

with the remainder predominantly due to unexplained anaemia (18%). Only 50% (25/50) of inpatient bowel preparation was rated by the endoscopist as “excellent” or “good,” compared with 86% overall for the same period ( $p<0.001$  by  $\chi^2$  analysis). Among endoscopists with individual overall caecal intubation rates of  $>90\%$ , the inpatient caecal intubation rate was only 74% (37/50). Out of the 13 failed inpatient intubations, 7 (54%) were due to poor bowel preparation. The remainder were due to patient discomfort (3), difficult angulation (2), and malignancy (1). In addition, the overall inpatient success rate was only 66% (33/50). In four cases (8%), although caecal intubation was achieved, poor bowel preparation meant a small lesion could not be excluded.

**Conclusion** This audit has demonstrated that the failure rate for inpatient colonoscopy is greater than outpatient procedures. The majority of these failures are due to poor bowel preparation. The reasons for this are complex, but may include reduced mobility and poorer adherence to bowel preparation and oral hydration. Deferring colonoscopy until after discharge from hospital is therefore advised whenever possible.

**Competing interests** None declared.

## REFERENCES

1. Ness RM, Manam R, Hoen H, *et al*. Predictors of inadequate bowel preparation for colonoscopy. *Am J Gastroenterol* 2001;**96**:1797–802.
2. Hendry PO, Jenkins JT, Diamant RH. The impact of poor bowel preparation on colonoscopy: a prospective single centre study of 10,571 colonoscopies. *Colorectal Dis* 2007;**9**:745–8.

## PTU-232 EVALUATING THE ROLE OF CAPSULE ENDOSCOPY IN EQUIVOCAL COELIAC DISEASE?

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**Introduction** Demonstration of villous atrophy (VA) on small bowel biopsy and positive serology (endomysial antibody (EMA) and/or tissue transglutaminase (tTG)) is the current gold standard for diagnosing coeliac disease. Difficulty in establishing the diagnosis may arise for several reasons. A minority may have antibody negative disease. Some individuals may have positive antibodies with histological changes that fall short of VA (Marsh Grade 1 and 2 [MG1-2]) or are unable to tolerate gastroscopy. In addition, not all VA seen is caused by coeliac disease. The aim of this study was to assess the value of capsule endoscopy (CE) in equivocal coeliac disease.

**Methods** Data from all patients with equivocal coeliac disease who underwent CE between 2004 and 2011 in a tertiary gastroenterology department were analysed. Patients were subdivided into five main groups: Group 1—antibody negative VA; Group 2—MG1-2; Group 3—positive coeliac serology with normal duodenal biopsy; Group 4—miscellaneous including strong family history and non-gastro-intestinal presentation of probable coeliac disease; Group 5—failed or refused gastroscopy. Demographic data, indication for CE, serology and histology were recorded prospectively. Videos were analysed by two experienced gastroenterologists blinded to the clinical data. Markers of coeliac disease such as scalloping, mosaic pattern and loss of folds were assessed. A diagnosis of coeliac disease was further supported by not only CE appearances but also combinations of HLA typing (DQ-2 or DQ-8), gluten challenge/response to a gluten free diet and in some cases repeat duodenal biopsy.

**Results** 102 patients, 72 female, median age 49 years, (range 18–89 y) underwent CE. 17/102 (16%) had features of coeliac disease on CE, with a further three cases of Crohn's disease identified (Abstract PTU-232 table 1). In patients with coeliac antibody

negative VA, CE secures a diagnosis of coeliac or Crohn's in 9/32 (28%) significantly more than in other groups where previous gastroscopy was undertaken ( $p=0.04$ ). In 57% (4/7) of patients with positive coeliac serology who either failed or refused gastroscopy, CE helped establish the diagnosis.

Abstract PTU-232 Table 1

|                                    | Normal CE (n) | Features of coeliac | Other CE diagnosis |
|------------------------------------|---------------|---------------------|--------------------|
| Antibody –ve VA (n=32)             | 23            | 7                   | 2 Crohn's          |
| MG1-2 (n=29)                       | 26            | 2                   | 1 Crohn's          |
| +ve antibody, normal biopsy (n=10) | 9             | 1                   | 0                  |
| Miscellaneous (n=24)               | 21            | 3                   | 0                  |
| Failed/refused gastroscopy (n=7)   | 3             | 4                   | 0                  |

**Conclusion** CE may have a role in the assessment of patients with coeliac antibody negative VA and in antibody positive patients where previous gastroscopy has been refused or failed. Its routine use is not supported in other causes of “equivocal” coeliac disease.

**Competing interests** None declared.

## PTU-233 IN VIVO POLYP SIZE AND HISTOLOGY ASSESSMENT AT COLONOSCOPY: ARE WE READY TO RESECT AND DISCARD? A MULTI-CENTRE ANALYSIS OF 1212 POLYPECTOMIES

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**Introduction** The current paradigm of colonoscopic management of polyps is to resect and send for pathologic assessment. Such practice incurs substantial costs for a group of lesions with limited clinical importance. Several studies have proposed a resect and discard approach for smaller polyps. For this to be effective our in vivo assessment of polyp size needs to be accurate. Additionally a high positive predictive value (PPV) of adenomas among polyps resected is essential to ensure patients are correctly risk stratified for surveillance.

**Methods** All polypectomies performed from 1 January 2010 to 31 December 2010 were identified retrospectively from databases in a dual site teaching hospital and local district general endoscopy units. Polyps removed and retrieved with corresponding histology were identified. Polyp site, endoscopic size and endoscopist specialty were recorded. Carcinomas, adenomas and serrated lesions were determined to be neoplastic. The total number of neoplasms removed divided by the total number of polyps removed was calculated (PPV). Fishers exact test was used to compare the subspecialties of endoscopist (nursing/surgical/medical). In vivo size was analysed for terminal digit preference by the colonoscopist compared to histology measurements using a  $\chi^2$  goodness of fit test. Calculations of the distribution of error between in vivo estimation and histology measurement and the number of times the size discrepancy crossed the 10 mm value used in planning surveillance colonoscopy were performed.

**Results** 1212 polyps were included, 864 had in vivo size estimation and subsequent en-bloc histology measurements  $\leq 20$  mm. The PPV for neoplastic polyps was 69% (831/1212) with 381 non-neoplastic polyps removed. Nurse endoscopists had the highest PPV, 74% ( $n=347/486$ ) compared to surgeons (PPV 72%: 143/199) and medics (PPV 64%: 339/527,  $p<0.02$ ). Considering proximal hyperplastic polyps as neoplastic the overall PPV=73% (879/1212), nurses PPV