CASE REPORT

Carcinoma of the oesophagus, with multiple cutaneous metastases

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SUMMARY

A 42-year-old woman was referred, for adjuvant treatment, by an oncosurgeon (outside our centre) after a transhiatal oesophagectomy and gastric pull-up for middle one-third squamous cell carcinoma of the oesophagus pT3N1M0. She underwent adjuvant chemoradiotherapy (CRT) to the tumour bed, regional nodes and scar. RT dose planned was 45 Gy in 25 fractions over 5 weeks. During the second week of RT, a painful nodule was observed over the lower back and cytology was positive for squamous cell carcinoma. Hypofractionated radiotherapy (RT) was planned for this skin nodule as 30 Gy in 10 fractions over 2 weeks using electron beams for pain palliation. Two months later, another nodule developed at the surgical scar on the anterior abdominal wall along with lung and liver metastases. This nodule was also given palliative RT. The patient tolerated the treatment well and had partial pain relief, and, in view of poor prognosis, was advised best supportive care.

BACKGROUND

Cutaneous metastasis from carcinoma of the oesophagus is rare, constituting only 1% of sites of distant metastases, with the liver and lungs being the most common.^{1 2} The presence of cutaneous metastases denotes an aggressive disease. The route of spread to skin may be haematogenous, lymphatic or direct. In postoperative cases, tumour handling is a potential factor for eventual distant metastasis. This is an interesting case of locoregionally controlled postoperative carcinoma of the oesophagus in which sequential distant spread to skin over the back, scar, lungs and liver was observed. Delay in systemic treatment due to upfront surgery instead of neoadjuvant chemoradiotherapy (NACRT) and tumour handling during surgery perhaps led to systemic metastasis and scar recurrence.

CASE PRESENTATION

A 42-year-old non-diabetic, non-hypertensive woman, a non-smoker, was referred for adjuvant treatment after transhiatal oesophagectomy and gastric pull-up. The patient was staged clinically as T3N0M0 middle one-third squamous cell carcinoma of the oesophagus based on contrast-enhanced CT (CECT), abdominal ultrasonography, upper gastrointestinal endoscopy and biopsy, and operated at a clinic outside our institution 1 week after diagnosis. As she was operated before reporting to us, we could not offer her preoperative CRT. Postoperatively, she was staged as pT3N2M0. Margins were negative and all the four nodes

removed were positive. At presentation in radiotherapy (RT) outpatient department, the scar had healed and no abnormality was detected on clinical or radiological examination. The patient was planned for adjuvant CRT in view of the heavy nodal burden; this was started 8 weeks after surgery. During the second week of RT, the patient developed a painful nodule over her lower back (figure 1); the nodule was about 2×2 cm in size, firm, non-tender and fixed to the skin but not to the underlying structures. After 2 months of the appearance of this nodule, another subcutaneous nodule about 4×4 cm in size, also firm, non-tender and fixed to the skin but not to underlying structures, appeared at the site of the surgical scar over the anterior abdomen (figure 2).

INVESTIGATIONS

The patient was advised complete haematological investigations, liver function test, renal function test, chest X-ray and ultrasound of the abdomen, and was planned for adjuvant CRT. However, as and when the subcutaneous nodules over the back and surgical scar developed, cytology from the nodules and CECT of the thorax and abdomen were advised. Cytological examination confirmed squamous cell carcinoma at both sites (figure 3), and CECT showed lung and liver metastases

Figure 1 Subcutaneous nodule over the lower back.

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Figure 2 Nodular scar recurrence on the anterior abdominal wall with marked radiation portals.

besides subcutaneous metastases, however, locoregionally, the disease was controlled.

TREATMENT

For adjuvant treatment, the patient was given concurrent CT (5 fluorouracil (FU) and cisplatin) and RT (45 Gy/25 fractions per 5 weeks) to the tumour bed, nodal clinical target volume with margins and scar which was started 8 weeks after surgery. For painful subcutaneous metastases at distant and scar site, palliative treatment was given by hypofractionated RT. The palliative RT dose was 30 Gy/10 fractions with 12 MeV electrons.

OUTCOME AND FOLLOW-UP

Treatment was tolerated well by the patient. The nodules decreased and the patient had partial pain relief. In view of poor prognosis, she was advised symptomatic treatment and home care.

DISCUSSION

Carcinoma of the oesophagus is the ninth most common malignancy and ranks sixth among the most common causes of cancer-related deaths in the world.³ Patients with oesophageal cancer often present with locally advanced disease and have metastatic presentation at the time of initial diagnosis. Extranodal metastases are seen in 20% of cases, and liver and lungs are the most common sites.² Cutaneous metastases from the oesophagus are rarely reported, as skin metastasis from oesophageal cancer affects <1% of cases.¹ In a review of 420 cases of cutaneous metastases by Lookingbill *et al*,⁴ primary was present in the oesophagus in only three cases. Another case was reported by Fereidooni *et al*.⁵

Cutaneous metastasis from carcinoma of the oesophagus is most commonly reported in males in their sixth and seventh decades.^{6,7} Such presentation in a 41-year-old woman shortly after surgery is perhaps due to tumour handling during surgery or delayed systemic treatment leading to scar recurrence and distant metastasis.

Cutaneous metastases may originate from squamous cell carcinoma as well as from adenocarcinoma, however, metastases with adenocarcinoma are more common.⁸

Metastatic spread to the skin occurs either haematogenously or via the lymphatic system, and may present with papules, erythema or indurated plaques, but subcutaneous nodules are the most common form, as in the present case.^{4,9} Any location in the body may be affected, but the chest and abdomen are the most common sites.⁴

A complete history, careful physical examination and radiographic studies (CT scans, bone scans, positron emission tomography) are essential in the assessment of local as well as distant metastases.

The role of postoperative RT alone in squamous cell carcinoma of the oesophagus is limited. Usually, 45–50 Gy with concurrent chemotherapy is offered to margin positive or incompletely resected cases. Cutaneous lesions may be dealt with using electron therapy; combination CT with cisplatin and

Figure 3 Fine-needle aspiration cytology smears of nodules over the lower back and anterior abdominal wall scar, showing small clusters and singly scattered atypical squamous cells on a necrotic background. The atypical squamous cells have moderate amounts of eosinophilic cytoplasm and hyperchromatic nuclei with irregular nuclear membranes.

5-FU currently represents one of the most effective regimens for advanced oesophageal cancer.

Metastatic oesophageal carcinoma has a poor prognosis, with overall survival varying from 4.3 to 4.7 months in cutaneous metastases.¹⁰ Survival differences according to histology of cutaneous metastatic oesophageal carcinoma has not been investigated due to a paucity of cases.

A multidisciplinary team should contribute to the decision-making in carcinoma of the oesophagus, and consideration should be given to NACRT followed by surgery instead of upfront surgery, as shown by the CROSS trial, where overall survival was significantly improved.¹¹ Similarly, Bass *et al*¹² concluded that NACRT with adjuvant surgery had a significantly complete pathological response and survival advantage over surgery alone, in both, squamous cell and adenocarcinoma of the oesophagus. In the present case, we were not able to offer the patient NACRT, as upfront surgery had already been performed outside the institution before she reported to us. This might have been the cause of early systemic failure in our case. Shapiro and Joel *et al* observed that after NACRT, residual oesophageal cancer frequently involves mucosa and submucosa, whereas surrounding stroma and regional lymph nodes had highest pathological complete response. This regression pattern supports a wait and see approach after NACRT.¹³ A study by Oppedijk *et al*¹⁴ revealed that NACRT followed by surgery sig-

nificantly reduced haematogenous dissemination and locoregional recurrence when compared to surgery alone.

Contributors RK and HM were responsible for clinical examination, treatment planning and response assessment and preparation of the manuscript. KPM and SS participated in pathological diagnosis and imaging.

Competing interests None declared.

Patient consent Obtained.

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Learning points

- Cutaneous metastasis is a rare presentation of carcinoma of the oesophagus.
- Tumour handling during surgery can harbour potential viable tumour cells, which can be a source for scar recurrence and distant metastases.
- Multidisciplinary decision-making and consideration of neoadjuvant chemoradiotherapy followed by surgery instead of upfront surgery in appropriate cases of carcinoma of the oesophagus should be considered.

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