, M-O 0:26, M-O 3a-3b:13, M-O 3c:11). Pooled diagnostic test summary statistics (%) for NF-NBI diagnosis of VA (Subtotal/total atrophy) were: Sensitivity 97.9 (91.67–100), specificity 82.15 (62.5–100), NPV 97.7 (92.59–100) and accuracy 89.7 (80–96) respectively. Mean difference in confidence using NF-NBI vs NF-WLE significantly improved when assessing the first part duodenum: The classification was further validated in histopathologically proven duodenitis (n=15) images with no features of VA using the proposed classification.

Conclusion A novel NF-NBI classification for VA had been validated to reliably diagnose VA in suspected CD amongst both expert/non-expert endoscopists using readily available equipment and required only short training supporting translation to wider practice.

AWE-05 CASE SERIES OF PER-ORAL ENDOSCOPIC PYLOROMYOTOMY IN PATIENTS WITH REFRACTORY GASTROPARSIS: A SINGLE CENTRE EXPERIENCE

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Introduction Gastroparesis (GP) is a disorder evidenced by delayed gastric emptying in the absence of mechanical obstruction, commonly idiopathic or secondary to diabetes mellitus. G-POEM has been used to treat refractory gastroparesis and we present our initial experience with this novel endoscopic technique.

Methods All patients undergoing G-POEM for refractory GP from May 2018 onwards were included, with data extracted from the hospital electronic patient record. Procedures were performed by one endoscopists at our centre with experience in submucosal endoscopy. Efficacy at 3 months was assessed by reduction of symptom score (Gastroparesis Cardinal Symptom Index; GCSI), with secondary considerations including technical success, procedural complications, hospital length of stay and hospitalisations after treatment.

Results 10 patients (10F; mean age 40.3± 15.4 y) were included (5 diabetic, 5 idiopathic). Mean duration of disease was 9.5± 5.6 y, with 4 months median duration of follow-up post-procedure. 6 patients had previous treatment with botulinum toxin, and one gastric electrical stimulator. Technical success was achieved in all cases while, at 3 months, 8 had improvement total GCSI (mean scores 3.978 vs 2.076 (p=0.008)) and each GCSI subtype score: nausea and vomiting (3.63 vs 1.70, p=0.012); fullness (4.30 vs 2.30, p=0.012); bloating (4 vs 2.22, p=0.28). Mean hospital stay was 9± 13 d, with 5 patients staying less than 4 days and two with prolonged admission. One significant adverse event was recorded: abdominal collection around the myotomy site requiring a prolonged hospital admission of 18 days for intravenous antibiotics in one patient.

Only one patient required hospitalisation for gastroparesis symptoms after their G-POEM procedure (this was the same patient who did not achieve clinical success with reduction in their GCSI scores).

Conclusion G-POEM is a promising therapeutic treatment for patients with refractory GP, with significant improvement in symptoms and, in our cohort a dramatic reduction in the need for hospitalisation in short-term follow up. A European sham-controlled study is under way and longer-term data are required to confidently determine its role in the management of such a challenging condition.

AWE-06 OUTCOMES OF HEMOSPRAY USE IN TUMOUR RELATED UPPER GASTROINTESTINAL BLEEDS: OUTCOMES FROM THE HEMOSPRAY REGISTRY

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Introduction Patients with tumour related upper gastrointestinal bleeds (UGIBs) are challenging to treat. Hemospray (Cook Medical, North Carolina, USA) is a novel haemostatic powder for GI bleeding. The primary aim was to look at outcomes of UGIBs secondary to tumours who had Hemospray therapy in 13 centres.

Methods Data was prospectively collected on the use of hemospray from specialist centres in the UK, France, Germany (Jan'16-September'18). Hemospray was used for UGIBs