

Unusual Site of Metastasis of Bronchogenic Carcinoma

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INTRODUCTION

Bronchogenic carcinoma may be clinically dormant in many cases until the involvement of pleura or erosion of bone occurs. However, focal chest wall swelling with axillary lymph node as an initial presenting of symptoms of bronchogenic carcinoma is quite rare. It often poses diagnostic challenges as it has to be differentiated from numerous other but equally less common conditions.¹ Contralateral axillary lymph node and chest wall involvement without ipsilateral nodal involvement in bronchogenic carcinoma as documented in our case is quite rare and the possible hypothesis for such a presentation and their implications on treatment and prognosis are discussed.

CASE REPORT

A 58 year old man, presented to our hospital with complaints of progressive breathlessness and swelling in the left chest and axilla. He first noticed a painless swelling three months back which had gradually increased in size. The patient also gave a history of cough with streaky hemoptysis.

ABSTRACT

Metastasis of bronchogenic carcinoma to the chest wall and axillary lymph nodes is a rare occurrence. This study reports the case of a patient presenting with chest wall swelling as initial symptom which on evaluation was found to be a lymph node metastasis. The patient also had axillary lymph node metastasis on the same side as the chest swelling with a contralateral pleural effusion. Here, we discuss the pathways and possible mechanisms of contralateral axillary and chest wall lymph node involvement without ipsilateral nodal involvement in bronchogenic carcinoma.

Key Words

bronchogenic carcinoma, contralateral metastasis, axillary lymph nodes, chest wall mass

On examination, an oval swelling of 7x5cm was noted in the left anterior chest wall at the infraclavicular area overlying the second to fourth ribs (Figure 1). A second swelling sized 6x8 cm was also seen in the left axilla (Figure-2). The swellings were non tender, firm in consistency, irreducible, with restricted mobility, no impulse on coughing, and the skin over the swelling was normal. Respiratory examination revealed that there was a stony dull note with absent breathing sounds on the right side of the chest. A frontal chest radiograph showed a massive right sided pleural effusion. A Contrast Enhanced Computed Tomography (CECT) of the chest showed that there was a right main bronchus endoluminal mass causing bronchial cut off and collapse (Figure-3). There was also evidence of extensive mediastinal lymphadenopathy with massive right sided pleural effusion and multiple sub pleural nodules suggestive of pleural metastases.

FNAC of the left infraclavicular mass and axillary mass showed metastatic well differentiated squamous cell carcinoma. The patient was not taken up for bronchoscopy and biopsy due to his poor performance status. He was treated symptomatically with thoracocentesis. The patient and his relatives denied further treatment in view of poor prognosis.

DISCUSSION

Cancers mainly spread by three mechanisms, local invasion; lymphatic stream; and/or haematogenous spreading. The mechanism of spread depends on the particular tumour subtype and location. Although tumours can create their own blood supply by the process of angiogenesis, they do not have their own lymphatic drainage and spread is initially by local invasion of surrounding lymphatics. Malignant cells may also be scavenged directly from the interstitial tissues by surrounding lymphatics. They may then drain into regional lymph nodes prior to any direct vascular invasion by the tumours. Most of these cells will die but some may have the ability to survive and grow in a new environment. This depends on the underlying cell properties and genetics of the particular tumour type. Should the cells survive, a tumour grows in the lymph node and may then progress to subsequent nodes.

The tumour may also locally invade beyond the lymph node capsule. Once a lymph node is completely invaded by the tumour, the usual lymph node drainage of the region will be disrupted, which may result in retrograde lymphatic spread.² This was perhaps the mechanism in our case wherein the contralateral chest wall and nodal metastasis probably resulted from a tumour blockage of lymphatics and retrograde spread. Axilla as an unusual site of metastasis has been reported with an incidence of 6.6% in bronchogenic carcinoma.³ The commonest primary site with contralateral spread is the right upper lobe.⁴

Bronchogenic carcinoma involving a chest wall invasion can be explained by the fact that a tumoural spread may occur through newly developed lymphatic channels as a result of pleural adhesions.

Axillary lymph node metastases may be involved through a direct chest wall invasion of bronchogenic carcinoma or retrograde spread from a supraclavicular lymph node block.⁵ With supportive care measures, the median survival rate of patients at the advanced stage of the disease is 16 to 17 weeks. Although chemotherapy is the backbone of treatment for metastatic diseases, the response rates are low, and survival times are poor. However, studies show platinum-based regimens improve symptoms, and can control and increase the one-year survival rate chance between 10% and 20%. The benefits of therapy are usually restricted to otherwise healthy patients with lung cancer, such as those who maintain a good functional status.⁶

Since the expected overall survival time is low, minimizing hospitalization and causing minimal distress are important factors when determining the treatment.⁷

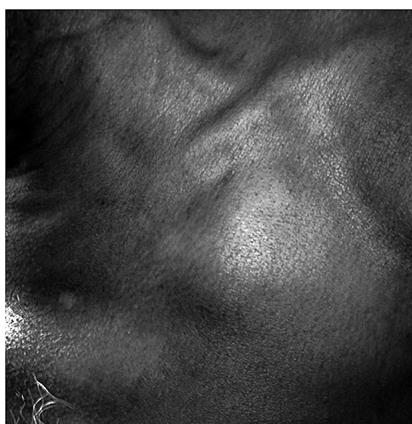


Figure 1. Left chest wall swelling



Figure 2. Left axillary mass



Figure 3. CECT showing right main bronchus endoluminal mass with collapse and massive right sided pleural effusion

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