Isolated axillary lymph node metastasis in oesophageal adenocarcinoma

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INTRODUCTION

The incidence of oesophageal adenocarcinoma is on the rise in the Western world. Prognosis of patients diagnosed with oesophageal adenocarcinoma is poor and studies have reported 5-year survival rates ranging between 20 and 36% [1]. Early diagnosis through endoscopic surveillance programmes of patients at high risk and surgical resection with lymphadenectomy remains the mainstay of patient management. The presence of nodal disease is recognized as an important prognostic factor; patients with lymph node metastases have poorer (18-47%) 5-year survival rates following surgical resection compared with those without nodal involvement (50-70%) [2].

CASE PRESENTATION

A 51-year old woman initially presented to the Gastroenterology Clinic with a 4-month history of progressive dysphagia, leading to an absolute dysphagia of liquids and solids and an associated loss of nearly 30 kg in weight. She underwent a gastroscopy, which revealed a tumour 2 cm above the gastro-oesophageal junction and involving the gastric cardia. It was biopsied, and histology confirmed a moderately differentiated adenocarcinoma. Staging showed no evidence of metastatic disease and she was referred to the thoracic surgery team for surgical resection.

In just under 3 weeks from diagnosis, she underwent a left thoracolaparotomy and oesophagectomy. Histology showed a T4 N0 moderately differentiated adenocarcinoma that was 29 mm wide, circumferential and ulcerated. The tumour penetrated the gastric serosa and invaded the pleura of an attached wedge of the lung. There was perineural, but no vascular invasion. All 16 lymph nodes (periesophageal, mediastinal with left gastric lymph nodes and those along the lesser curve of the stomach), including a further pulmonary node in the specimen, were negative. Her postoperative recovery was uneventful, except for a routine oesophagoscopy and dilatation for a benign stricture 12 months following surgery.

Four months after her first-year follow-up, she was re-referred earlier to the Thoracic Surgery clinic by her general practitioner after a nurse had palpated a right axillary mass at a screening mammography. Fine-needle aspiration was performed revealing metastatic adenocarcinoma cells, mucoid material, adipose tissue and scanty lymphoid cells. After a repeat staging computed tomography (CT) that demonstrated no sign of tumour recurrence or other metastases, she underwent another oesophageal dilatation and excision of the right axillary mass. The specimen contained a fatty nodule measuring 27 mm at widest, with a pale, firm cut surface. Histological section showed skeletal muscle infiltrated by a mucin-secreting, moderately differentiated adenocarcinoma that was marginally excised with the tumour present at the resection margin at least at one point.

Two months after her axillary surgery, the patient noted an increasing nodularity under the scar in her right axilla. The clinical significance of this was uncertain, and the multidisciplinary team decided to refer her to the oncology team for postoperative radiotherapy due to incomplete excision of the tumour. She received a course of 30 Gy in 10 fractions over 2 weeks that was completed nearly 4 months after axillary surgery and 21 months following oesophagectomy. At completion of radiotherapy, she had an easily palpable mass in the posterior fold of the right axilla. At this stage, the patient opted to defer treatment until symptomatic progression.

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DISCUSSION

The thoracic duct terminates in the confluence of the left internal jugular and subclavian veins. The lymphatic drainage of the right arm and axilla is to the right lymph trunk that drains into the right brachiocephalic vein. This means that even if lymphatic spread could occur from oesophagus to the axilla, it would be to the left and not the right axilla. Therefore, although regional lymph node metastasis can occur via lymphatics within the oesophagus or along the thoracic duct [3, 4], the anatomical site of metastasis to the right axilla makes lymphatic spread unlikely and blood-borne spread more probable.

Axillary lymph node spread of oesophageal cancers is rare, with a reported rate of 1% in a Japanese study involving 361 patients diagnosed with squamous cell carcinomas of the oesophagus. This group of patients were diagnosed with Stage IVB carcinoma located in the upper two-thirds of the oesophagus. All patients developed left axillary lymph node metastases, which were treated with combined lymphadenectomy and chemotherapy. The longest overall survival period was reported as 89 months following primary treatment for oesophageal cancer [5]. Additionally, some studies suggest that in more than 95% of cases, metastatic oesophageal adenocarcinoma would first develop in the regional lymph nodes around the lower mediastinum around the anatomical site of the primary tumour, lesser gastric curvature and left gastric artery [4].

While resection of blood-borne metastases (e.g. to lung, liver) if isolated can be considered in other tumours (e.g. colorectal cancer or sarcoma), the generally poor prognosis of oesophageal cancer means that such metastases are rarely considered for resection.

Nevertheless, in our case report, the patient had no evidence of nodal involvement at CT staging and following two-field lymphadenectomy. She underwent repeated endoscopic biopsies at the oesophageal anastomosis that demonstrated no evidence of local recurrence, as well as repeat staging CTs, which showed no indication of metastatic spread or occult malignancies elsewhere. While it is possible that the axillary metastasis to the right side was in the subcutaneous tissue, the presence of lymphoid cells observed during fine-needle aspiration performed makes it more likely that the original axillary metastasis involved a lymph node. Isolated metastasis of oesophageal adenocarcinoma to her axilla without involvement of previous regional nodes was unexpected.

Oesophageal adenocarcinoma with metastatic spread to the axilla is a rare occurrence and is not usually considered for aggressive treatment. Our report of a combination of surgical resection and radiotherapy for isolated axillary recurrence has resulted in long-term disease-free survival, and should be considered as an option for patients in a similar situation.

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REFERENCES