**UGI CANCERS – ARE WE LOOKING?**

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**Introduction** Oesophago-gastric (OG) cancers in the UK often present at an advanced stage, and hence reduced chance of curative therapy. A recent meta-analysis involving 3787 patients with OG cancer has shown that 11.3% OG cancers are missed at endoscopy 3 years before diagnosis. Recent guidelines from the BSG recommend that endoscopy units should audit for potential missed pathology in those diagnosed who have undergone an endoscopy in the preceding 3 years.

**Methods** This was a retrospective audit at a regional upper gastrointestinal centre reviewing all cases presenting with OG cancer over a 2 year period between Sept 2015 and Sept 2017. Data was collected from the electronic database, case notes and the GI reporting tool, in all patients to ascertain if an OGD was performed within 3 years prior to diagnosis. This included site of cancer, stage, endoscopist, probable reason for missed pathology and assessment of certain KPI’s pertaining to the endoscopy.

**Results** 105 patients were diagnosed with OG cancers during this period. Median age 74 years; M:F 69:31; Oesophageal 60%; stomach 40%. Twenty-two patients (21%) had an OGD in the 3 years prior to their index (diagnostic) OGD; 11 (10.5%) were deemed ‘not missed’ cancers because there were valid reasons for repeating an endoscopy; and 11 (10.5%) were thought to represent ‘missed’ opportunities of diagnosing cancer in the preceding 3 years. The median time interval between the 1st OGD and index OGD were 20 and 270 days for ‘not-missed’ and ‘missed’ groups respectively. Possible reasons for missed cancers were lack of lesion recognition (5/46%), dual pathology (1/9%), technical limitations of OGD (1/9%) or a combination of factors (4/36%). Adequacy of mucosal visualisation was not photo-documented in 64% of cases. The main reason for early repeat endoscopy in the ‘non-missed’ group was a high index of suspicion of pathology on initial OGD without any histological confirmation.

**Conclusions** A missed cancer rate of 10.5% in a regional upper GI centre is similar to published rates in a recent meta-analysis but does not achieve the minimal standard of <10% set by the BSG. These results were discussed at the EUGM and various measures being undertaken to reduce this include: modifications to optimise visualisation (simethicone pre-procedure), rigorous photo-documentation, dedicated surveillance lists eg. Barretts. This will be re-audited in 3 years.

**Conventional versus Virtual Chromoendoscopy for Colitis Surveillance: Dysplasia Detection, Feasibility and Patient Acceptability (Convince)**

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**Introduction** Chromoendoscopy (CE) is the recommended surveillance technique for dysplasia in colitis, but uptake has been limited. Virtual CE (VCE) by Fujinon Intelligent Colour Enhancement digitally reconstructs mucosal images in real-time, without the technical challenges of CE. The literature provides limited information on patient experience (PE); imperative to adherence to surveillance programmes. We performed a multi-faceted randomised crossover trial to evaluate acceptability of study design and obtain preliminary comparative procedural performance data and PE using CE vs VCE.

**Methods** Patients 18–75 y due surveillance colonoscopy were randomised to undergo CE or VCE first. After 3–8 weeks, participants underwent colonoscopy with the second technique, performed by an endoscopist blinded to the results of the first. Patient recruitment/retention, missed dysplasia by VCE/CE, endoscopist’s prediction of dysplasia and contamination (endoscopists memory/sampling of the 1st procedure) were recorded. PE was assessed by validated questionnaires. This abstract presents independent research funded by the NIHR under its Research for Patient Benefit Programme (PB-PG-0614-34040). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

**Results** 60 patients were recruited (recruitment rate 80%) over an 11 month period. 48 patients completed the trial (retention rate 80%); 23 (11F, 48.4±14.6 y) received VCE and 25 (9 F, 41.4±12.3 y) CE first. Examination time for CE vs VCE was 20±7 vs 14±4 mins respectively (p<0.001; CI 3.5–8). There were no episodes of contamination. 11 dysplastic lesions were detected in 7/48 (14.5%). Per-lesion analysis: VCE missed 1 lesion (miss rate 9.1%), CE missed 2 lesions in 2 patients (miss rate 18.2%). Per-patient analysis: miss rate for dysplasia using VCE was 1/48 (2.1%) VCE and CE 2/48 (4.2%). Diagnostic accuracy for dysplasia using VCE 93.94% (85.2–98.32) vs CE 76.9% (66.9%–98.2%). Visual analogue scale for pain experienced using VCE and CE were 27.4 ±17.5 mm and 34.7±18 mm respectively. Patient preference for VCE was 67% (n=31) vs CE 33% (n=15) in n=46, p<0.001.

**Conclusions** This is the first study to incorporate CE in a colitis surveillance trial and has demonstrated feasibility of the trial design itself. VCE is safe, appears technically less challenging, quicker and more comfortable procedure for patients with dysplasia detection at least as good as CE, thus overcoming many of barriers to the wider adoption of CE. This trial forms the successful foundation to inform a multicenter trial to confirm the value of VCE for colitis surveillance.

**The Outcomes of ERCP for Common Bile Duct Gallstones in England Between 2003 and 2015**

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**Introduction** The BSG ERCP standards suggest duct clearance should be achieved in >85% of ERCPs for common bile duct gallstones. However recent data on ERCP for palliation of malignant biliary obstruction demonstrated significant variation in outcomes between providers related to procedure volume. We have therefore examined outcomes of ERCPs for common bile duct gallstones.

**Methods** Hospital Episode Statistics (HES) include diagnostic and procedural data for all hospital attendances in England. All subjects undergoing their first ERCP with the ICD10 code K80 (cholelithiasis) were included. Subjects with a relevant
cancer diagnosis 2 years before, or after ERCP were excluded. Associations between demographics, co-morbidities and unit ERCP volume were examined by logistic regression analysis. Not needing to undergo repeat ERCP within 90 days was considered a surrogate for successful duct clearance.

**Results**

98,887 subjects were included, 65.5% were female, their median age was 68 (IQR 52–79) and 72.3%, 13.8% and 13.9% had a Charlson co-morbidity score of 0, 1–4 and >4 respectively. Approximately half were elective procedures (50.8%).

86.6% did not require repeat ERCP within 90 days; 12.1% required 1 repeat; and 1.3% required 2 or more repeats. The following factors were associated with not needing a repeat ERCP: Charlson co-morbidity score >4 (OR 0.83 (95% CI: 0.78–0.88), p<0.001), age >81 (0.82 (0.77–0.88), p<0.001), and outpatient procedures (0.80 (0.76–0.84), p<0.001).

Provider volume, (volume knot 1 (1.00 (1.00–1.00), p=0.133), knot 2 (1.00 (1.00–1.00), p=0.523), knot 3 (1.00 (1.00–1.01), p=0.333)), year of procedure and emergency admission type were not associated with needing a repeat ERCP within 90 days.

Needing a repeat ERCP was associated with: Asian ethnicity (1.18 (1.06–1.31), p=0.002), Black ethnicity (1.22 (1.03–1.45), p=0.023), mixed ethnicity (1.51 (1.14–2.01), p=0.005), age quintile 47–62 (1.10 (1.04–1.17), p=0.001), age 63–72 (1.09 (1.03–1.16), p=0.004) and male gender (1.12 (1.02–1.45), p<0.001).

**Conclusions**

The BSG key performance indicator for stone clearance at first ERCP (>85%) appears to be achieved overall, assuming that no repeat ERCP within 3 months is a marker of successful stone clearance. Not needing a repeat ERCP for common bile duct stones was associated with outpatient procedures, very old and co-morbid subjects.

Increased ERCP volume and year of ERCP (2003–2015) did not change the apparent success rate of stone clearance at ERCP.

**PTH-033 SPYGLASS: A FOUR YEAR EXPERIENCE**

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**Introduction**

Diagnostic and therapeutic single operator cholangioscopy (SOC) has increased in importance for stricture assessment and management of choledolithiasis. The technique is often employed under general anaesthesia but can be performed using conscious sedation. The primary aim of this study was assessment of diagnostic accuracy of histology taken for stricture assessment and stone clearance rates during SOC.

**Methods**

A single centre retrospective analysis was performed of consecutive SOCs over 4 years at BRI (tertiary referral centre for South West England and South Wales), including fibreoptic (Spyglass Legacy) and high resolution digital systems (Digital Spyglass). Recorded parameters included sedation/general anaesthetic (GA) dosages, stone clearance, use of electrohydraulic lithotripsy (EHL), histology, complications, final diagnosis and correlation with histology.

**Results**

Between 2013–2017, 164 patients (mean age 65.4 years (range 22–91); 79 females; 85 males) had 206 SOC procedures, referred from 12 hospitals. 15 SOCs were performed in 2013 compared to 64 in 2017. 54% of patients were referred for stricture assessments, 43% for SOC+EHL; 5 patients had assessment of an indeterminate lesion on imaging. 7 patients had SOC under GA. 97% of patients had Charlson Co-morbidity score of 0, 1–4 and >4 respectively. A majority were during emergency admissions (53.5%).

7 day, 30 day and 12 month mortality was 0.8%, 2.3% and 8.0% respectively. 30 day mortality was 3.5% in emergency cases compared to 0.8% in elective. The re-admission rate within 30 days was 11.7%. Repeat ERCP was required within 90 days in 13.9%.

30 day mortality was positively associated with: male gender (OR 1.24 (95% CI: 1.17–1.32), p<0.001), Black ethnicity (1.55 (1.12–2.14), p=0.008), Charlson co-morbidity score 1–4 (1.18 (1.06–1.31), p=0.002), score >4 (3.55 (3.31–3.81), p<0.001), increasing age quintile 47–62 (3.43 (2.65–4.44), p<0.001), age 63–72 (7.01 (5.48–8.97), p<0.001), age 73–81 (11.50 (9.05–14.62), p<0.001) and age >81 (20.31 (16.03–25.74), p<0.001). Factors associated with reduced mortality included: elective rather than emergency admission (0.37 (0.33–0.40), p<0.001), and day case procedures (0.86 (0.74–0.99), p=0.031). Advancing year of procedure 2004/05 (1.01 (0.87–1.18), p=0.859), 2009/10 (0.71 (0.61–0.83), 2014/15 (0.61, 0.53–0.71, p<0.001) was also associated with reduced mortality. Provider volume was not associated with mortality: volume knot 1 (1.00 (1.00–1.00), p=0.445), knot 2 (1.00 (1.00–1.01), p=0.253), knot 3 (0.99 (0.98–1.01), p=0.288).

Conclusions 30 day mortality following ERCP for benign pathology is associated with advancing age, increasing co-morbidity and male gender. Outpatient elective procedures were negatively associated with mortality. Mortality has reduced in recent years, but no variation in mortality was observed based upon provider volume.