

Sub cutaneous swelling as the first clinical manifestation of small cell carcinoma of lung

Sunil Kumar,¹ Amit Gupta,¹
Sanjay K. Diwan,¹ Arvind Bhake²

¹Department of Medicine, ²Department of Pathology, Jawahar Lal Nehru Medical College, DMIMS, Sawangi, Wardha, India

Abstract

Subcutaneous swelling as first clinical presentation of small cell lung carcinoma is uncommon and rarely reported in literature. This case highlights a rare presentation in which subcutaneous swelling was the first clinical manifestation of a small cell carcinoma of lung which also had metastasis to rib bone, muscle and pleural involvement as pleural effusion. We describe the case of a 64-year-old male patient who presented with dyspnea, pleuritic pain, loss of weight and nodule on his anterior chest, back and left arm suspicious of lipoma. Biopsies revealed small cell carcinoma of lung. This case demonstrates the meticulous work up of subcutaneous swelling in the clinical scenario of breathlessness, chest pain and loss of weight.

Introduction

Subcutaneous swelling as metastases are an uncommon presenting feature for primary solid tumors like lung cancer usually in the range of 1.5-2.6%.¹ It is important to distinguish such metastases from a soft-tissue mass as they may represent the first clinical sign of an occult tumor. In this report, we describe an unusual case of small-cell lung cancer metastasizing to his anterior chest, back and left arm as soft tissue nodule at the time of initial diagnosis; an aggressive cancer which has a poor prognosis owing to its late presentation.

Case Report

A 64-year-old male, chronic smoker presented in the medicine outpatient department with complaints of breathlessness, loss of weight, multiple swellings on the chest, back and left arm since 2 months. There was no history of trauma, pulmonary tuberculosis, chronic obstructive pulmonary disease, bronchial asthma, Ischemic heart disease, hypertension or diabetes. On examination, there were firm, var-

iegated and no tender cystic swellings on the anterior chest, back and left arm (Figure 1). There was no cervical or axillary lymphadenopathy. Other systemic examination was normal. His blood pressure was 130/80 mmHg. The hemoglobin was 9.6 g%, total leukocyte count was 6300/cmm with a differential of 45% neutrophils, 37% lymphocytes, 17% monocytes and 1% eosinophils, in the peripheral smear. The erythrocyte sedimentation rate was 30 mm 1st hour (Westergren). Serum proteins were 8.2 g%, with albumin 3.9% and globulin 4.3 g%. Serum calcium, phosphorus and alkaline phosphatase were 13.2 mg%, 4.0 mg% and 7.2 Bodansky unit, respectively. His kidney function, liver function and blood sugar were normal. Fine needle aspiration cytology of the swelling from chest showed small cell lung carcinoma seen as small round cells in rosettes and nests with high N/C and pepper salt chromatin (40×, pap. Stain) (Figure 2). His chest X-ray showed mild pleural effusion. Computerized tomography of the chest showed pleural effusion, rib fracture with multiple small hypoechoic shadow suggestive of lung cancer (Figure 3). Pleural fluid cytology also showed small cell lung cancer. He was referred to radio-oncology department for further management but he refused due to non-affordability.

Discussion

Small cell lung cancer results from bronchial epithelial cells, which are relatives of Kultchitsky cells, a type of intestinal epithelial cell. Skin metastasis from this type of cancer is very rare and worsens its prognosis. The rate of cutaneous metastases changes according to the types. It is found as 0.81% for small cell lung carcinomas. It is much lower compared to adenocarcinomas (2.95%) and squamous cell carcinomas (1.16%) of the lung.² The disease most fre-



Figure 1. Multiple cystic swelling on the anterior chest wall.

Correspondence: Sunil Kumar, Department of Medicine, DMIMS, Sawangi, Wardha, Maharashtra 442 102, India.

E-mail: drsunilkr_med@rediffmail.com

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quently metastasizes to the central nervous system, bone marrow and suprarenal glands. Small cell lung cancer may be accompanied by paraneoplastic syndromes, superior vena cava syndromes, compressions to the spinal cord and, very rarely, skin metastases.³ Although they can occur in any part of the skin, most common sites for cutaneous metastases are chest, back, abdomen, and scalp.² Generally, cutaneous metastases are early indicators of metastatic disease. Diagnosis may be delayed by several months, unless the skin lesion grows rapidly or other sites such as the lung or liver are affected by the tumor's spread.⁴ Early recognition of tumor from a suspicious skin lesion may lead to initiation of treatment before widespread metastases occur. In our case, the metastasis in the form of subcutaneous swelling was found simultaneously with the primary lung tumor, facilitating diagnosis. Although at the time of

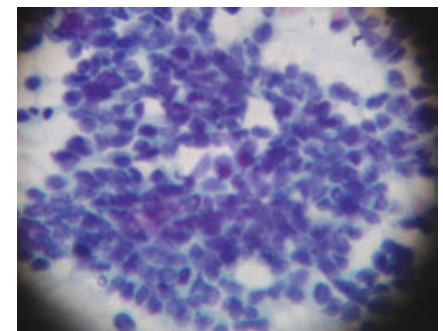


Figure 2. Small cell lung carcinoma seen as small round cells in rosettes and nests with high N/C and pepper salt chromatin (40×, pap. Stain).

initial presentation he also had pleural effusion and rib fracture. Moreover in this case nature of swelling was not suspicious rather it looked like

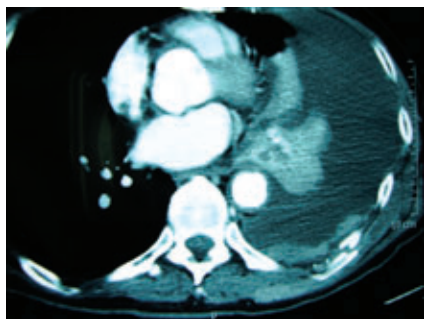


Figure 3. Computerized tomography of the chest showing pleural effusion and rib fracture with multiple small hypoechoic shadow, suggestive of lung cancer.

lipoma and on aspiration cytology it was metastasis from small cell lung cancer. The most likely pathogenesis of metastatic route is the hematogenous spread. The basic metastatic course can occur in the following steps: detachment from the primary tumor followed by invasion, intravasation into a vessel, circulation, stasis within a vessel, extravasation, invasion into recipient tissue bed, and proliferation.⁵

In conclusion, as seen in this case of rare unexpected skin metastasis of small cell lung carcinoma, which lack a pathognomonic physical appearance, like rapid enlargement, ulceration, tender, physicians should be vigilant about this entity. Any skin lesions in the form of swelling should be evaluated meticulously and biopsies should be done to exclude metastases in the clinical scenario of breathlessness, chest pain and loss of weight especially in old age. Because in this case though both primary and metastasis were detected at the same time, earlier diagnostic anticipation

about this cutaneous swelling could have different and better prognosis.

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