PWE-118 DIAGNOSTIC AND THERAPEUTIC OUTCOMES IN GOBLET CELL APPENDICEAL NEUROENDCORINE TUMOURS

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Introduction Goblet cell appendiceal neuroendocrine tumours (GCA-NETs), comprise approximately 6% of appendiceal neuroendocrine tumours (NETs) and share histologic features of both adenocarcinomas and NETs. We are presenting our data from 37 patients, focusing on diagnostic features, prognostic markers, treatment and survival.

Methods A retrospective analysis included 18 male and 19 female patients (mean age: 48.8; range: 19–73 years). Follow-up was complete (mean follow-up: 4.1 years).

Results Although majority of patients (69%) presented with appendicitis, 15.5% had bowel obstruction and 15.5% atypical abdominal pain. 27% had metastases at presentation (one in lungs). Chromogranin-A, CEA and CA-125 were not significantly raised in these patients. Initial treatment was appendicectomy (26 patients) and 24/26 had a subsequent prophylactic right hemicolectomy. Additional hysterectomy and bilateral oophorectomy was performed in six patients and four patients just underwent either single or bilateral oophorectomy. 12% had recurrence and all had Ki67 proliferation index ≥20%. Octreoscan was negative, but FDG-PET was positive in all these patients, and in patients with distal metastases at presentation. FOLFOX chemotherapy was given prophylactically in two patients with local lymph nodes resulting in no evidence of recurrence (Median=8 months) and in two patients with distal metastases resulting in only temporary disease stabilisation. 19% have died with disease and again all had Ki67 ≥20%.

Conclusion GCA-NETs may metastasise to the lungs (first report in literature). Ki67 ≥20% seems to be related with a worse prognosis. FDG-PET is the molecular imaging of choice. No optimal biomarkers or chemotherapy regimens are available to date.

Competing interests None declared.

PWE-119 DUODENAL BULB BIOPSIES FOR DIAGNOSING ADULT COELIAC DISEASE: IS THERE AN OPTIMAL BIOPSY SITE?

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Introduction There has been increasing interest in the role that duodenal bulb biopsies may have in helping to establish the diagnosis of coeliac disease. This study aims to determine whether a targeted duodenal bulb biopsy in addition to distal duodenal biopsies is the optimal strategy when trying to identify villous atrophy, comparing histological findings from different quadrants of the duodenal bulb.

Methods Patients undergoing oesophogastroduodenoscopy (OGD) were prospectively recruited from a single tertiary referral hospital in the UK between July 2010 and October 2011. Indications for biopsy included positive coeliac serology, family history of coeliac disease, chronic diarrhoea, iron deficiency anaemia, abdominal pain and weight loss. All patients recruited to the study had immunoglobulin A (IgA) endomysial antibody (EMA) and tissue transglutaminase (tTG) antibody measurements prior to undergoing their EGD. At endoscopy, eight duodenal biopsies were taken: four from the second part of the duodenum and four quadrantically from the bulb (3,6,9 and 12 o'clock). Each biopsy was graded according to the modified Marsh Criteria, with the optimal biopsy site in the bulb being evaluated by the ability to detect the presence and severity of villous atrophy.

Results A total of 77 patients were recruited (27 male (35%), 50 female (65%), median age 45, range 19–79) between July 2010 and November 2011. Of these, 28 (36%) were found to have newly diagnosed coeliac disease and 49 were controls (64%). Bulbar villous atrophy was identified in 96% of the coeliac patients, with five patients having villous atrophy confined to the bulb alone (Abstract PWE-119 table 1). The most severe degree of villous atrophy was detected when distal duodenal biopsies were taken in addition to a duodenal bulb biopsy from either the 9 or 12 o'clock position (sensitivity 96.4%, 95% CI 79.7% to 100%). The difference between the 12 o'clock biopsy and the 3 o'clock biopsy in detecting the most severe villous atrophy was 92% (24/26) vs 65% (17/26) (p=0.04).

Abstract PWE-119 Table 1 Histology results

	n	Coeliac serology +ve	VA in D1	VA in D2	VA in D1 only	VA in D2 only
Coeliac disease	28	25 (89%)	26 (93%)	23 (82%)	5 (18%)	2 (7%)
Control group	49	12 (24%)	0	0	0	0

D1, Duodenal Bulb; D2, Second part of the duodenum; VA, Villous Atrophy.

Conclusion This study demonstrates the patchy appearance of villous atrophy that occurs within the duodenum. A targeted duodenal bulb biopsy from either the 9 or 12 o'clock position in addition to distal duodenal biopsies, may improve diagnostic yields by detecting the most severe villous atrophy within the duodenum.

Competing interests None declared.

PWE-120 HOW DOES A BLOOD TRANSGLUTAMINASE-BASED RAPID TEST COMPARE TO CONVENTIONAL SEROLOGICAL MARKERS TO DETECT COELIAC DISEASE?

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Introduction Coeliac disease may be missed at endoscopy. For this reason many centres take routine duodenal biopsies or have a low threshold for duodenal biopsy. While duodenal biopsies demonstrating villous atrophy remains the current gold standard, serological markers are widely used either alone or in combination (tissue transglutaminase (TTG)/endomysial antibody (EMA)) to help identify at risk individuals. However, these results may not be available at the time of endoscopy. Recently a whole blood transglutaminase-based rapid test has become available. This Point of Care Test (POCT) can be read in 5–10 min prior to endoscopy and could help in determining which patients having an endoscopy should have a duodenal biopsy. This strategy could also have cost-saving implications if we could reduce the number of duodenal biopsies performed. This is the first study to assess the clinical utility of this POCT within the setting of endoscopy. Comparisons are made against current serological markers and duodenal biopsy.

Methods Patients undergoing oesophogastroduodenoscopy (OGD) with duodenal biopsies were prospectively recruited between August 2010 and November 2011. Unselected patients undergoing endoscopy were concurrently serologically tested for IgA TTG, EMA, a total IgA immunoglobulin level and the transglutaminase-based rapid test. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for the transglutaminase-based rapid test were calculated and comparisons made with TTG

and EMA to detect coeliac disease, using duodenal biopsy as the gold standard.

Results 235 patients were recruited (145 female, median age 48, range 17–86). Of these, 51 had newly diagnosed coeliac disease and 184 were controls with a normal duodenal biopsy. The sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for the individual coeliac serological test are demonstrated in Abstract PWE-120 table 1.

Abstract PWE-120 Table 1 Diagnostic accuracy of coeliac serological tests

Serological test	Sensitivity	Specificity	PPV	NPV
TTG	92%	84%	61%	98%
EMA	80%	98%	93%	95%
TTG POCT	67%	97%	87%	91%

Conclusion The Negative Predictive Value of the transglutaminase-based POCT may allow us to adopt this into clinical practice and potentially reduces the number of duodenal biopsies which would be taken at endoscopy.

Competing interests None declared.

PWE-121 DOES CHROMOENDOSCOPY ALLOW AVOIDANCE OF DUODENAL BIOPSY IN COELIAC DISEASE?

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Introduction Chromoendoscopy is increasingly being used to detect, localise and characterise mucosal abnormalities seen at gastrointestinal endoscopy. The endoscopic features of coeliac disease may be difficult to recognise and are reported to lack sensitivity and/or specificity. Thus many UK centres undertake routine duodenal biopsy or have a low threshold for duodenal biopsy in order to ensure detection of patients with coeliac disease. Other than one Italian investigator group there has been limited work evaluating the role of duodenal dye spray in patients undergoing endoscopy. We aimed to determine if dye spray improved identification of characteristic endoscopic markers of coeliac disease and whether this would enhance a biopsy avoidance strategy.

Methods Patients undergoing oesophagastroduodenoscopy (OGD) with duodenal biopsies were prospectively recruited between January and November 2011. Four experienced endoscopists undertook the endoscopic examinations, with endoscopic findings reported both before and after the use of indigo carmine dye spray in the second part of the duodenum (D2). Endoscopic markers reported suggestive of coeliac disease included reduction or absence of duodenal folds, scalloping, mosaic pattern, visible blood vessels and nodularity of the duodenal folds. Thereafter, in accordance with the current gold standard four duodenal biopsies were taken and histology compared with reported endoscopic findings.

Results 83 patients were recruited (55 female: 28 male, median age 49 years). Of these, 33 (40%) had coeliac disease (24 newly diagnosed, nine previously treated) and 50 were controls. Three of the treated coeliac patients had persistent Marsh 3a–3c changes. In patients with coeliac disease (n=33), endoscopic features of coeliac disease were identified in 16/33 (48%) of patients. The addition of dye spray in D2 accentuated these features but only highlighted endoscopic markers in two further cases (18/33, 55%), which was not statistically significant (p=0.81). However, a significant difference was identified when comparing endoscopic markers in the coeliac group with the control group (p<0.001), both before and after the use of dye spray (Abstract PWE-121 table 1). Sensitivity, specificity, positive and negative predictive values of chromoendoscopy to detect coeliac disease were 55%, 100%, 100% and 77% respectively.

Abstract PWE-121 Table 1

		Coeliac endoscopic markers seen	
	n	Without dye	With dye
Coeliac group	33	16	18
Control group	50	0	0

Conclusion The preliminary data from this study suggests there is no additional benefit of using dye spray in patients with suspected coeliac disease. Our data suggests that our current practice of a low threshold for duodenal biopsy may still be the optimal way of diagnosing patients with coeliac disease due to the low sensitivity of endoscopic markers.

Competing interests None declared.

PWE-122 HOW RELIABLE IS SEROLOGICAL TESTING IN THE DIAGNOSIS OF COELIAC DISEASE?

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Introduction Coeliac disease is an autoimmune disorder of the small bowel with a prevalence as high as 1:100 in the UK and Ireland. The gold standard for diagnosis is to identify the characteristic histopathological changes (based on the modified Marsh criteria) from an adequate small bowel biopsy. However non-invasive serological blood tests are often the first line investigation. Serological testing is reported to have both high sensitivity and specificity with the sensitivity and specificity of IgA anti-tissue transglutaminase antibodies (tTG) being higher (99% and >90%) than IgA anti-gliadin (46–100% and 86–100%) and IgA anti-endomysium (74–100% and 91–100%). However, in a study of 26 UK patients with coeliac disease Smith-Laing *et al* (Clinical Medicine 2009) raised the issue of limitations of serological testing reporting discrepancy between histology and anti-tTG in as many as 38.5%. Given our reliance on serological testing the results were of concern. The objective of this retrospective study was to analyse the results of serological tests for coeliac disease in consecutive patients with duodenal biopsies confirming the diagnosis.

Methods Results of duodenal biopsies which fulfilled the histological criteria for coeliac disease between 2005 and 2010 at two UK district general hospitals (King George hospital, Ilford and Queen's hospital, Romford) were correlated with coeliac serological tests. IgA tTG antibodies, IgA anti-endomysium antibodies, and serum IgA levels were recorded. Serological testing done before or within a month of biopsy was noted. Reference range for tTG was >15 U positive.

Results There were 182 positive duodenal biopsies. Serological tests were not performed in 35 patients. Of the remaining 147, sixteen were excluded (IgA not measured—6, IgA deficient—3, serological testing done more than a month after biopsy date—6, other—1). Complete data were therefore available in 131. Nine patients with confirmed coeliac disease had anti-tTG levels below the diagnostic range. Of these, three had positive anti- endomysium antibody. Thus anti-tTG levels suggestive of coeliac disease were found in 122 of 131, demonstrating sensitivity of 0.93 with combined sensitivity of tTG and anti-endomysium of 0.954.

Conclusion This retrospective study reassuringly demonstrates that there is not a significant number of serologically negative but