

Squamous Cell Lung Cancer with Solitary Subungual Metastasis

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Abstract

Subungual metastasis resulting from internal malignancies is an extremely rare event. A few cases of subungual metastasis from lung cancer have been reported. However, subungual metastasis arising from lung cancer without any other form of distant metastases has not been reported. The misdiagnosis of a solitary subungual metastases as a benign inflammatory lesion is an important problem as it may cause the misdiagnosis of a lower stage of lung cancer. We may be reporting the first case of a subungual metastasis from lung cancer without any other distant metastases.

Key Words: Lung cancer, Subungual metastasis

INTRODUCTION

The rate of cutaneous metastases from lung cancer has been reported to be 0 to 4 percent.¹ In particular, subungual metastasis originating from lung cancer is extremely rare. There have been a few reports of subungual metastases resulting from lung cancer.¹⁻³ However, at the time of initial presentation we were unable to find a single case of subungual metastasis that had originated from lung cancer in the absence of any other distant metastases. It is well known that accurate staging is very important in determining a therapeutic plan and providing a proper prognosis for lung cancer. The rarity and clinical features of a subungual metastasis can be confused with benign inflammatory diseases and, consequently, most clinicians may misdiagnose the exact nature of the lung cancer.

CASE REPORT

In July 1999, a 63-year-old man visited the

out-patient clinic of our hospital reporting a cough, sputum, febrile sensation and a newly developed tender swelling of his fourth fingertip. He had a thirty-year history of smoking, but consumed minimal quantities of alcohol. The chest X-ray and chest CT scan revealed a 10×7 cm sized abscess cavity with an air fluid level on the lower lobe of the left lung (Fig. 1). On the mediastinal setting of the chest CT scan, ipsilateral hilar and bulky subcarinal lymphadenopathies were seen and the tumor mass was observed to be attached to the wall of the inferior pulmonary vein of the left lung and the lateral wall of the thoracic aorta (Fig. 1). Because the result of a chest MRI may not alter the therapeutic plan in the presence of a bulky N2 on a chest CT scan, we were unable to use the chest MRI to evaluate the vascular invasion by the lung cancer. There was no evidence of metastases in the bone scan or the abdominal ultrasonogram. Upon fiberoptic bronchoscopy, erythematous mucosal changes from the carina to the left main bronchus were seen and the orifice of the lobar bronchus of the lower lobe of the left lung was observed to be almost totally obstructed by the tumor mass. We performed biopsies bronchoscopically and diagnosed it as a squamous cell cancer of the lung, staged clinically as T3/4N2M0. He received radiation therapy due to the obstructive pneumonitis of the lower lobe of the left lung and subsequently underwent two cycles of chemotherapy (cisplatin, vinorelbine and ifosfamide) from July 1999. We consulted a dermatologist concerning the

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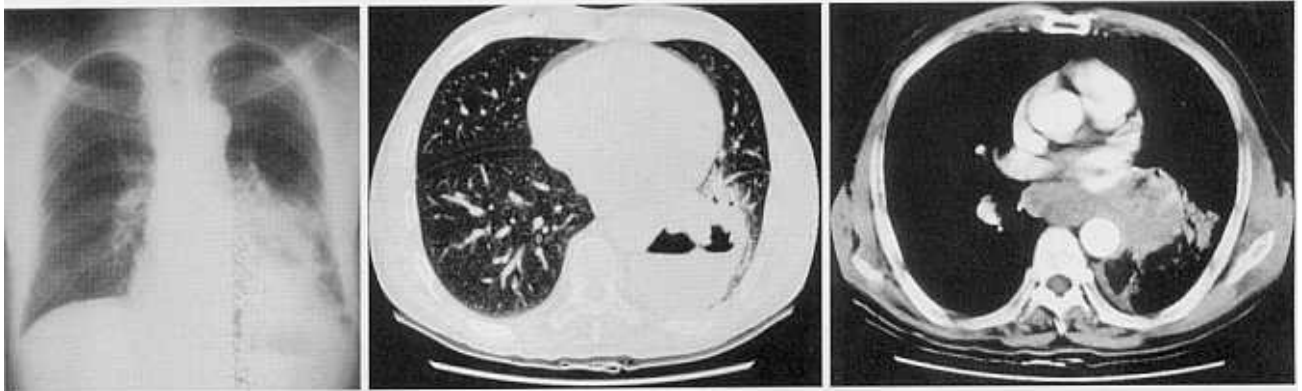


Fig. 1. The chest X-ray and chest CT scan revealed a 10×7 cm sized abscess cavity with an air fluid level on the lower lobe of the left lung. On the mediastinal setting of the chest CT scan, ipsilateral hilar, bulky subcarinal lymphadenopathies and the tumor mass attached to the wall of inferior pulmonary vein of left lung and the lateral wall of thoracic aorta were observed.



Fig. 2. After extracting the nail, the ulcerated, friable lesions were seen on the Subungual area.

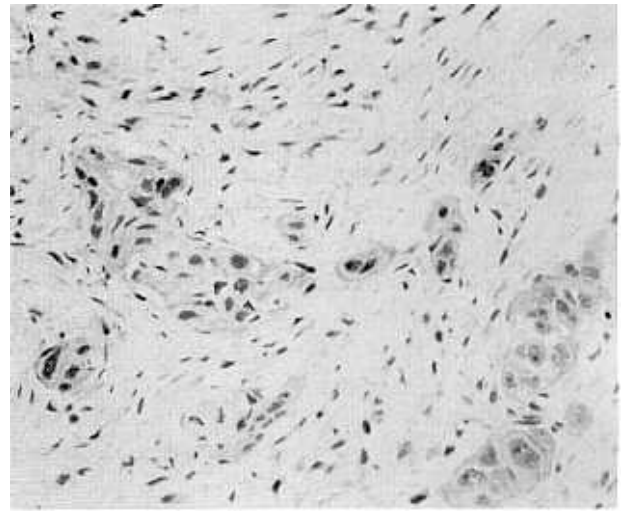


Fig. 3. A microscopic finding of a biopsy specimen in the Subungual lesion showed squamous cell carcinoma (H & E stain, ×200).

inflammation-like lesion on the patient's fourth fingertip and acute paronychia was suggested as the cause. In spite of dressing the subungual lesion with antibiotics, it became oozing and friable. In October 1999, after the nail was extracted, ulcerative lesions were revealed and biopsied (Fig. 2). The biopsy showed a metastatic squamous cell carcinoma (Fig. 3). Following radiation therapy and chemotherapy, re-evaluation with a plain chest X-ray, chest CT scan and bone scan showed that the disease had progressed. Because the patient's performance status of ECOG had changed from 0 to 4, the patient was treated conservatively with analgesics alone. He died 6 months after the diagnosis of lung cancer.

DISCUSSION

Cutaneous metastases from internal malignancies are relatively rare events. The most frequent sources of cutaneous metastases, which are affected by the patient's sex, is lung cancer in men and breast cancer in women.⁴ However, lung cancer most commonly metastasizes to the bones, liver, adrenal glands, lymph nodes and brain. The skin is ranked as only the 12th frequent site of metastases resulting from lung cancer.⁵ The most common sites metastasized from lung cancer are the chest wall and the posterior abdomen.⁶ Ariel IM et al.⁷ noted that the rate of cutaneous metastases originating from lung cancer

was 0 to 4 percent. According to a review by Terashima, et al.,⁸ the incidence of cutaneous metastases varies among the different cell types of lung cancers. 10.3 percent of 87 cases of large cell carcinoma, but only 1.4 percent of 348 cases of squamous cell carcinoma, showed cutaneous metastases.

The presence of a subungual metastasis means that the lung cancer must be staged as stage IV. We simply understood the lesion on the patient's fingertip to be a benign inflammatory disease and staged the lung cancer initially as stage IIIA. The initial misdiagnosis of the subungual metastasis and the resulting diagnosis of a lower stage lung cancer may have resulted in the choice of an incorrect course of therapy. A definitive diagnosis with a biopsy or needle aspiration should be made in cases with unusual newly developed or initially presented skin lesion(s), particularly those not responding to the usual treatments. In our case, it was reasonable to treat the lung cancer with radiation therapy followed by chemotherapy because of the presence of the obstructive pneumonitis and the bulky subcarinal lymphadenopathy. The pain and swelling of the patient's fourth fingertip had not progressed and was controlled by conservative treatment with topical antibiotics and analgesics. The presence of a subungual metastasis indicates the extensive spread of the primary cancer. Terashima, et al.⁸ noted that the survival rate following diagnosis of cutaneous metastasis was poor, with only a 3-month estimated median survival time. The reevaluation of the therapeutic responses in our patient revealed local and systemic recurrences, such as increased pleural effusion, enlargement of the mediastinal lymphadenopathies and increased size of the primary lung mass. This poor performance meant the patient could only be treated conservatively with analgesics.

Subungual metastases from internal malignancies

are extremely rare and imply the end stage of a malignancy or the first sign of recurrence. There are a few reports of subungual metastases originating from lung cancer.¹⁻³ Kegel, et al.¹ reported a case with both skull and subungual metastases from squamous cell carcinoma of the lung. Chang, et al.² reported a case with multiple rib and subungual metastases from squamous cell carcinoma of the lung. Seoud, et al.³ presented a case of choriocarcinoma which metastasized to the subungual site in the presence of brain, kidney and liver metastases. To our knowledge, no solitary subungual metastasis originating from lung cancer with the absence of other distant metastases has been reported. We may be reporting the first case presenting a solitary subungual metastasis resulting from squamous cell cancer of the lung.

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