Case Report

Chest Wall Metastasis of Squamous Cell Carcinoma of Larynx

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ABSTRACT

Distant metastases in squamous cell carcinoma of head and neck are most often to the lung, liver and bone. They rarely metastasise to chest wall. We report a 60-year-old male patient who initially presented with an abscess over the anterior chest wall that was initially treated for infective pathology. Due to lack of response, cytological examination was performed that turned out to be metastasis from carcinoma larynx. **[Indian J Chest Dis Allied Sci 2011;53:113-115]**

Key words: Squamous cell carcinoma, Metastasis, Carcinoma larynx.

INTRODUCTION

Squamous cell carcinoma of head and neck accounts for 6% to 10% of all human malignancies. Larynx and oropharynx are the most common sites. Early laryngeal carcinomas respond well to single-modality treatment, though the disease may at times progress aggressively despite maximal treatment. Squamous cell carcinoma of head and neck has a predilection to involve the cervical lymph node and distant haematogenous spread is less frequent. With improved methods of local and regional control, the reported incidence of distant metastases has increased. It is reported as 3% to 8%, but post-mortem studies figures range between 34% and 57%.[2-6] The lung is the most common site involved, followed by mediastinum, bone, central nervous system and other organs.[2,3] Unusual metastatic sites such as skin, percutaneous gastrostomy site, small intestines, spleen and scapular muscles have also been reported.[7]

To the best of our knowledge, metastases of head and neck carcinoma to chest wall has not been reported so far. We report a case of squamous cell carcinoma larynx metastasising to the chest wall without involving the lung that initially presented as an abscess.

CASE REPORT

A 60-year-old male, chronic smoker with a 20 pack-year history of smoking presented to Out-patient Department in April 2009 with a gradually progressive swelling over the chest wall on the right side since four months. It was associated with pain and fever. There was also a history of breathlessness, decreased appetite and weight loss since the last three months. He was thinly-built and emaciated. On examination, the swelling was 9cm x 10cm in size, warm and tender with congestion of the overlying skin suggestive of an infective abscess (Figure 1). The chest radiograph showed a homogeneous opacity with irregular borders in the right lower zone of the lung involving the soft tissues anteriorly and

Figure 1. Photograph of the patient showing swelling over the chest wall with overlying skin congested.

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blunting the costophrenic angle (Figure 2). Initially he was treated with antibiotics considering an infective pathology. However, the swelling gradually increased in size. On aspiration, 30mL of thick pus was aspirated. The pus was sterile on culture for pyogenic bacteria and negative for acid-fast bacilli by direct smear.

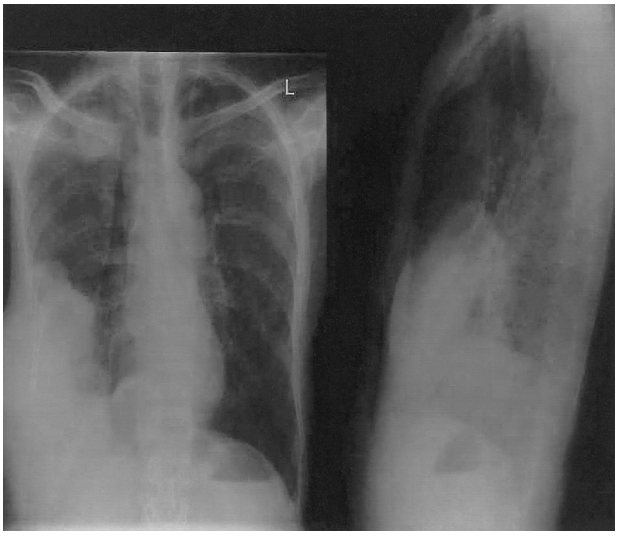

Figure 2. Chest radiograph (postero-anterior and right lateral views) showing homogeneous opacity in the right lower zone of lung with involvement of soft tissue.

Fine needle aspiration cytology smear from the swelling revealed metastasis from squamous cell carcinoma (Figure 3). All the baseline investigations including the complete haemogram, liver function tests, and renal function tests were within normal limits. Ultrasound of abdomen revealed multiple irregular hyperechoic lesions surrounded by a halo, the largest of size 56mm x 56mm showing flow on colour Doppler in the left lobe of liver suggestive of metastasis.

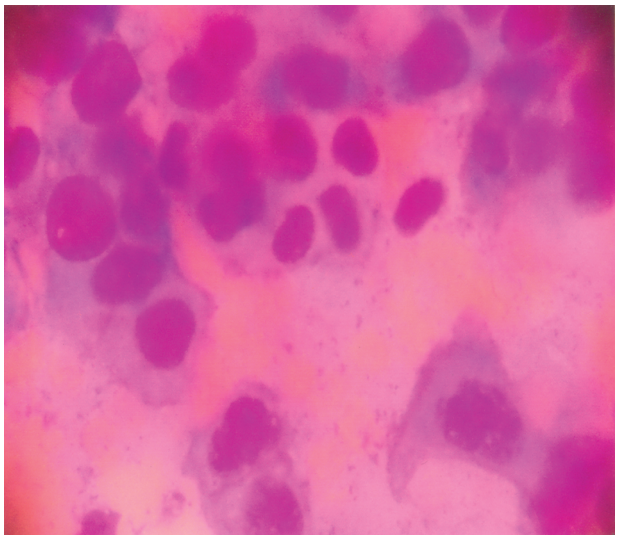

Figure 3. Fine needle aspiration cytology smear from the swelling revealing metastasis from squamous cell carcinoma.

Contrast enhanced computed tomogram (CECT) of thorax and abdomen was performed that showed a heterogeneously enhancing cavitating mass lesion involving the right chest wall with involvement of underlying ribs (Figure 4). However, the lung fields revealed no focal lesion. Lymph nodes were enlarged in the pre-tracheal and pre-carinal region. There was also a heterogeneously enhancing mass in the pre-vertebral and right para-vertebral region suggestive of a lymph node mass. The mass was seen to involve the liver anteriorly and laterally suggestive of metastasis. Magnetic resonance imaging of the thorax confirmed the findings of CECT showing metastasis to ribs, pleura and liver (Figure 5).

Figure 4. Contrast enhanced computed tomogram of thorax showing heterogeneously enhancing cavitating mass lesion involving the right chest wall with involvement of underlying ribs.

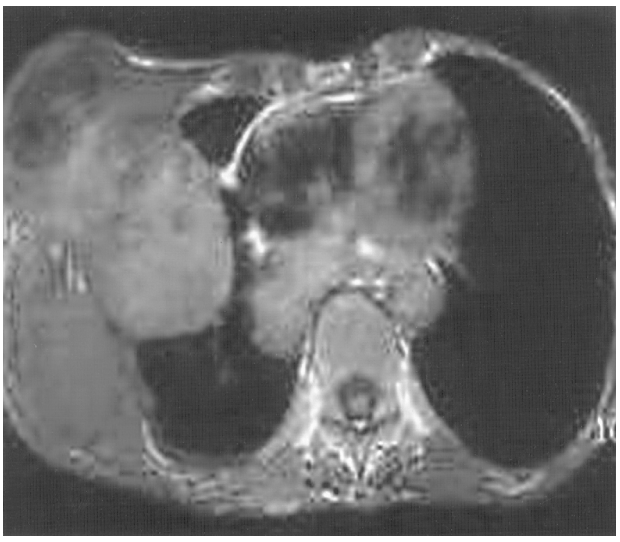

Figure 5. Magnetic resonance imaging of thorax confirming the findings of CECT and showing metastasis to ribs, pleura and liver.

On detailed history, the patient was found to be a biopsy proven case of moderately differentiated squamous cell carcinoma larynx diagnosed four years ago. He had taken neoadjuvant chemotherapy in the form of four cycles of carboplatin and 5-fluorouracil at three weekly intervals followed by 64 grey external radiotherapy in 32 fractions. He tolerated the chemo-radiotherapy well and was advised regular follow-up. He was disease-free for about three-and-half years. There was no sign of recurrence at the local or nodal site.

DISCUSSION

In squamous cell carcinoma of head and neck, distant metastasis generally occurs after regional metastasis and advanced nodal disease increases the incidence by three-fold.[3] There is no known factor to predict metastasis, but host defence and tumour biology may play a role. The explanation to unusual sites of metastasis, such as the chest wall, is even less clear. The disturbance of lymphatic drainage due to surgery and radiation may result in alternative pathways of drainage. This phenomenon can result in lymphatic metastasis of cancer to sites below the clavicle.[8] Another possible explanation is the hematogenous spread of tumour.[7] The most common sites of distant metastases in head and neck cancers are usually lung (70%-75%), liver (17%-38%) and bone (23%-44%).[9]

This case is unique because of its presentation as an abscess over the anterior chest wall as a result of late metastasis without involvement of the lung parenchyma and without local recurrence.

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