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Introduction Squamous Cell Cancer (SCC) of the oesophagus has a poor prognosis with 5-year survival at 10%. Squamous high grade dysplasia (HGD) is the precursor lesion to SCC. Risk of progression to SCC with Squamous HGD can be 65% at 5 years. Radiofrequency ablation (RFA) is a minimally invasive ablation technique with proven efficacy for early neoplasia in Barrett's Oesophagus.

Methods Prospective multicenter registry of patients undergoing RFA for Squamous HGD and early carcinoma in situ (CIS) from eight UK centers. Nodular lesions were removed by endoscopic mucosal resection before RFA. Treatment consisted of a single ablation at 12 J/cm². Patients were followed-up 3 monthly and repeat biopsies taken. Those with residual dysplasia underwent RFA 3 months later until 12 months where they were assessed for treatment success or failure.

Results 25 patients have undergone ablation for squamous HGD/CIS. We report on 17 patients to have completed protocol. Mean length of dysplastic epithelium ablated was 5 cm (1–14). Mean time to protocol completion was 8.7 months. CR-HGD was seen in 59% of patients and CR-D in 47% at end of protocol biopsy with mean of 1.4 RFA treatments (1–3). All those with successful outcomes remain free of dysplasia at most recent biopsy, median follow-up 10.6 months (2–36) from first treatment. At protocol completion, six of 17 patients (35%) had progressed to invasive cancer and referred for surgery or chemo-radiotherapy. Three patients (18%) required dilatations for oesophageal structuring after first treatment. Two of these patients have required serial dilatations thereafter with an average of four dilatations per patient.

Conclusion Squamous HGD and CIS are very aggressive pathologies as evidenced by the fact a third of patients progressed to invasive disease despite RFA. The role of RFA in these patients remains unclear. In our series 47% of patients responded to RFA & have reassuringly remained free of dysplasia at last follow-up. These figures are lower than limited published data to date but in our series an emphasis was placed on restaging carefully after each treatment to assess for progression. As our experience grows with confidence in identifying these lesions more accurately and increasing the frequency and number of ablations administered over the protocol period, dysplasia reversal rates will be expected to increase.

Competing interests None declared.

PWE-028 HALO RADIOFREQUENCY ABLATION FOR HIGH GRADE DYSPLASIA AND EARLY MUCOSAL NEOPLASIA ARISING IN BARRETT'S OESOPHAGUS: INTERIM RESULTS FROM THE UK HALO RADIOFREQUENCY ABLATION REGISTRY

doi:10.1136/gutjnl-2012-302514d.28

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Introduction Barrett's oesophagus (BE) is the pre-cursor to oesophageal adenocarcinoma (OAC). High grade dysplasia (HGD) and early mucosal neoplasia in BE has historically been treated with surgery. Recently there is a shift towards minimally invasive endotherapy with endoscopic mucosal resection (EMR) and Radiofrequency ablation (RFA).

Methods Prospective registry from 14 UK centers to audit RFA outcomes in patients with HGD and early neoplasia in BE. Prior to RFA, any visible lesions were first removed by EMR. Patients then underwent RFA 3 monthly until all visible BE was ablated or cancer developed. Biopsies were taken at the end of this protocol.

Results 216 patients have completed protocol, mean age 68.6 years (40–90), 81% male. Mean time to protocol end 11.3 months (IQR 8–14.3), median 2 ablations and mean of 2.4 (2–6) during protocol with mean 1.4 circumferential ablations and 1.2 focal ablations performed during protocol. Mean length BE segment ablated is 5.8 cm (1–20). CR-HGD was achieved in 83% patients at protocol end biopsy. CR-D was 76% and CR-BE 50% at this point. CR-D was more likely in short segment BE (<5 cm) at protocol end (82% vs 54%, p<0.0001, Fisher's exact test). Patients who required EMR during RFA protocol were less likely to achieve CR-D than those who had RFA alone (52% vs 79%, p=0.002, fishers exact test). 3.7% patients progressed to invasive cancer at protocol end. Complications include one perforation and 1% incidence of superficial tears. 37 patients have at least 12 months or more follow-up after successful completion of protocol (range 12–42), median 16.2 months. Durability in these is excellent with 95% dysplasia free at most recent biopsy.

Conclusion This is the largest series to date of patients undergoing RFA from 14 UK centers. End of protocol CR-D is satisfactory at 76% and successful eradication appears to be durable. Patients with short segment BE are likely to respond better. Our data represent real life outcomes of integrating minimally invasive endotherapy into demanding endoscopy service commitments.

Competing interests None declared.

PWE-029 OBJECTIVE ASSESSMENT OF PHYSICAL ACTIVITY AS A MEASURE OF FUNCTIONAL RECOVERY AND QUALITY OF LIFE FOLLOWING OESOPHAGO-GASTRIC CANCER RESECTION

doi:10.1136/gutjnl-2012-302514d.29

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Introduction Functional recovery following surgery is determined by the interaction between pre-operative performance, post-operative catabolism, nutritional status, and mood. Physical activity (PA) is an important domain of health-related quality-of-life (HRQL), and may be a useful objective index of recovery. We aimed to use an accelerometer-based activity metre (ActivPAL) to monitor post-operative PA in oesophago-gastric (OG) cancer patients undergoing surgery with curative intent.

Methods PA measures, including step count, time spent in various body positions, and energy expenditure of activity, were assessed over 7-day periods in patients undergoing oesophagectomy or gastrectomy (n=16). Nutritional status, HRQL (FAACT, FACIT-F and EORTC-QLQC30 questionnaires), and mood (HADS questionnaire) were also assessed. Time-points were pre-operatively and 1–2 weeks, 5–6 weeks, 3 months and 6 months post-operatively.

Results Compared with pre-operative results, PA measures were decreased by 23–89% (p<0.05) 1–2 weeks post-operatively, and were still decreased by 15–57% (p<0.05) 5–6 weeks