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**PTU-054** TRANSNASAL GASTROSCOPY – ARE THE BIOPSIES SUITABLE FOR BARRETT'S SURVEILLANCE?

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**Introduction** Transnasal gastroscopy is a far more acceptable form of gastroscopy to the patient, with benefits including reduced gagging, ability to communicate during the procedure, greater flexibility of endoscope allowing easier visualisation of difficult areas and closer inspection of the larynx.<sup>1</sup>

Due to the smaller working channel, 2.0mm as compared with 2.8 mm of a standard oral gastroscopy, the biopsy forceps used in transnasal gastroscopy are smaller, leading to questions about the suitability of transnasal gastroscopy for Barrett's surveillance.

As an early adopter of transnasal gastroscopy, Braintree community hospital endoscopy service has performed many thousands of diagnostic transnasal gastroscopies including Barrett's surveillance. This study compares the dysplasia and malignancy rate of transnasal gastroscopy biopsies and oral gastroscopy biopsies.

**Methods** All patients attending for a follow up gastroscopy for Barrett's surveillance over the past three years were included in the study.

Patients attending for gastroscopy are sent information on the types of procedure when the appointment is booked. The patient is free to choose whichever form of gastroscopy they wish. On admission, the nurse will explain both procedures again and the patient will then choose. The vast majority choose to have transnasal gastroscopy.

For those that choose to have oral gastroscopy, a standard oral gastroscopy is used rather than a transnasal gastroscopy.

All endoscopists take quadrantic biopsies of the Barrett's segment in accordance with the BSG guidelines.

The study looked back at 3 years of Barrett's surveillance and compared the rates of dysplasia found in the transnasal series and the oral series. The overall dysplasia rate, including adenocarcinoma, was compared.

**Results** In the three year period there were a total of 1282 patients who underwent Barrett's surveillance.

Of these, 905 (70.6%) chose to have transnasal gastroscopy, the remainder, 377 (29.4%) chose to have oral gastroscopy.

Of the transnasal series, 12 (1.3%) had LGD, 5 (0.6%) had HGD, 3(0.3%) had ACA and 9 (1%) were indefinite for dysplasia.

Of the oral series, 7 (1.8%) had LGD, 0(0%) had HGD, 2 (0.5%) had ACA and 7 (1.8%) were indefinite for dysplasia.

The overall dysplasia and malignancy rate in the trans nasal group versus the oral group was 2.2% vs. 2.4% (p = 0.4048).

**Conclusion** Our series at Braintree community hospital shows that there is not a significant difference in the dysplasia and malignancy rate found on transnasal biopsies as compared with oral gastroscopy biopsies.

**REFERENCE**

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**PTU-055** A COMPARISON OF RADIOLOGICAL AND ENDOSCOPIC OESOPHAGEAL STENT PLACEMENT IN MALIGNANCY

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**Introduction** Self expanding metallic stent (SEMS) placement effectively palliates malignant dysphagia, most commonly due to oesophageal cancer. Typically stents are placed under fluoroscopic guidance, but some centres use direct vision endoscopy as an alternative.<sup>1</sup> There are however little data comparing the two techniques. At our 2-hospital institution, all patients presenting to Stoke Mandeville Hospital undergo radiologically guided stent placement, while patients at Wycombe Hospital undergo endoscopic placement without fluoroscopy. We describe our experience over a three year period.

**Methods** A retrospective observational study of all patients who underwent SEMS placement at our two hospitals over a three year period (2009–2012) was performed. 41 patients were included in the study, with placement of 48 SEMS. Improvement in dysphagia, survival and complication rates were the main outcome measures.

**Results** 21 patients underwent radiologically guided placement, 20 for oesophageal cancer, 14 male, median age 78 years. 20 patients underwent endoscopically guided placement, 17 for oesophageal cancer, 8 male, median age 80.5 years. Disease stage was similar in both groups, with metastases in 11/21 of the radiology group, and 10/20 of the endoscopy group. More patients in the radiology group had received prior radiotherapy (13 vs 8). Significant improvement in dysphagia was similar in both groups (14/21 radiology vs 14/20 endoscopy, p = 0.82). There was no significant difference in median survival after stenting (135 vs 116 days, p = 0.98), or major 30 day complications defined as perforation, recurrent dysphagia or death (5 in both groups).

**Conclusion** Direct vision endoscopic SEMS placement was as effective as radiological guidance for dysphagia palliation at our institution, with a similar mortality and complication rate. This provides further evidence for the role of direct vision endoscopic SEMS placement in palliation of malignant dysphagia.

**REFERENCE**

1 Wilkes EA *et al.* Insertion of expandable metallic stents in esophageal cancer without fluoroscopy is safe and effective: a 5 year experience. *Gastrointest Endosc.* 2007 May;65:923–9

**Disclosure of Interest** None Declared.

**PTU-056** HIGHLY SUCCESSFUL, MINIMALLY INVASIVE ENTERAL ACCESS BY DOUBLE-BALLOON ENTEROSCOPY (DBE) AND LAPAROSCOPIC-ASSISTED DBE

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**Introduction** Patients with chronic gastroparesis frequently require prolonged enteral feeding via the jejunal route. This is often achieved through the placement of a percutaneous endoscopic gastrostomy with jejunal extension (PEG-J) or a surgically

placed jejunostomy (SJ). Direct percutaneous endoscopic jejunostomy (DPEJ) is increasingly used as an alternative to these modalities: Avoiding the intrinsic problems associated with the narrow calibre PEG-J and the tendency of displacement and retrograde migration; and is less invasive than SJ insertion, which also requires an enterotomy and enteropexy. Although progress with deep enteroscopy over the last decade has facilitated DPEJ placement, the presence of post-surgical intra-abdominal adhesive disease may still reduce success rates and procedure safety. In this setting, miniport laparoscopic-assisted DBE (lap-DBE) has the potential to provide safe and successful placement while maintaining the relatively minimally invasive approach of the endoscopic pull-through technique.

**Methods** Prospective assessment of outcomes of DPEJ placement by DBE and lap-DBE placed at our tertiary referral institution since June 2012.

**Results** 10 patients (6 [60%] female, median age 40 years [range: 27–43 years]) with chronic gastroparesis underwent DBE or lap-DBE facilitated DPEJ placement. Miniport laparoscopic assistance was only required in patients with a history of abdominal surgery (30% [3/10]) and allowed us to identify and divide any underlying adhesions laparoscopically, facilitating DPEJ placement under direct endoscopic and laparoscopic vision, without the need for an enterotomy or surgical enteropexy. In this series DPEJ placement was successful in all 10 patients: Estimated depth of insertion [mean±SD] 66 ± 12 centimetres post-pylorus and procedure time [mean±SD] 49 ± 114 min. There were no immediate procedure-related complications and no delayed complications, morbidity or mortality at a mean follow-up of 339 days [range: 175–576 days].

**Conclusion** DPEJ placement by DBE is successful and safe. In patients with a history of abdominal surgery and underlying adhesive disease, lap-DBE should be considered, as it may enhance procedure success and safety.

**Disclosure of Interest** None Declared.

**PTU-057 THE “POOR MAN’S CELL-BLOCK” SAMPLE PREPARATION METHOD FOR EUS-FNA OF MEDIASTINAL AND RETROPERITONEAL LESIONS DOES NOT REQUIRE ATTENDING PATHOLOGY STAFF OR CYTOLOGY EXPERTISE**

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**Introduction** We present a novel technique of sample preparation for endoscopic ultrasound (EUS) that is simple, convenient and yields a high diagnostic success rate. EUS-guided fine needle aspirate (FNA) is increasingly used to obtain tissue in the mediastinum and retroperitoneum. Compared with surgical biopsy, EUS is minimally invasive and safe. The procedure, however is not without risk and can occasionally be poorly tolerated. It is therefore imperative that sampled tissue is optimally prepared. Ideally sample preparation should be simple without the need for an attending pathologist, and enable specific diagnosis and prognostics. The novel “poor man’s cell block”<sup>1</sup> (PCMB) technique, recently adopted in our institution for all EUS FNA, fulfils this need.

The PCMB technique allows the entire sample to be processed “as a biopsy”. No slide preparation skills are needed and pathology staff need not be present. Special equipment or centrifugation is unnecessary, and samples can be reported without

specific expertise or training in cytopathology. PCMB enables additional studies such as immunohistochemistry to enable subclassification and risk stratification of some neoplasms.

**Methods** All mediastinal and retroperitoneal histology/cytology reports since starting we started using the PCMB technique (2012–2013) were retrieved from the pathology database.

**Results** 23 mediastinal and 33 retroperitoneal reports were retrieved, of which 18 mediastinal and 27 retroperitoneal samples respectively were prepared with the PCMB technique.

All of the mediastinal PCMB samples (100%) were diagnostic. Neoplasms were accurately subclassified, and several benign samples were corroborated by the presence of non-necrotising granulomas.

63% of retroperitoneal PCMB samples were diagnostic. More specific diagnoses were afforded by the PCMB technique vs cytology (stromal and perineural invasion was seen in many pancreatic PCMB samples, enabling a “definitive” invasive diagnosis). In addition, a spindle cell GIST, and well differentiated endocrine carcinoma were diagnosed and both approximately graded/risk stratified.

**Conclusion** The PCMB technique is a simple, reliable and cost-effective EUS-FNA sample preparation technique that in our hands appears superior to conventional cytology preparations (83% diagnostic rate PCMB vs 57% cytology). We suggest PCMB can be reported by pathologists without cytology training/expertise. PCMB allows more accurate diagnosis with the additional benefit of immunohistochemistry allowing more accurate diagnosis and risk stratification for some neoplasms.

**REFERENCE**

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**PTU-058 MACHINE LEARNING CREATES A SIMPLE ENDOSCOPIC CLASSIFICATION SYSTEM FOR DETECTING DYSPLASIA IN BARRETT’S OESOPHAGUS WITH I-SCAN IMAGING AND OPENS THE WAY TO STANDARDISED TRAINING AND ASSESSMENT OF COMPETENCE**

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**Introduction** Barrett’s oesophagus (BE) is the pre-cursor for oesophageal adenocarcinoma. Endoscopic surveillance is performed to detect dysplasia in BE as it is likely to be amenable to curative treatment. Current surveillance relies on white-light endoscopy to obtain 4-quadrant biopsies through every 2cm of the BE segment. This samples less than 5% of the BE epithelium and is likely to miss dysplasia.

A novel endoscopic image enhancement technology, *i-Scan* (PENTAX HOYA, Japan), has been developed to improve lesion recognition in the gastrointestinal tract (GIT). *i-Scan* uses post-processing light filtering to provide real-time analysis and enhancement of the mucosa and microvasculature.

We evaluated the accuracy of *i-Scan* using a mucosal (M) and vascular (V) classification system for BE amongst 3 expert (consultant) endoscopists. Machine learning (ML) generates simple rules, known as a decision tree, to improve dysplasia detection and validate our classification system. To our knowledge, ML has never been applied for dysplasia detection in the GIT.