

for Paediatric Gastroenterology and Nutrition report there is no compelling evidence to treat children colonised with HP without histological evidence of gastritis. This reflects the current pathophysiological understanding of cancer development, where inflammation secondary to infection is believed to be the driver of dysplasia and cancer. In our tertiary referral centre current practice stains all paediatric gastric biopsies with Haematoxylin and Eosin stain (H+E) as well as Warthin Starry (WS) stain, specifically for HP-like organisms. The aim of this study was to investigate the incidence of HP infection in children undergoing endoscopy. We also examined the routine use of special staining on all gastric biopsies for HP and whether other histological features on H+E examination could act as reliable markers of infection allowing selective special staining.

**Methods** We reviewed all gastric biopsies submitted between January 8 and September 11, in patients born after 1989. All reports were loaded onto a database and searched for key words with "helico", "HLO" and "H Pylori". Each report was then examined for evidence of HP, acute inflammation and lymphoid aggregates.

**Results** 1102 cases were examined and 23/1102 were positive for HP, 2% of all cases. There was acute inflammation in 17/23 cases. In the six with no acute inflammation, two were suspected of having HP (one previously treated) and one had only a single biopsy from the body, not the antrum. 146/1102 (13%) cases had acute inflammation. Acute inflammation as a marker for HP has a sensitivity of 74%, specificity of 88%, PPV of 11% and NPV of 99%. Lymphoid aggregates and acute inflammation as markers of infection further increased HP detection.

**Conclusion** This study shows our current practice involves special staining of all biopsies for low prevalence disease (2%). However H+E examination alone has low sensitivity for picking up HP in cases of low density infection. Acute inflammation as a marker for HP infection could aid selection of cases for special staining. The NPV of 99% suggests that very few cases would be missed. Selective staining of cases for HP would also save around £3000/year (excluding pathologist time). The disadvantage that a small number of children colonised with HP, without gastritis may be missed is of unclear significance. Further research is required in order to develop an integrated clinical and pathological approach into the investigation, diagnosis and treatment of HP in children.

**Competing interests** None declared.

## Pathology

### PTU-136 DOES TOTAL NUMBER AND POSITIVE LYMPH NODE RATIO HAVE AN IMPACT ON OUTCOME FOLLOWING SURGICAL RESECTION FOR HILAR CHOLANGIOCARCINOMA?

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**Introduction** Lymph node status is an important predictor of survival following resection for hilar cholangiocarcinoma (HCCA). Controversies still exist regarding the extent of lymphadenectomy and whether an extended lymph node dissection improves outcome. This study aims to evaluate the prognostic value of the total number of nodes removed and positive lymphnode ratio (LNR) on overall and disease-free survival in patients undergoing resection for HCCA.

**Methods** From 1994 to 2010, 84 HCCA were resected at our Institution. Seventy-eight patients with available data were included in our analysis. Overall survival (OS) and disease-free survival (DFS)

were calculated and stratified according to the number of lymph nodes excised and positive LNR at different cut-off levels.

**Results** An average of 13.8 lymph nodes were removed. 45 patients (57.7%) had a positive lymph node status, with a mean of 3.2 involved nodes per patient. 1, 5 and 10-year OS for N+ status was 60%, 10% and 10%, while N- OS was 82%, 41% and 41% (p=0.000). Similarly, 1, 5 and 10-year DFS was worse in the N+ group (71%, 45% and 42%) compared to N- (91%, 65% and 60%) (p=0.045). There was no difference in 1, 5 and 10-year OS (70%, 23%, 20% vs 70%, 23% and 20%, p=0.690) and DFS (78%, 48% and 48% vs 82%, 58% and 58%, p=0.305) when <10 nodes were removed (n=39) compared to ≥10 nodes (n=36). There was no difference in 1, 5 and 10-year OS (63%, 9% and 9% vs 60%, 10% and 10%, p=0.562) and DFS (78%, 40% and 40% vs 65%, 46% and 40%, p=0.795) when LNR <0.25 (n=22) was compared to LNR >0.25 (n=23). No difference was found when a cut-off of 15 total excised lymphnodes and LNR of 0.50 was used.

**Conclusion** The overall number of lymphnodes excised and positive LNR did not correlate with overall and DFS in resected HCCA. Larger, prospective studies are necessary to confirm these results.

**Competing interests** None declared.

### PTU-137 DOES A PROMPT FROM THE HISTOLOGY REPORT TO PERFORM SEROLOGY TO EXCLUDE COELIAC DISEASE MEAN THIS IS DONE?

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**Introduction** Lymphocytic duodenitis (LD) is a histological diagnosis comprising normal duodenal architecture, but an intraepithelial lymphocyte (IELs) count >25/100 enterocytes. A diagnosis of coeliac disease (CD) can be made in up to 16% of cases where LD is seen.<sup>1</sup> CD serology (antibodies to tissue transglutaminase) should be performed in all cases of LD. The aim of this study was to identify the rate of CD serological investigations following a diagnosis of LD.

**Methods** All duodenal biopsies taken at St Marys Hospital, London between March and August 2011 were evaluated. The histological reports for all duodenal biopsies coded as abnormal were reviewed. Serology results were checked in all cases where LD was diagnosed.

**Results** 280 duodenal biopsies were performed of which 24 met the criteria for a diagnosis of LD (8.6%). The indication for biopsy was anaemia in 12/24 (50%), dyspepsia in 4/24 (16.7%), abdominal pain in 3/24 (12.5%), dysphagia in 1/24 (4.2%) and an indication was not indicated in 1/24 (4.2%). The numbers of lymphocytes per 100 enterocytes varied from 26 to 62. Serological testing for CD was carried out prior to or following the diagnosis of LD in 12/24 (50%). In all cases where serology was performed the result was negative.

**Conclusion** Opportunities to diagnose CD are being missed in 50% of cases. These figures are similar to an audit carried out in the same department in 2009 which showed that serological testing for CD was being carried out in 56% of cases where LD was diagnosed. Diagnosis and treatment of CD has been shown to reduce morbidity and mortality<sup>2,3</sup> and reduce the cost of medical care.<sup>4</sup> Therefore it is important that opportunities to diagnose CD are taken and follow-up on the diagnosis of LD with serological testing by clinicians is imperative.

**Competing interests** None declared.

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**PTU-138 ANALYSIS OF THE EFFECTS OF SPECIALISATION ON THE QUALITY OF REPORTING OF STOMACH CANCER USING THE ROYAL COLLEGE OF PATHOLOGISTS MINIMUM DATASET IN THE YORKSHIRE REGION**

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**Introduction** The completeness of a cancer pathology report is central to quality patient management and over the years proforma reporting has become a way of standardising reports. There has been an increasing trend towards specialisation in histopathology. This study examines the effect of specialisation on the degree of completeness, accuracy of information and quality of reporting of the Royal College of Pathologists' stomach cancer dataset.

**Methods** An audit of 1065 pathology forms from surgically removed stomach cancer cases over a 12-year period (1995–2006) was carried out. The rate of completeness of the forms, accuracy of the information content and quality of reporting were determined. Accuracy of the information content was adjudged by running specific queries to check for discrepancies such as mis-match of the depth of local invasion and the pathological tumour (pT) stage. Quality was assessed by the number of lymph nodes retrieved and recorded. The impact of specialisation on the accuracy and quality of the information contents of the forms were analysed by comparing median number of lymph nodes retrieved, completion rate of the forms and rate of discrepancies between specialist (Leeds) and non-specialist (11 others) departments. Differences between the two were statistically tested for significance ( $p \leq 0.05$ ) using appropriate parametric and non-parametric tests.

**Results** Of the 1065 forms, 31% were submitted from Leeds NHS Trust. There was 90.3% completion rate for core items overall and there were discrepancies in 316 cases (30%). The number of lymph nodes retrieved range from 0 to 95 per case with an overall median of 15 lymph nodes. The results of the comparison between the specialist and non-specialist centres with respect to completeness, accuracy and quality are presented in Abstract PTU-138 table 1. These showed statistically significant difference between the two groups with specialist centre consistently performing better than the non-specialist centres.

Abstract PTU-138 Table 1 Assessing role of specialisation on quality

Variable	Specialist	Non-specialist	p Value
Lymph nodes retrieved			
Median (IQR)	22 (14–30)	14 (8–19)	0.0001*
Completion rate of forms			
Complete (n=858)	281 (85.7%)	571 (78.2%)	
Incomplete (n=207)	48 (14.3%)	159 (21.8%)	0.004†
Discrepancies on forms (n=316)	81 (25.6%)	235 (74.4%)	<0.0001†

\*Kruskal–Wallis rank test.

† $\chi^2$  test.

**Conclusion** This analysis of a large number of proformas from a region shows a completion rate and an overall good quality using lymph node retrieval. Specialisation of histopathologists has significant impact on the completeness of forms, accuracy of information content and quality of reporting. Therefore, further specialisation is recommended to improve the quality of cancer reports and patient management.

**Competing interests** None declared.

**PTU-139 COLONIC HISTOLOGICAL ABNORMALITIES ARE NON-SPECIFIC AND NON-SIGNIFICANT IN BILE ACID MALABSORPTION**

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**Introduction** Bile acid malabsorption (BAM) is a common cause of chronic secretory diarrhoea via poorly characterised mechanisms. The aim of this study was to determine if histological abnormalities in colonic mucosa are linked to BAM in patients with chronic diarrhoea.

**Methods** During a 6-year period 264 patients were investigated with SeHCAT for chronic diarrhoea and their retention values recorded ( $\leq 8\%$  = positive result;  $\geq 16\%$  = negative result). Colonic biopsies and histological analysis were available in 150 (57%). The patients were categorised as: Group 1: terminal ileum Crohn's disease, (pre or post resection) n=51. Group 2: Idiopathic BAM (including patients with diarrhoea predominant IBS) n=159. Group 3: BAM secondary to other gastrointestinal disease n=51; of which cholecystectomy (n=37), coeliac disease (n=1), chronic pancreatitis (n=1), bacterial overgrowth (n=2), diabetes (n=4) and other gastrointestinal surgeries (n=6). Group 4: terminal ileum disease plus cholecystectomy n=3.

**Results** A histological abnormality was present in 29% (n=16/56) of the patients with positive SeHCAT, vs 23% (n=17/74) of the patients with negative SeHCAT ( $p=0.318$ , two-tailed Fisher's exact test). Similarly, 30% (n=6/20) of the patients with equivocal SeHCAT results (8%–16% retention) had histological abnormalities. As expected, the highest prevalence of these abnormalities was noted in groups 1 and 4, the subjects with Crohn's disease, regardless of the presence of BAM. Abnormalities were noted in descriptive terms and included colitis (n=4), chronic inflammation (n=5), cryptitis (n=4), mild non-specific inflammation (n=11), moderate non-specific inflammation (n=5), polyps (n=2), ulceration (n=6) and active inflammatory bowel disease (n=2). 30% (n=8/27) of positive SeHCAT with idiopathic BAM (group 2) had abnormalities on histology compared with 19% (n=10/52) who had negative SeHCAT in group 2, which was again a non-significant difference ( $p=0.397$ , two-tailed Fisher's exact test). The 7% (n=2/28) of patient in group 3 with histological abnormalities also had negative SeHCAT results.

**Conclusion** This retrospective study indicates that colonic histological abnormality is non-specific and coincidental to the presence of bile acid malabsorption in patients with chronic diarrhoea. It is unlikely to be relevant to the mechanism of diarrhoea which is probably non-inflammatory. This might be further studied in the future using faecal markers of inflammation in these patients.

**Competing interests** None declared.

**PTU-140 NEUTROPHIL LYMPHOCYTE RATIO IN OUTCOME PREDICTION AFTER EMERGENCY ABDOMINAL SURGERY IN THE ELDERLY**

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**Introduction** Accurate prediction of outcome after emergency surgery in the elderly patient may assist decision making. However, certain scoring systems require post-operative data (eg, P-POSSUM) while others have failed to gain widespread use (eg, Surgical risk score). Recent reports have suggested that C reactive protein (CRP)