

pathology of 28 IMC (28%) and 69 HGD (71%). Finally the time from first RFA to developing malignancy was a mean of 182 (42–733) days.

Conclusion In this cohort, there is a 4.7% chance of developing EAC, 2.8% of patients could not complete planned endotherapy and an 8.5% chance of death from non-oesophageal diseases. These outcomes are independent of the demographic, pathologic and endoscopic variables studied.

Disclosure of Interest None Declared

PTU-145 INCIDENCE OF EOSINOPHILIC OESOPHAGITIS IN A NEW ZEALAND POPULATION: A RETROSPECTIVE ANALYSIS

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^{1,2,†} A Murray, ³ A Lee, ³ C Tan, ⁴ M Lau, ⁵ J Palmer, ^{2,3} M Schultz. ¹Gastroenterology, Royal Cornwall Hospital, Truro, UK; ²Gastroenterology, Dunedin Hospital; ³Dunedin School of Medicine, University of Otago; ⁴Pathology, Dunedin Hospital, Dunedin, New Zealand; ⁵Research and Development, Royal Cornwall Hospital, Truro, UK

Introduction Eosinophilic oesophagitis (EO) is the diagnosis in 10–15% of dysphagic patients in European and N American studies, most frequent in men aged less than 50 years. It is precipitated by aero-allergens. Diagnosis requires > 20 eosinophils per hpf on oesophageal biopsies. We investigated its incidence in a New Zealand population where the genetic profile is similar (92% NZ European descent) but the environmental exposure to flora very different.

Methods A retrospective review of 871 patients investigated by gastroscopy for dysphagia from 2006–11 at Dunedin hospital. Age, sex, endoscopic findings and whether biopsied were recorded from the endoscopy database. Histology was determined from the hospital PAS system and equivocal cases reviewed by a consultant histopathologist. Sex and age differences were interrogated with chi-squared and $P < 0.05$ was considered significant.

Results Average age of all patients was 68.7 years, 57.1% male. Common diagnoses were normal (27.7%), oesophagitis (21.7%), cancer (11.2%), dysmotility (7.3%), peptic stricture (5.0%). 20 patients (12 male, mean age 45.5 years) had EO. 5 of these had endoscopic abnormalities (2 × ridges, 2 × Schatzki rings, 1 × furrows). 351 patients (40.9%) had oesophageal biopsies, but only 86 of 434 where the underlying cause was not evidence ie no cancer, oesophagitis or peptic stricture. EO incidence was 2.3% of all patients, 5.7% of those biopsied but 23.2% of those where an alternative diagnosis was not evident. Annual incidence varied from 1.1 to 4%. The frequency of biopsies was greater in 2011 (73.6%) than previous years (26.9–44.1%) but the number of cases identified did not differ significantly (3.4–9.0% of those biopsied).

Abstract PTU-145 Table 1 Variation of Frequency of Biopsy and EO with Age and Sex

	Total	Biopsied	Eosinophilic oesophagitis
Male	497	224 (45.1%)*	12 (2.4%: 5.4% of those biopsied)
Female	374	133 (35.6%)	8 (2.1%: 6.0% of those biopsied)
< 50 years old	96	42 (43.8%)	12** (12.5%: 28.6% of those biopsied)
≥ 50 years old	771	313 (40.6%)	8 (1.0%: 2.6% of those biopsied)

* $P < 0.05$

** $P < 0.0001$

Conclusion EO appears less frequent in a New Zealand dysphagic population than in previous Northern hemisphere studies although this might be due to few biopsies where no macroscopic abnormality was seen. Biopsies are more frequent in men than women but EO no more likely. Biopsies are not more frequent in younger patients (< 50 y.o) but EO is much more frequent. The exact incidence of EO and reasons for discrepancies with previous studies merit further investigation.

Disclosure of Interest None Declared

PTU-146 INCIDENCE AND PREDICTORS OF EOSINOPHILIC OESOPHAGITIS IN DYSPHAGIA: A PROSPECTIVE ANALYSIS

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^{1,2,†} A Murray, ¹ S Bennett, ³ J Palmer, ⁴ M Lau, ¹ M Schultz. ¹Gastroenterology, Dunedin Hospital, Dunedin, New Zealand; ²Gastroenterology; ³Research and Development, Royal Cornwall Hospital, Truro, UK; ⁴Pathology, Dunedin Hospital, Dunedin, New Zealand

Introduction Eosinophilic oesophagitis (EO) causes dysphagia: 10–15% in European and US studies. It is diagnosed by finding > 20 eosinophils per hpf in oesophageal biopsies. We prospectively examined the incidence and clinical indicators of EO in a New Zealand population.

Methods Interim analysis of demographics, symptoms and associated diseases by questionnaire prior to endoscopy in 75 consecutive patients with dysphagia. Endoscopic findings were recorded with histology.

An initial analysis was performed to investigate whether age and gender of patients and symptoms (duration of dysphagia, intermittent or progressive symptoms, level of dysphagia, weight loss, choking, reflux odynophagia or a history of allergy) were associated with a final diagnosis of EO using chi squared or Fisher's exact test as appropriate then logistic regression used to determine the final model.

The sensitivity and specificity of endoscopic changes (furrows, ridges and rings) was determined separately and significance determined by Fisher's exact test.

Statistical significance was taken as $P < 0.05$. Ethics approval was obtained.

Results 75 patients, mean age 56 (range 15–94 years), 31 male (41%), had gastroscopy because of dysphagia. 64 (85.3%) completed the questionnaire and 67 (89.3%) had endoscopic biopsies. 12 (16%) had EO, mean age 36.7 years (range 18–62), 8 male. Endoscopic abnormalities suggestive of EO were seen in 7 EO patients (sensitivity 38.9%, specificity 91.2%: $P < 0.01$).

Allergy/atopy (hayfever, asthma, eczema, coeliac) was no more common in EO (54.5%) than those without (49.0%). The level of dysphagia was not pharyngeal in 5 EO patients. Duration of dysphagia was at least 6 months in all bar one EO patient (range 26–1248 weeks). Weight loss of 7–10 kg was reported by 4 EO patients. No patient responding to PPI therapy had EO. The strongest predictor of EO was age under 50 (OR 20.0 95% CI 3.4–117.8) with male sex also being significant (OR 6.7 95% CI 1.4–32.3). No other factor was statistically significant.

Conclusion EO is present in a dysphagic New Zealand population with a relatively high incidence. It is more common in younger males but there was no obvious association with allergy. Although endoscopic changes associated with EO were highly specific they were not sufficiently sensitive to depend upon. We would recommend oesophageal biopsies in all patients presenting with dysphagia without obvious cause at endoscopy.

Disclosure of Interest None Declared

PTU-147 INCIDENCE AND PREDICTIVE FEATURES OF PHARYNGEAL POUCHES IN A DYSPHAGIC POPULATION

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^{1,†} A Murray, ¹ H R Dalton, ² J Palmer, ³ A D Wilde, ⁴ D R Grimes. ¹Gastroenterology; ²Research and Development; ³ENT, Royal Cornwall Hospital, Truro; ⁴Surgery, Luton & Dunstable Hospital, Luton, UK

Introduction Pharyngeal pouches (PPs) commonly present with dysphagia. Perforation of a pouch at gastroscopy is a feared complication. Predicting patients likely to have PPs can enable selection for barium swallow to reduce this risk. PP incidence in a dysphagic population has been reported as 0.3%.¹ We investigated PP incidence and predictive demographic and clinical features in patients referred to a dysphagia hotline service over a 7 year period.²

Methods Analysis of prospectively collected data on demographics (age, sex) and symptoms (including duration and level of dysphagia, type [solids/liquids, progressive/intermittent], associated symptoms [weight loss, reflux, regurgitation] and outcomes of investigations of 2000 consecutive referrals for dysphagia. Logistic regression determined significant variables for predicting PPs. A consultant ENT surgeon reviewed all barium swallows of PP patients. The local ethics committee ruled the study was within the remit of audit.

Results 1775 patients were investigated through the DHL, 37 with PP (1.9% of total, 2.1% of those investigated). One of these was a re-referral, 6 years after initial pouch stapling. 20 were male (54%), mean age 80.1 years (range 58–103 years). Mean age of all patients was 68.1 years (range 17–103), 48.5% male. Two patients had PPs and oesophageal cancer. On logistic regression only age greater than 73 years and symptoms of dysphagia greater than 26 weeks were predictive of PP as final diagnosis ($p < 0.001$ and 0.005 respectively). Weight loss (5.4 vs 28.5%) and reflux (45.9% vs 60.6%) were less common in PP patients and regurgitation more so (62.2% vs 52.1%) but none of these were significant.

Abstract PTU-147 Table

		Pharyngeal pouch (%)	All dysphagia (%)
Level of dysphagia	Pharyngeal/combination	83.8	25.6
	Midsternal	16.2	30.4
	Lower/combination	0	42.3
Type of dysphagia	Intermittent	49	44
	Progressive	43	30
	Solids only	81.1	79.7
	Both	18.9	19.7
Duration of dysphagia	≤ 26 weeks	51.3	74.8
	> 26 weeks	48.7	25.1

Conclusion Pharyngeal pouches in a dysphagic population are more common than previously recognised. Most though not all have pharyngeal level dysphagia. Where gastroscopy was performed as initial investigation, the procedure was likely to be incomplete although no complications occurred. Just over 50% of the PPs were thought likely to be the cause of dysphagia but less than 50% of these underwent surgery (stapling).

Disclosure of Interest None Declared

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PTU-148 EFFICACY OF EARLY CANCER SCREENING IN BARRETT'S OESOPHAGUS

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¹J Faulkner, ¹R Ley Greaves, ¹J Hoare. *Gastroenterology, Imperial College London, London, UK*

Introduction The British Society of Gastroenterology recommends biennial endoscopic screening of patients with known Barrett's. Despite being widely employed the efficacy of surveillance is contested as the assumed 0.5% per year progression from metaplasia to cancer is disputed.⁽¹⁾ This study aims to evaluate the

efficacy of detection of Barrett's related cancer through screening within the Imperial College NHS Trust.

Methods We retrospectively analysed endoscopy and pathology reports of all patients who received an endoscopy for Barrett's oesophagus within a 5 year period from 2007 to 2012. Patients presenting with established dysplasia or adenocarcinoma were excluded and only those with confirmed Barrett's oesophagus were considered. The surveillance regime in this period was in accordance with the British Society of Gastroenterology guidelines. All endoscopies were conducted by Imperial College NHS gastroenterologists within Imperial Trust sites.

Results Over 54 months 326 patients underwent endoscopic surveillance of Barrett's oesophagus with a mean follow-up of 36 months. 73 (22%) patients stopped surveillance in this period. Early Adenocarcinoma and High Grade Dysplasia was reported in 2 (0.6%) and 3 (0.9%) patients respectively. Providing a 0.2% progression to adenocarcinoma per year and a 0.5% progression to High Grade Dysplasia or cancer per year. This gave a cancer incidence in Barrett's oesophagus of 1 per 492 patient years of surveillance. All three of the HGD patients underwent endoscopic therapy and have successfully eradicated dysplasia and Barrett's. Both cancer patients were unsuitable for endoscopic therapy. 1 received surgical treatment and 1 received radiotherapy.

Conclusion The risk of progression to cancer is lower than previously anticipated. We estimate the cost of a single surveillance endoscopy at £400, thus surveillance costs are £124,000 per cancer diagnosis. The mean age of adenocarcinoma diagnosis through surveillance is 68.1(2) and with average male life expectancy of 78, the cost of diagnosis is approximately £12,400 per year saved. This assumes all cancers detected via surveillance are curable and does not account for any subsequent treatment or follow-up costs, therefore this is likely to be a fraction of the true cost. NICE state that £20,000–£30,000 is a cost-effective range per quality adjusted life year saved. In light of this we recommend a more stratified, cost effective screening programme be considered.

Disclosure of Interest None Declared

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PTU-149 IS PEPSIN DETECTED IN THE SALIVA OF HEALTHY INDIVIDUALS?

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¹J O Hayat, ²A Woodcock, ²P Dettmar, ³E Yazaki, ¹J-Y Kang, ³D Sifrim. *Gastroenterology, St. George's University of London, London*; *Technostics Ltd, Hull*; *Wingate Institute of Neurogastroenterology, Barts and the London School of Medicine and Dentistry, London, UK*

Introduction The presence of pepsin in the oesophagus or more proximally (pharynx or airways) suggests gastro-oesophageal reflux (GOR). However, appropriate normal values and correlation with acid and non acid reflux are still limited. The aim of this study was to measure pepsin in expectorated saliva together with objective assessment of GOR by pH-impedance in a large cohort of healthy asymptomatic subjects.

Methods 100 healthy subjects, age 30.7 (range 19–55), BMI 23.7 (17.7–32.8) with no typical or atypical reflux symptoms underwent MII-pH monitoring "off" PPI. Oesophageal pH was measured 5 cm above the LOS and impedance sensors were positioned at 3.7.9.12 and 15 cm above LOS. Subjects collected expectorated saliva on waking, one hour after lunch and one hour after dinner. Saliva was