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Cutaneous Metastasis as an Initial Presentation of Lung Carcinoma: A Case Report

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Abstract
Cutaneous metastasis as an initial presentation occurs in 0.8% of patients with internal malignancies. Cutaneous metastasis from lung carcinoma is rare and has ominous prognosis. Due to the absence of any pathognomonic appearance, it is usually misdiagnosed as benign lesions. Clinically, lung carcinoma may present first time with cutaneous lesions alone whilst the primary lesion in lung remains quiescent. We present the case of 62 years old male patient who presented with cutaneous metastasis from squamous cell carcinoma of lung.
Keywords: *Neoplasm, metastasis, carcinoma.*

Introduction

Lung cancer is a common neoplasm, in most cases fatal, affecting men and women usually after the age of fifty years. In general, cancers that tend to metastasize to other organs also involve the skin. Thus, lung cancer which spreads to brain, bone, liver, and adrenal glands, is responsible for the majority of skin metastasis in men. The skin is reported to be the first site of metastasis in about 25% of lung cancer cases.[1] The presentation of cutaneous metastasis in lung cancer portends poor prognosis with average survival ranging between 3-5 months in majority of studies.[2]

Case Report

A 62 years old male patient presented with four, painless, skin coloured swellings over the right side of scalp, right lower chest and left wrist for the last two months with progressive increase in their size. History of loss of weight and appetite was present. He was a chronic smoker (45 pack-year cigarettes). On examination, there were 4(2 in right frontal region while one each over subcostal region and left wrist) well defined, skin coloured nodules varying in from 1*0.5*0.5 to 3*2*2 cm with no surface changes. On palpation these were non tender, hard and fixed to underlying tissue. (Figure 1).

On X-ray lateral view of scalp, there was presence of localised area of decreased bone density in the frontal and parietal region with erosion of the inner table of skull in the frontal region. On X-ray left wrist, there was presence of erosion of the cortex medially at the lower end of shaft of ulna. On X-ray chest (PA view), there was presence of ill-defined inhomogeneous air space opacities in the left upper and right lower zone (Figure 2). Contrast enhanced computed tomography (CECT) of the head and chest was done. On CECT head, a large heterogeneously enhancing lesion having

both intracranial and extra cranial components was seen in right frontal region. There was evidence of erosion of frontal and parietal bone on right side (Figure 3). On CECT chest, a heterogeneously enhancing mass was seen in the right hilum and posterior mediastinum measuring 7*5.6 cm in size. The mass compressed the right branch of the pulmonary artery (Figure 4).

Fine needle aspiration cytology (FNAC) of the nodule in the frontal region on right side showed evidence of metastatic squamous cell carcinoma (Figure 5). Excision biopsy from the same lesion showed e/o metastatic squamous cell carcinoma (Figure 6). Transbronchial biopsy from the mass showed findings suggestive of squamous cell carcinoma of lung.

In view of the imaging and constellation of clinical features, the final diagnosis was squamous cell carcinoma right hilum lung with cutaneous metastasis. The patient was referred to department of oncology for further management and later on he was lost to follow up.

Figure-1: A 62 years old male with well defined, skin coloured nodules with no surface changes in forehead and chest wall (Excision biopsy was one from the forehead nodule).

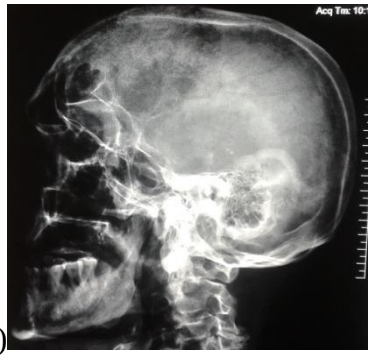
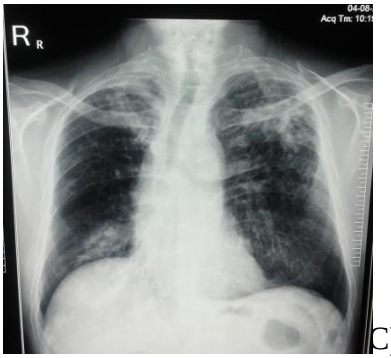
A)  B)  C) 

Figure-2: A) X-ray lateral view skull showing focal osteopenia in frontal and parietal bone with erosion of inner table. B) Chest x-ray(PA view) showing air space opacities in left upper and right lower zone. C) X-ray B/L wrists showing erosion of cortex medially at lower end of shaft of ulna.

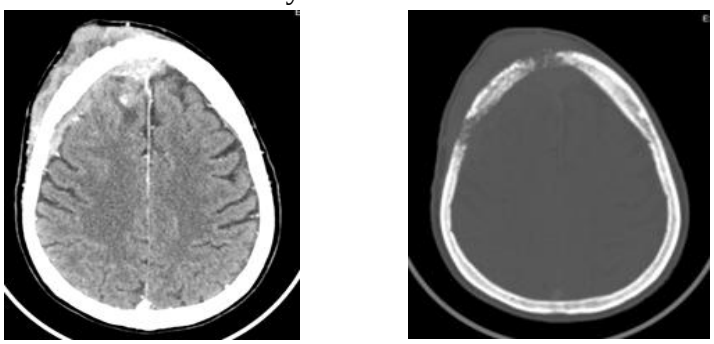


Figure-3: CECT head axial images showing heterogeneously enhancing mass in right frontal region (both extra and intracranial component) with e/o erosion of outer as well as inner cortex of bone as seen on bone window images.

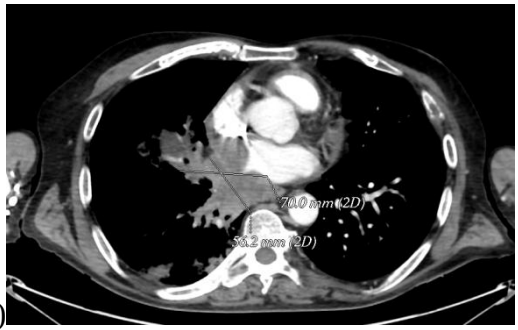
A)  B) 

Figure-4: CECT chest axial(A) and coronal(B) images showing heterogenously enhancing mass in right hilum and posterior mediastinum measuring 7.0*5.6 cm in size with a post contrast CT value of 80-100 hounsfield units (HU). This mass has compressed the right main bronchus, its branches and the right pulmonary artery.

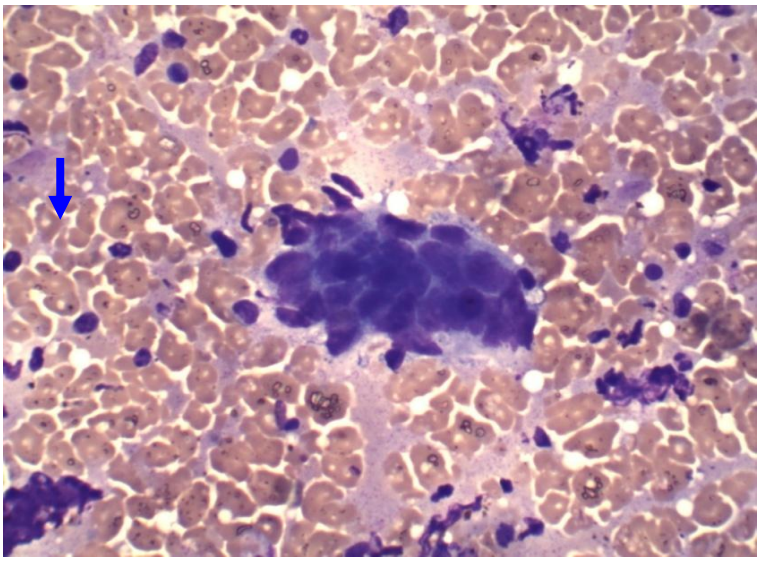


Figure-5: FNAC showing malignant squamous cells in aggregates and isolation.

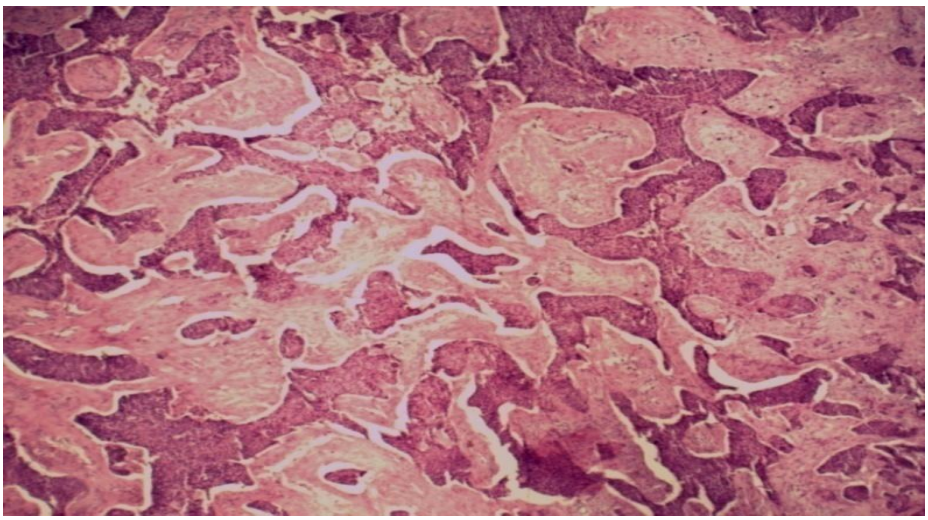


Figure-6: HPE showing metastatic deposits from squamous cell carcinoma

Discussion

Clinically, skin metastases vary considerably, but their recognition is important because they can be the first clinical manifestation of a still occult neoplasm. Skin areas usually affected by lung cancer metastasis are the chest wall, neck,

abdominal wall, scalp, dorsum and face[1,2,3,4] but the scrotum, lip, nose, perianal region[5] and fingers[6] have also been reported.Dreizen et al.[7] reported that adenocarcinoma has the highest tendency to metastasize to skin. Brownstein and Helwing [8] reported that adenocarcinoma and squamous cell carcinoma show equal tendency to involve the skin, while Terashima and Kanazaw[9] and Hidaka et al.[10] noted that the cutaneous metastasis rate was high for large cell carcinomas and low for squamous and small cell variants. Therefore, the histological type of lung cancer with the highest incidence of cutaneous metastases seems yet to be debated but 1 to 12 percent of the patients with lung cancer develop cutaneousmetastases [6,11,12].

There is no typical appearance of cutaneous metastasic lesions from lung cancer, which can be inflammatory, ulcerative or erythematous papules. Response to chemotherapy is poor in such patients probably because of poor blood supply to the skin[3].

Conclusion

With no pathognomonic appearance of skin lesions,poor response to treatment and grave prognosis, physicians should be alert about this presentation of lung carcinoma and atypical skin lesions should be evaluated with biopsy and other necessary investigations to find out the spread of disease, to guide futher adjuvant and supportive treatment.

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Conflict of interest- None declared.

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