Hypomagnesaemia is a rare and potentially serious complication of PPI therapy. About 30 cases of severe hypomagnesaemia have been reported in long term PPI users.

Methods We describe two cases recently admitted to our hospital with symptomatic hypomagnesaemia and a history of long term PPI usage.

Results Patient 1 — A 54-year-old female was admitted with nausea, vomiting and abdominal discomfort for few months. Patient was on lansoprazole for more than a year. On admission, magnesium level was 0.42 mmol/l. Patient was treated with magnesium supplements and was sent home with increased dose of lansoprazole. Over the next few weeks, magnesium level dropped to 0.4 mmol/l in spite of supplementation. On stopping PPI, magnesium returned to normal levels in 4 weeks time. Patient 2 — A 75-year-old female was admitted with vomiting and lethargy. Patient was on PPI for more than 18 years. Magnesium level was 0.15 mmol/l and calcium 1.62 mmol/l. Patient was treated with intravenous supplements and discharged on oral magnesium. Within 2 months, patient was readmitted with similar complaints and magnesium level was again noted to be 0.13 mmol/l. OGD and CT abdomen were normal. Urinary magnesium levels were normal. Magnesium levels did not normalise in spite of supplementation. Omeprazole was stopped and magnesium started improving over the next 4 weeks.

Conclusion Hypomagnesaemia is a under recognised complication of long term PPI therapy, which responds rapidly on stopping PPI. In few of the reported cases, a causal relationship with PPI use has been established by recurrence of hypomagnesaemia after rechallenge. The cause of hypomagnesaemia is poorly understood. Mutation of TRPM 6/7 gene which is involved in the active transcellular pathway of intestinal absorption of magnesium is one of the postulated mechanisms. Monitoring magnesium levels in patients on long term PPI should be considered. This rare complication might not even be so uncommon as more people become aware of the association.

Competing interests None declared.

REFERENCES
3. FDA Drug Safety Communication. Low Magnesium Levels can be Associated with Long-Term use of Proton Pump Inhibitor drugs (PPIs).

CHALLENGES THE ROUTINE USE OF WSCS FOLLOWING OESOPHAGECTOMY

Introduction Water-soluble contrast swallow (WSCS) is performed following oesophagectomy to assess anastomotic integrity before commencing oral intake. This study, the largest in the UK to date, challenges the routine use of WSCS following oesophagectomy.

Methods All patients undergoing open transthoracic oesophagectomy for oesophageal cancer with intrathoracic anastomosis, within a supra-regional upper GI cancer centre, were registered on a prospective database between 2006 and 2011. WSCS results, anastomotic leak rate and the modality of leak detection were analysed.

Results During the study period, 116 oesophagectomies were performed. WSCS was undertaken in 97 (84%) cases on a median of day 5 (range 3–8) post-operatively; 95 (98%) WSCS reported no evidence of a leak, two studies reported a leak and one study was equivocal. WSCS was not performed in 19 (16%) cases; 10 patients developed early clinical signs suggestive of an anastomotic leak and were immediately imaged by CT, eight had a prolonged ITU stay due to cardiorespiratory complications while one patient died perioperatively. There were 6 (5%) anastomotic leaks of which three patients had immediate CT due to clinical deterioration while three patients had routine WSCS. WSCS was followed by CT in two patients due to a positive or equivocal finding. One patient had no WSCS evidence of a leak but then developed sepsis and CT confirmed a leak. Clinical signs suggestive of a leak were evident in all patients within 7 days post-operatively.

Conclusion Routine WSCS has limited value in the detection of anastomotic leak following oesophagectomy. All patients with an anastomotic leak developed significant clinical signs of a leak that were subsequently confirmed by CT imaging. WSCS altered the management in just 2% of cases.

Competing interests None declared.
PWE-042THE RELEVANCE OF THE SIEWERT CLASSIFICATION IN THE ERA OF MULTIMODAL THERAPY FOR ADENOCARCINOMA OF THE GASTRO-OESOPHAGEAL JUNCTION
doi:10.1136/gutjnl-2012-302514d.42

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Introduction Since the early 1980s the Siewert classification has been used to plan treatment for tumours of the gastro-oesophageal junction. However, the relationship between tumour site and survival has not been conclusively demonstrated, with conflicting outcomes in the largest series, before the widespread application of neoadjuvant chemotherapy. The aim of this study was to evaluate whether there were differences in the biology and clinical characteristics of adenocarcinomas by Siewert type, in a contemporary cohort of patients, in whom the majority had received neoadjuvant chemotherapy. The relationship of the surgical approach and tumour site with patient survival was also assessed.

Methods A prospective database was reviewed for all patients who underwent resection for adenocarcinoma of the distal oesophagus and gastro-oesophageal junction from 2005 to 2011. In our unit, based on pre-operative assessment, distal oesophageal, type I and II tumours are treated as oesophageal cancer, with transthoracic procedures. Type III tumours are treated as gastric cancer with an abdominal approach. Classification systems used for analysis included TNM 7 for staging, Clavien-Dindo for grading complications and Siewert with final tumour site determined from the pathological specimen. Survival was estimated by Kaplan–Meier analysis excluding inpatient deaths (n=4) and R1 resections (n=42).

Results 216 patients underwent oesophago-gastric resection: 133 for type I, 51 for type II and 33 for type III tumours. Median follow-up was 2.94 years. 62.5% of patients received neoadjuvant chemotherapy with no difference between groups. There were no significant differences in age, sex, pT stage, pN stage, pM stage, ASA, or inpatient complications between patients with adenocarcinoma based on their Siewert classification. Type I tumours were significantly associated with coexisting Barrett’s metaplasia (presence of Barrett’s: Type I 58.3%, Type II 21.6%, Type III 9.1%; pType II > Type I). Median overall survival was significantly shorter for more distal tumours (Type I: 4.96 years vs Type II: 3.3 years vs Type III: 2.64 years; p=0.04). The surgical approach did not influence survival for all tumour types and had no impact on the rate or severity of complications.

Conclusion This study demonstrates significant differences in the biological characteristics of adenocarcinomas of the gastro-oesophageal junction based on their anatomical topographical sub-classification. In the era of multimodal therapy overall survival is worse for tumours arising at or below the gastro-oesophageal junction compared with oesophageal tumours.

Competing interests None declared.