Methods Female mice (C57 strain) were divided into three groups of 5: ovariectomised (OVX), OVX with oestrogen replacement (OVX + E) (50 µg oestradiol per day dorsal implants) and intact females. 1.5 mm buccal ulcers were induced using a punching biopsy and treated with 1 M hydrochloric acid. Wounds were harvested at day 4. Wound planimetry and immunohistochemistry for macrophages and neutrophils were compared in a blinded fashion.

Results Results: Re-epithelialisation was greatest in the intact group (mean 0.33 mm ± 0.22) compared to the OVX (0.51 mm ± 0.13) or OVX+E (0.79 mm ± 0.12) groups. The difference between intact and OVX groups was statistically significant (p = 0.04). Neutrophil wound infiltration (cells/wound area) was greater in the OVX group (1842 ± 75) than the intact group (1279 ± 169, p = 0.02) and the intact group (1026 ± 91, p = 0.01).

Conclusion Lack of systemic oestrogen delays mucosal healing in buccal wounds. This may explain gender differences in the oesophageal epithelial response to gastro-oesophageal reflux injury.

Competing interests None declared.

PTU-173 NEUROEPITHELIAL CELL TRANSFORMING GENE 1 IN ADENOCARCINOMA OF THE OESOPHAGO-GASTRIC JUNCTION: EXPRESSION, BIOLOGY AND PROGNOSTIC SIGNIFICANCE IN A LARGE WELL CHARACTERISED COHORT

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Introduction Neuroepithelial Transforming Gene 1 (NET1) is a protein involved in tumour invasion and metastasis and is associated with poor prognosis in a number of human cancers. We aimed to determine NET1 expression status and its prognostic significance in a large, well characterised cohort of patients with oesophageal cancer and cancer of the oesophago-gastric junction.

Methods NET1 expression was measured by immunohistochemistry in a 210 patient tissue micro-array (TMA). The TMA was constructed from bio-banked tissue using a comprehensive and prospectively maintained clinical database which includes demographic, clinical, histopathological and survival data on all patients.

Results Of 210 patients in the original cohort, 89 had a post-operative diagnosis of oesophageal adenocarcinoma and did not receive neoadjuvant chemotherapy or radiotherapy. Five patients had oesophageal adenocarcinoma, 81 had cancer of the oesophago-gastric junction and three had gastric adenocarcinoma. Of the 89 patients 51% were NET1 positive. NET1 staining was variable across tumour subtypes. Using the Siewert classification for OGJ tumours, significantly more type I tumours were NET1 positive (p = 0.008) and there was significantly more Barrett’s in the NET1 positive group (59% vs 30%, p = 0.009). Median disease specific survival for the overall group was 37 months for NET1 negative patients compared with 23 months for NET1 positive. In patients with gastric and OGJ type III tumours, NET1 positivity was associated with worse median survival (23 vs 15 months, p = 0.02). Within this subgroup (n=31), NET1 positive patients were more likely to be female (p = 0.04), had advanced stage cancer (p = 0.05), had a higher number of transmural cancers (p = 0.006) and a significantly higher median number of positive lymph nodes (p = 0.05).

Conclusion There is growing recognition of the heterogeneity of the different subtypes of OGJ tumours. While existing data shows differences in clinical and prognostic indices in these patients, there are no studies showing differences in tumour biology between OGJ sub-types. Our data suggests NET1, a known mediator of an aggressive tumour phenotype in numerous human cancers, is differentially expressed across OGJ sub-types and may be of prognostic significance in the clinical management of this disease.

Competing interests None declared.