

**P270** **DUODENAL BULB BIOPSIES INCREASE THE DETECTION OF VILLOUS ATROPHY WHEN ASSESSING ADHERENCE IN COELIAC DISEASE**

Sarah H Coleman\*, Anupam Rej, Elisabeth MR Baggus, Lauren Marks, Michelle Lau, David S Sanders. *Academic Unit of Gastroenterology, Royal Hallamshire Hospital, Sheffield Teaching Hospital NHS Foundation Trust, Sheffield, UK*

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**Introduction** Duodenal bulb biopsies have been demonstrated to increase the diagnostic rate of newly diagnosed coeliac disease (CD) by 10%. The aim of this study was to assess the utility of duodenal bulb biopsies for the assessment of established CD.

**Methods** A prospective study of 375 established CD patients (mean age 51.0 years; 69.9% female) who underwent endoscopy for assessment of persisting symptoms or remission at Sheffield Teaching Hospitals was performed, between 2013–2019. Quadrantic biopsies were taken from D2 in addition to duodenal bulb biopsies.

**Results** 63.2% (n=237) of patients had ongoing villous atrophy (VA). Table 1 outlines the histological appearance of D1 and D2 biopsies. Among those with VA (n=237), this was confined to D1 in 10.2% (n=14) and to D2 in 8.0% (n=11). There was no significant difference in number of patients with VA confined to D1 versus D2 (p=0.69). There was no difference in age (p=0.18) or gender (p=0.10) between patients with VA confined to D1 compared to the remaining cohort. As time from diagnosis increased, the proportion of individuals with complete duodenal mucosal healing (defined as Marsh 0 in both D1 and D2 biopsies) also increased. Two years after diagnosis 4.9% (n=11) of patients had complete healing, increasing to 10.7% (n=24) after 4 years, 17.3% (n=39) after 6 years, 20.9% (n=49) after 8 years and 24.0% (n=54) after 10 years. A further 11.1% (n=25) of patients achieved complete healing after more than 10 years since diagnosis.

**Abstract P270 Table 1** Histological appearance of D1 and D2 biopsies

		D1 histology		
		Normal (Marsh 0)	Marsh 1/2	Marsh 3a-c
D2 histology	Normal (Marsh 0)	36.8% (n=138)	3.2% (n=12)	0.5% (n=2)
	Marsh 1/2	5.6% (n=21)	17.9% (n=67)	3.2% (n=12)
	Marsh 3a-c	1.3% (n=5)	1.6% (n=6)	29.9% (n=112)

**Conclusions** Duodenal bulb biopsies increased the detection of VA by 10% in established CD, highlighting the importance of bulbar biopsies in established CD for the first time in the literature. Complete mucosal healing can occur in established CD after a significant delay, suggesting development of immune tolerance in these individuals.

**P271** **BILE ACID MALABSORPTION DOES NOT CAUSE A LOW FAECAL ELASTASE**

Benjamin Shandro\*, Joshua Chen, Jennifer Ritehnia, Andrew Poullis. *St George's University Hospitals NHS Foundation Trust, London, UK*

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**Introduction** The coordination of biliary and pancreatic secretions is vital for normal digestion. However, it is unknown if bile acid malabsorption (BAM) is associated with pancreatic exocrine insufficiency (PEI). Faecal elastase-1 (FE1) is the only widely available test for PEI. Its limitations include a falsely low (positive) result in patients submitting dilute stool samples, as might occur in patients with BAM. We studied the association between BAM and PEI, and the impact of coexisting BAM on the management of patients with low FE1.

**Methods** We carried out a retrospective study at a London teaching hospital. All outpatients investigated with both FE1 and a SeHCAT scan between 2012 and 2018 were identified. Demographic and clinical information was retrieved from the electronic medical record. PEI was defined as FE1 <200 µg/g, and BAM as 7-day SeHCAT retention ≤15%. Where FE1 had been repeated, any normal result led to classification as not having PEI. Logistic regression was used to explore the dependence of PEI on BAM, and multivariable logistic regression was used to adjust for age, sex and ethnicity. Pearson's Chi<sup>2</sup> test was used to study the association between BAM and repeating FE1, imaging the pancreas, and the initiation and response to pancreatic enzyme replacement therapy (PERT). Complete case analysis was used where any data were missing.

**Results** 258 patients were identified; mean age 51 years; 65.5% female; 61.6% white ethnicity. BAM was diagnosed in 111 patients (43%). PEI was diagnosed in 39 patients (15.1%), with no subjective difference between those with and without BAM (15.3 v. 15.0%). On univariable analysis, BAM was not associated with PEI (OR 1.03; 95% CI 0.52 to 2.04; p=0.94). After adjusting for age, sex and ethnicity, this lack of association held (OR 0.78; 95% CI 0.37 to 1.64; p=0.52).

43 patients (16.7%) had FE1 repeated, with 9 patients (20.9%) reclassified from PEI to normal as a result. There was no difference between patients with and without BAM in FE1 being repeated (15.3% v. 17.7%; p=0.61) or the repeat FE1 leading to reclassification of PEI status (23.5% v. 19.2%; p=0.74). In patients with PEI, there was no difference in the rate of pancreatic imaging between those with and without BAM (64.7% v. 63.6%; p=0.61), but pancreatic abnormalities were detected more frequently in patients with coexisting BAM (58.3% v. 20.0%; p=0.04). Findings included atrophic or fatty pancreas, and one pancreatic cancer. There was a non-significant trend towards fewer patients with PEI and BAM receiving PERT (58.8% v. 72.7%; p=0.36), but no difference in clinical response when treated (77.8% v. 76.9%; p=0.96).

**Conclusions** BAM is not associated with PEI. However, when a patient with BAM does have a low FE1, our findings suggest most are representative of PEI, rather than false positives.

**P272** **CHOOSING WISELY: DUODENAL BIOPSIES WITHOUT SEROLOGICAL EVIDENCE OF COELIAC DISEASE, WHY CAN'T WE DO BETTER?**

Byron Theron, Deepanjali Banerjee, Iain Bain\*. *Northern Devon District Hospital, Barnstaple, UK*

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**Introduction** The BSG guidelines recommend anti tissue transglutaminase antibody (tTG) testing as a first line test for