Accuracy of Endoscopic Ultrasound Staging of Oesophageal Adenocarcinoma (OAC)

Aims

Endoscopic Ultrasound (EUS) plays an important role in the accurate staging of oesophageal adenocarcinoma (OAC) prior to neo-adjuvant chemotherapy (NAC) and surgical resection. However, discrepancy can occur between the EUS and pathological tumour (T) and lymph node (LN) staging. We sought to determine the accuracy of EUS staging and whether it correlated to a patient’s response to NAC.

Methods

Clinical and pathological staging data was collected for 172 patients treated with cisplatin-based NAC followed by surgical resection at a single institution between 2004 and 2012. Tumour (T) and lymph node (N) stage was assessed at diagnosis radiologically (computed tomography, positron emission tomography, endoscopic ultrasonography) and then pathologically at resection. EUS was performed on 160 (93%) of resectable OAC patients and reports for 127 cases (73.8%) were obtained for inclusion in this study. All resection specimens were staged according to the TNM 7th edition classification and pathological response assessed according to the Mandard Tumour Regression Grade (TRG).

Results

Following neo-adjuvant chemotherapy and surgical resection T stage was decreased in 34 (26.8%), remained the same in 83 (65.4%) and increased in 10 (7.9%) of patients. LN stage was available for 111 cases (64.5%) and decreased, stayed the same and increased in 28 (25.2%), 40 (36.0%) and 43 (38.7%) patients respectively. Of those cases with an increase in LN stage following chemotherapy, 14 (32.6%) showed an increase in LN stage of 1 and 29 (67.4%) an increase of 2 TNM classes. A high Mandard TRG was significantly associated with an increase in N stage following neo-adjuvant chemotherapy (p<0.001).

Conclusions

Pre-operative staging by EUS tends to understage lymph node disease in OAC. This effect may be partially corrected for by response to NAC but those tumours with a high TRG are associated with an increase in the LN stage between EUS and resection.