

Conclusion To diagnose the condition history is crucial, while laboratory and gastroscopy add more strength. Fluticasone inhaler, exclusion diets and montelukast help in the majority of patients. Strictures associated with EoE can be successfully treated with biodegradable stent.

Competing interests None declared.

PWE-181 PANCREATIC EXOCRINE FUNCTION AFTER MAJOR UPPER GASTROINTESTINAL SURGERY MEASURED WITH A CARBON 13 MIXED TRIGLYCERIDE BREATH TEST

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Introduction Major upper gastrointestinal resectional surgery, including oesophagectomy, gastrectomy and pancreaticoduodenectomy, can result in post-operative nutritional difficulties, which may in part be associated with reduced pancreatic exocrine function, but there is debate in the literature about the actual proportion of these patients that have pancreatic exocrine insufficiency which may then benefit from oral supplementation. The Carbon 13 labelled mixed triglyceride breath test (C13-MTG-BT) was used to indirectly measure pancreatic exocrine function in post-operative patients and these results were compared to the test performed in control subjects.

Methods 30 normal subjects, 15 post-oesophagectomy patients, 15 post-gastrectomy patients and 10 post-pancreaticoduodenectomy patients were recruited to undertake the C13-MTG-BT at Box Hill Hospital, Melbourne, Australia, between August 2009 and January 2011. The C13-MTG-BT was performed using 200 mg of C13-MTG substrate and measured using an infra-red isotope spectrometer. The cumulative percentage of ingested C13 exhaled after 6 h and the time at peak rate of C13 excretion were measured in all subjects and compared between groups, with statistical significance calculated using the Student t test.

Results The mean cumulative percentage of ingested C13 exhaled after 6 h in the control group was 28.6% with a SD of 8.8%. The cumulative percentage exhaled after 6 h in each post-operative group compared with the control group was not significantly different. The time of peak rate of C13 excretion was earlier in the post-operative groups compared with the control group.

Conclusion This study has not found a large percentage of patients post major upper gastrointestinal resections with measurable reduction in pancreatic exocrine function using the C13-MTG-BT, which is in contrast to the literature. The finding of earlier times of peak rate of excretion imply the post-operative patients tend to have more rapid gut transit. Larger and prospective studies using this test or another pancreatic function test may be useful to detect the proportion of post-operative patients with pancreatic exocrine insufficiency that may then benefit from pancreatic exocrine supplementation.

Competing interests None declared.

PWE-182 EFFICACY OF ARGON PLASMA COAGULATION THERAPY FOR GASTRIC ANTRAL VASCULAR ECTASIA

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Introduction Argon plasma coagulation (APC) is an established endoscopic therapy for various gastrointestinal disorders but with

varied success in the management of Gastric Antral Vascular Ectasia (GAVE). The aim of this study was to assess the efficacy of APC in the management of patients with GAVE.

Methods Retrospective audit of upper GI endoscopies (UGIE) performed at our institution between 1 January 2007 and 31 December 2011. Data were extracted from the endoscopy reporting software (Unisoft) database using search term "argon plasma coagulation." The case notes were reviewed for those patients undergoing APC for a diagnosis of GAVE.

Results 306 episodes of APC were noted on 127 patients. Of these 135 APC sessions were performed on 30 patients for management of GAVE. Of the 30 patients 17 (57%) were women. The median age was 68 (range 44–89) years. Co-morbidities included chronic kidney disease in 9 (30%), chronic liver disease in 7 (23%), malignancy in 4 (13%), scleroderma in 3 (10%). Seven (23%) patients were on Aspirin, 1 (3%) on Clopidogrel, 1 (3%) on Clopidogrel and Aspirin and 2 (7%) on Warfarin. The indication for index UGIE was anaemia in 23 (77%) cases, iron deficiency without anaemia in 2 (7%) and acute upper gastrointestinal bleeding in 5 (17%). APC therapy was applied at 50–65 watts. A cluster of multiple sessions of APC was treated as "one cycle" of therapy. APC was applied with success in single cycle lasting over a median period of 2 (range 0–30) months with median of 3 (range 1–24) APC sessions. Six (20%) patients required a single session of APC. The median follow-up period was 26.5 (range 1–59) months. We noted mean haemoglobin (Hb) rise of 22% and Hb normalised in 57% cases. In 3 (10%) patients symptomatic anaemia recurred and two of them required one further cycle and one required two cycles of APC therapy. There was no significant difference in the index Hb and number of APC sessions required between men and women. However, 13 out of 17 (75%) women normalised their Hb at the end of therapy while only four out of 13 (31%) of men could achieve normal Hb at the end of treatment.

Conclusion Argon plasma coagulation appears to be an effective therapy for patients with Gastric Antral Vascular Ectasia.

Competing interests None declared.

PWE-183 INVESTIGATIONS FOR COELIAC DISEASE IN IRON DEFICIENCY ANAEMIA—ARE WE FOLLOWING BSG GUIDELINES?

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Introduction BSG guidelines for the investigation of iron deficiency anaemia (2011)¹ recommend screening of these patients for coeliac disease (CD) by serology. Small bowel biopsy is recommended at OGD if coeliac serology is positive or not available. If coeliac serology is negative, small bowel biopsies need not be performed at OGD unless there is a high degree of suspicion for CD despite negative serology.

Methods We retrospectively evaluated the use of coeliac serology testing (tissue transglutaminase antibody, tTG) and upper gastrointestinal endoscopy (OGD) with duodenal biopsies in the evaluation of anaemia, according to BSG guidelines in our NW London teaching hospital cohort. All upper GI endoscopies performed for anaemia over a 6-month period were reviewed for rates of duodenal biopsy and results, and serological testing.

Results In 6 months, 206 OGDs were performed for anaemia. Duodenal biopsies were taken in 134/206 (65%). Of 72 (35%) procedures at which no duodenal biopsy was taken, another cause for anaemia found on OGD in 27, six had melaena or acutely falling haemoglobin as an indication for OGD, six had previous duodenal

biopsies, and the procedure could not be completed in nine cases. Five patients with no duodenal biopsy taken at endoscopy had negative coeliac serology prior to OGD. 19/206 (9.2%) patients did not have duodenal biopsies taken at endoscopy, despite an indication for biopsy. 48/206 (23.3%) patients referred for an OGD with anaemia had coeliac serology performed (34 prior to OGD and 14 after OGD). All results were negative. 3/134 duodenal biopsies showed features suggestive of CD (tTG negative) and 11/134 (8.2%) duodenal biopsies showed lymphocytic duodenitis (LD) (normal villous architecture and increased intraepithelial lymphocytes >25/100 enterocytes) (5/11 tTG sent and negative, 6/11 not done).

Conclusion Coeliac disease is a major cause of iron deficiency anaemia in the UK. Tissue transglutaminase antibody is a simple, non-invasive test, which was underused in our cohort. It was performed prior to upper GI endoscopy in only 16.5% of patients. Duodenal biopsies were taken in the majority of cases when indicated in anaemia, though there is room for improvement. While 10.4% had biopsies suggestive of CD, serology to confirm this was only performed in 57.1%.

Competing interests None declared.

REFERENCE

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PWE-184 PREVALENCE, MANAGEMENT AND OUTCOMES OF PATIENTS WITH COAGULOPATHY FOLLOWING ACUTE NON-VARICEAL UPPER GASTROINTESTINAL BLEEDING

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Introduction There is increasing interest in optimising transfusion strategies in patients with major haemorrhage. In other models of haemorrhage such as trauma, an endogenous coagulopathy early in the disease course is associated with increased mortality, with subsequent implications for transfusion management. Non-variceal upper gastrointestinal bleeding (NVUGIB) is a leading cause of admission with haemorrhage and for transfusion of blood components. The impact of coagulopathy in this group is poorly characterised. We characterised in patients presenting with NVUGIB 1) the epidemiology of a key marker of coagulopathy, a prolonged International Normalised Ratio (INR) and the association of coagulopathy with patient survival and other key clinical outcomes.

Methods We used data from the 2007 UK national audit of acute upper gastrointestinal bleeding (AUGIB) and the use of blood. We included those patients with endoscopically confirmed NVUGIB and excluded those with documented cirrhosis. Coagulopathy was defined as an INR>1.5. A logistic regression model was used to compare risk adjusted clinical outcomes in those patients with coagulopathy vs those without coagulopathy.

Results An INR at presentation was performed in 61% (2709/4478) of patients with NVUGIB. The prevalence of coagulopathy (INR ≥1.5) was 16.4% (444/2709). Patients with coagulopathy were older, more likely to present with shock (45% vs 36%), have a higher clinical Rockall (4 vs 2), more likely to have high risk stigmata at endoscopy and more likely to be transfused both red blood cells (70% vs 48%) and FFP (35% vs 3%). 8% (220/2709) of all patients who had an INR recorded received FFP transfusion during their admission. In those patients with an INR of

Conclusion An early coagulopathy is prevalent in patients presenting with acute NVUGIB and is independently associated with in-hospital mortality. The wide variation in the use of FFP to correct this suggests clinical uncertainty regarding best practice.

Competing interests None declared.

Endoscopy III

PWE-185 THE DIAGNOSTIC YIELD OF DUODENAL BIOPSY IN COELIAC DISEASE RELATIVE TO CLINICAL INDICATIONS AND SEROLOGY FINDINGS: AN ANALYSIS OF 2109 PATIENTS

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Introduction Serology testing with IgA tissue transglutaminase (TTG) is relatively cheap and non-invasive which NICE guidelines for coeliac disease (CD) advocate as a first choice test for patients with unexpected weight loss or anaemia.¹ Referral for duodenal biopsy is indicated if serology is positive or if negative but there is still a clinical suspicion of CD. The sensitivity, specificity and negative predictive value for IgA TTG have been found to be 90.9%, 90.9% and 99.6% respectively thus demonstrating IgA TTG to be a sensitive marker for CD.² Our aim was to evaluate the diagnostic yield of duodenal biopsies relative to clinical indications and serology findings.

Methods This is a retrospective review of 2109 adult patients from the Heart of England Trust, between January 2009 and December 2010. Coeliac serology (IgA TTG), immunoglobulin levels and D2 biopsy results were recorded for patients referred for upper gastrointestinal endoscopy for anaemia (n=1550) or weight loss (n=559).

Results In the anaemia group, 7/27 (25.9%) with positive serology had a negative biopsy, 19/27 (70.4%) with positive serology had a positive biopsy and 1/27 (3.7%) with positive serology had no biopsy taken. 6/27 (22.2%) with positive biopsy had negative serology. In the weight loss group, 4/12 (33.3%) with positive serology had a negative biopsy, 5/12 (41.7%) with positive serology had a positive biopsy and 3/12 (25.0%) with positive serology had no biopsy taken. 7/14 (50.0%) with positive biopsy had negative serology.

Conclusion Our review demonstrates that anaemia or weight loss are good indicators to attempt to diagnose CD by duodenal biopsy. If we corrected for the diagnosis of upper GI cancer, in our cohort, an additional 14 cases of CD would have been diagnosed if all patients had a duodenal biopsy. Furthermore, a significant proportion of patients in our study with a biopsy positive for CD had negative serology, strengthening the argument that all such patients should have a duodenal biopsy. Rates of serology testing were poor. However, we suggest regardless of serology patients referred with anaemia or weight loss should have a duodenal biopsy to look for evidence of coeliac disease.

Abstract PWE-185 Table 1 Diagnostic yield of duodenal biopsy according to indication

Indication	Serology tested	TTG positive	IgA tested	Duodenal biopsy	Diagnostic of CD
Anaemia	492/1550	27/492	210/492	1068/1550	27/1068
	32.8%	5.4%	42.6%	68.9%	2.5%
Weight loss	210/559	12/210	113/210	410/559	14/410
	37.6%	5.7%	53.8%	73.3%	3.4%

Competing interests None declared.