

**Conclusion** We identified a subgroup of patients with hoarseness with objective detection of oesophago-pharyngeal reflux (10/21). (b) the majority of oropharyngeal pH drops detected by Dx-pH do not correlate with retrograde flow (liquid or gas) in the oesophageal body. (c) Detection of pepsin in saliva suggests the likelihood of reflux episodes in the previous 60 min.

**Competing interests** None declared.

**PTU-186 EXOGENOUS NSAID EXPOSURE INCREASES TRANSCRIPTIONAL EXPRESSION OF THE 5-LIPOXYGENASE PATHWAY IN NORMAL SQUAMOUS TISSUE, BUT NOT IN BARRETT'S METAPLASIA: AN EX VIVO STUDY OF OESOPHAGEAL BIOPSY SPECIMENS**

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**Introduction** Barrett's oesophagus (BO) is a premalignant condition for oesophageal adenocarcinoma, an increasingly common malignancy with poor survival. The prostanoids and leukotrienes are lipid inflammatory mediators derived from a common precursor by the cyclooxygenase (COX) and 5-lipoxygenase (5-LO) pathways respectively. Both families have been implicated in oesophageal adenocarcinoma, prompting studies of the effects on disease progression of drugs that modulate these pathways. NSAIDs may prevent tumorigenesis by inhibiting COX, but are also a risk factor for reflux and Barrett's disease. Increased expression of 5-LO pathway proteins is implicated in oesophageal adenocarcinoma, so we hypothesised that in vitro exposure of oesophageal tissue to an NSAID may induce transcriptional expression of genes for 5-LO pathway enzymes.

**Methods** Patients with known BO (n=14) were recruited as they attended endoscopy for routine surveillance. There was no evidence of dysplasia before or after this endoscopy. In each patient, oesophageal biopsies were taken from a single level of BO and from proximal squamous mucosa. Biopsies from each site were cultured for 15 h at 37°C in HEPES-buffered DMEM in the presence or absence of indomethacin (10 µM). Biopsies were then transferred to lysis buffer for quantification of mRNA for 5-LO, FLAP, LTA<sub>4</sub> hydrolase and LTC<sub>4</sub> synthase using quantitative RT-PCR. Transcript levels for each enzyme were calculated as mean ΔΔCt values compared to baseline expression after correction with a calibration sample across all plates.

**Results** Culture with indomethacin (10 µM, 15 h) significantly increased transcriptional expression of 5-LO (p<0.01) and FLAP (p<0.05) in squamous control biopsies, with a trend for increased LTC<sub>4</sub> synthase transcripts (p=0.08) but not LTA<sub>4</sub> hydrolase (p=0.38), suggesting induction of a cysteinyl-leukotriene biosynthetic pathway. Expression of the 5-LO pathway genes was elevated at baseline in Barrett's tissues and in vitro exposure to indomethacin did not produce further changes in this group (all p>0.2).

**Conclusion** These results indicate that indomethacin increases transcriptional expression of the proximal, rate-limiting enzymes of the 5-LO pathway in squamous oesophageal tissues, which may lead to increased enzyme activity and production of tumorigenic leukotrienes. This preliminary study suggests that brief NSAID exposure in vitro may mimic changes in the expression of 5-LO pathway genes induced in vivo in Barrett's metaplasia.

**Competing interests** None declared.

**PTU-187 LONG-TERM QUALITY OF LIFE AFTER OESOPHAGECTOMY FOR CANCER: COMPARISON OF CERVICAL VS MEDIASTINAL ANASTOMOSES**

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**Introduction** With improvements in neoadjuvant therapy and earlier diagnosis, long-term survival after oesophagectomy for adenocarcinoma is becoming more frequent. With longer survival the quality of life (QOL) of patients post resection has become a greater priority. There has been extensive debate focusing on the long term effects of different sites for anastomosis. We aimed to examine if post-oesophagectomy QOL is affected by the site of the surgical anastomosis.

**Methods** QORTC C-30 and OG-25 QOL questionnaires were analysed from post-oesophagectomy patients surviving >3 years. Data were available both from a prospective database and questionnaires sent to post-oesophagectomy patients. Surgery was completed by two surgical teams and data were analysed in subsets dependant on the site of oesophago-gastric anastomosis—either thoracic or cervical. No patients underwent formal pyloroplasty. Data were analysed using the Student t test on SPSS statistical software. QORTC C-30 data were compared against the reference tables for oesophageal cancer pre-treatment and a cohort of pre-surgical patients awaiting oesophagectomy. Ethical approval was granted by the local MREC.

**Results** A total of 60 patients responded (82%, anastomosis: thoracic n=29, cervical n=31) with a median time post-surgery of 6.1 years (range 3–12 years). Cervical and thoracic anastomosis subgroups were equivalent in terms of age at time of surgery, time post op and cancer stage. No significant QOL difference was noted between cervical or chest anastomosis groups for any functional or symptom score, especially focusing on dysphagia (OG25, p=0.24), odynophagia (OG 25, p=0.68) and swallowing problems (OG25, p=0.73). The patients' overall general health (QL2) score was 72.0±19.43 (mean±SD) compared with 74.8±20.57 for a cohort of 53 NNUH pre-op oesophagectomy patients and 71.2±22.4 for the QORTC general population reference data. Functional indices and symptom scores are improved for our cohort compared to the QORTC oesophageal cancer reference baseline except symptom scores for diarrhoea and dyspnoea which worsen post-operatively.

**Conclusion** There is no significant difference in QOL scores between oesophagectomy patients with cervical or thoracic anastomosis at >3 years post-surgery when analysed using the QORTC C-30 and OG25 questionnaires. QOL in long-term survivors after oesophagectomy compares favourably with QORTC reference data for both pre-treatment oesophageal cancer and baseline general population data in our cohort, possibly due to the absence of pyloroplasty. Further prospective QOL data collection is required to elucidate any long-term differences between the two anastomosis sites.

**Competing interests** None declared.

**PTU-188 "KNITTED" OESOPHAGEAL STENTS: SUPERIOR CONFORMABILITY WITH NO TRADE OFF**

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**Introduction** Knitted enteral stents have reduced stent shortening and no axial straightening forces, resulting in better conformability