Skin metastases as the first manifestation of lung cancer: A case report
Lourembam Sunil Singh 1, Takhellambam Yumjaobabu Singh 2, Kshetrimayum Raju Singh 3, Sapam Opendra Singh 4, Ayekpam Anil Meetei 5

Department of Surgery, RIMS, Imphal, Manipur. 1- Senior Resident. 2- Professor. 3&4- Asst. Professor. 5- Post Graduate Trainee

Submission Date: 19-12-2013, Acceptance Date: 23-12-2013, Publication Date: 31-01-2014

How to cite this article:
Vancouver/ICMJE Style

Harvard style

Corresponding Author:
Dr. Lourembam Sunil Singh, Department of Surgery, RIMS. Imphal-795004. Tel: 8414867612. E-mail: sunillourembam@yahoo.com

Abstract:
A 70yrs old chronic smoker male farmer presented with multiple skin nodules which on FNAC and biopsy turned out to be well differentiated squamous cell carcinoma. In view of its multiplicity it was considered as a case of skin metastases and a primary source was searched. Chest X-Ray and CECT Thorax showed the primary lesion as carcinoma of lung. Skin metastases as the first sign of internal visceral malignancy occurs in around 0.7 to 10.4% and 1 to 12% of lung cancer has skin metastases. Skin metastases usually indicate a poor prognosis. The case is being presented in order to make aware of the rare and deceiving ways of presentation of internal malignancies.

Key words: Carcinoma; Fine needle aspiration cytology; Skin metastases; Skin nodules; Squamous cell carcinoma.

Introduction
Metastasis refers to the development of secondary implants discontinuous with the primary tumour, in remote areas. Metastasis to skin from visceral malignancies is rare with a reported incidence of 0.7% to 10.4%. In 0.8% of the cases, it can be the first manifestation of the underlying malignancy [1]. Lung cancer when presents with skin metastasis, is likely to be misdiagnosed for some other common skin lesions and skin metastasis in lung cancer heralds a grave prognosis. Case is reported for its rarity and for the clinical importance of correct diagnosis to avoid misinterpreted prognosis when lung cancer presents in such atypical ways.

Case history
A 70 years male farmer was admitted to the department of General Surgery RIMS, Imphal in March 2011 with the chief complaint of slightly painful, slowly enlarging multiple swellings over the back and sides of chest, shoulder and thenar aspect of right palm for the last 2 months. The patient was a
chronic smoker and had occasional non productive cough. However there was no chest pain. Except for the presence of clubbing, his general condition was unremarkable. Systemic examination was normal. The skin lesions chiefly consisted of firm to hard, non-tender, mobile nodules of varying sizes ranging from 1cm to 5cms in diameter. (Figure: 1). The overlying skin was intact and reddish to pinkish in color except the one lying over the right infrascapular area where the skin surface had already eroded. Routine laboratory investigations were normal except for a high ESR (85mm/1st hr). Fine needle aspiration cytology and biopsy of the skin swellings showed features of squamous cell carcinoma (Figure: 2). In view of multiple sites involvement by the same tumor, a primary site was searched. Subsequently, Chest X ray and CT thorax of the patient revealed malignant lung mass in right upper lobe with involvement of mediastinum and mediastinal lymph nodes. (Figure: 3) and (Figure: 4). He was finally referred to the Radiotherapy Department, RIMS for possible palliative care. The patient survived for 4 months.

Discussion

Skin is a rare site of metastatic deposits from internal malignancies. The reported incidence ranges from 0.7% to 10.4% [1]. It can be the first indication of a silent primary growth in about 0.8% to 12% [1, 2]. The common sources of primary are lung, melanoma, colorectal and head and neck in men, while in women the usual sites are breast, melanoma, ovary, colon and lung.

Lung cancer is one of the leading cancer and about 2.8% to 8.7% of patient with lung carcinoma develop skin metastases [3]. In about 20-60% of these cases the skin lesions present before or synchronously with the diagnosis of the primary tumour.

The common sites of skin metastases in lung cancer are the chest and head and neck. Rare sites include extremities, nail bed, lips and perineal areas. In a study of 43 patients of lung cancer with skin metastases conducted in AIMS, New Delhi, Rammurti K et al found head and neck (49%) followed by trunk (37%) to be the most common site of skin deposits [4].

Cutaneous metastases from lung cancer do not have a characteristic presentation. However, they are often described as nodular, mobile or fixed, hard or flexible, single or multiple, and painless. Their colours varied from flesh-coloured, red, pink, purple, or bluish black. Over the scalp it can present with alopecia (alopecia neoplastica).

The most common histological subtype of lung carcinoma with skin metastases is adenocarcinoma, followed by squamous-cell carcinoma, small-cell carcinoma, and then large-cell carcinoma [5]. However, Terashima and Kanazawa noted that skin metastasis was high for large cell carcinoma and low for squamous and small cell carcinoma [6].

The work up for the unknown primary presenting with skin metastases involves thorough history taking, physical examination, laboratory investigations and imaging techniques. A tissue biopsy of the skin deposits can help narrow down the differential diagnosis of the primary source. Immunohistochemistry may sometimes aid in deriving conclusion in difficult situations. In regard to lung carcinoma, two markers are noted though their exact roles are still undefined. They are anti-thyroid transcription factor (TTF) and CK7/20. Anti-TTF is both sensitive and specific for primary adenocarcinomas, bronchioalveolar carcimomas, and small-cell carcinomas when a thyroid primary has been ruled-out. A CK7+/20- pattern is sensitive but not specific for primary adenocarcinomas and bronchioalveolar carcimomas [7].

Since, patients of lung carcinoma which come with skin metastases represent a late stage; treatment is usually unsatisfactory and palliative. Treatment options include surgery, chemotherapy and radiotherapy. Surgical excision is indicated when tissue is needed for histological examination, when metastases cause functional or cosmetic inconvenience or significant pain. Palliative radiotherapy may be useful for bleeding or painful lesions. Chemotherapy has less effect on skin metastases than on primary tumour, probably because of poorer blood supply to skin. Chemotherapeutic agents that have been tried with variable success rates include adriamycin, vincristine, cisplastin, cyclophosphamide, etoposide and carboplustin [3].

Despite the combination of radio- and chemo-therapy, patients with lung cancer that has spread to skin have a poor prognosis. The median survival time of a patient with lung cancer and skin metastases is 3 to 4 months [3]. Our patient survived for 4 months after diagnosis.

The case is being presented in order to be aware of the rare ways of presentation of internal malignacies which may be seemingly misleading. Such knowledge and a keen mind may avoid many a
wrong diagnosis and misinterpreted prognosis of a grave disease.

**Source of Funding:** Nil

**Source of Conflicts:** None

Figure 1: Skin lesions of the patient.

![Figure 1: Skin lesions of the patient.](image1)

Figure 2: Histology of the skin lesion showing features of squamous cell carcinoma.

![Figure 2: Histology of the skin lesion showing features of squamous cell carcinoma.](image2)

Figure 3: Chest X Ray of the patient showing mass lesion at the right lung.

![Figure 3: Chest X Ray of the patient showing mass lesion at the right lung.](image3)

Figure 4: CECT of the thorax showing malignant mass lesion in upper lobe of the right lung.

![Figure 4: CECT of the thorax showing malignant mass lesion in upper lobe of the right lung.](image4)

**References**


