

Lung Adenocarcinoma with Skin Metastasis

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ABSTRACT

Skin metastasis from lung cancer is a very rare event with poor prognosis. It is usually misdiagnosed as benign lesions. We present a 50 year-old female patient with the diagnosis of lung cancer with skin metastasis.

Key Words: Lung cancer, skin metastasis

ÖZET

Akciğer Kanseri Deri Metastazı

Akciğer kanserinin deri metastazı çok seyrek olup kötü prognoza sahiptir. Genellikle benign lezyonlarla karıştırılır. Akciğer kanserinin deri metastazı tanılı 50 yaşında bayan olgu sunulmuştur.

Anahtar Kelimeler: Akciğer kanseri, deri metastazı

INTRODUCTION

Skin metastasis from lung cancer is a rare event that worsens the prognosis of the patients. Due to the absence of any pathognomonic appearance, it is usually misdiagnosed as benign lesions (1). The chest wall and the abdominal wall are the most commonly involved regions (1). With a very poor prognosis, the

median survival time after the diagnosis of the cutaneous metastasis is between 2.9-4.9 months (1,2,3). The physicians need to be alarmed of the findings and the prognostic importance of the lesions in follow up of their patients with metastatic lung cancer

CASE PRESENTATION

A 50-year-old non-smoker woman was admitted to the hospital with cough and dyspnea complaints continuing approximately for 7-months. Physical examination was normal and laboratory tests were in normal range. Thorax computed tomography (CT) demonstrated anterior mediastinal mass approximately 10 cm in diameter. The bronchoscopic biopsy was nondiagnostic. Diagnostic work-up including abdominal CT, brain magnetic resonance imaging (MRI) and bone scintigraphy showed no evidence of metastasis. She underwent a total excisional operation with the high suspicion of thoracic malignancy. The pathology stated a poorly differentiated adenocarcinoma and positive surgical margins with 3 metastatic lymph nodes with extracapsular extension (level 3 and level 9) out of 5 nodes dissected.

The patient was then referred to our clinic for further treatment one month after the operation. PET-BT was required for the purpose of restaging which demonstrated recurrence of the mediastinal mass, accompanying a left axillary, bilateral mediastinal, supraclavicular (SCF) and liver metastasis. Owing to the diffuse metastatic systemic disease, the local radiotherapy schedule was cancelled and she was prescribed six cycles of cisplatin and taxotere chemotherapy. The reevaluation of the patient following chemotherapy revealed partial response in the intrathoracic mass and a complete response in mediastinal and SCF lymph node metastasis. In one month, the patient presented with the symptoms of nausea, vomiting and headache. Brain MRI showed multiple metastatic lesions largest being 3x3 cm, located in the right cerebellar hemisphere. There was no neurological deficits at the time. She was prescribed a whole brain irradiation to a total dose of 3000 cGy in 10 fractions and additional boost



Figure 1. Inflammatory, ulcerative skin lesion with well demarcation located on the left chest wall under the breast, covering the end of the previous incision scar.

dose of 1500 cGy in 5 fractions to the largest lesion demonstrated.

In second week of the cranial irradiation, the physical examination revealed a recently appeared skin lesion; which was an inflammatory well demarcated ulcerative lesion located on the left chest wall under the breast, lateral to the previous incision scar (Figure 1). The incisional biopsy showed skin metastasis of the non-small cell lung cancer. The skin metastasis rapidly expanded in size and became 6x7 cm with frequent tendency to bleed. The bleeding lesion was irradiated by 12 Mev electron beams in 400 cGy/fraction to a total dose of 2000 cGy, which palliated the bleeding in the second day of treatment. In the next couple of days following radiotherapy, she developed respiratory problems with accompanying malignant pleural effusion and superimposing infection. The patient did not respond to the best supportive care and died.

DISCUSSION

The incidence of skin metastasis from lung cancer is very rare, reported to be 1 to 12% (4,5,6) and appear generally near the primary tumor (6,8). Commonly involved sites are known to be the chest, back, abdomen and the scalp (5,6,7) Here, we report a patient with a skin metastasis on the chest wall on the same side of the primary tumor.

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 the equal tendency to involve the skin; while Terashima and Kanazawa (3) and Hidaka et al (9) 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 to be debated yet.

Cutaneous metastasis shows the advanced form of the disease with the involvement of the other distant organs including brain, liver, bone, adrenal gland. The median survival is reported to be between 2.9 to 4.9 months (1,2,3). None of the current treatment modalities are able to change the poor prognosis (9). As stated in the literature, our

patient had also a disseminated disease involving the lymph nodes, liver and brain and her skin metastasis appeared during her cranial irradiation.

Cutaneous metastasis indicates poor prognosis and lung cancer with skin metastasis has the poorest outcome among other cancers (2). As the skin metastasis lack a pathognomonic gross appearance (7), the physicians should be alert about the phenomenon and atypical skin lesions should be evaluated with biopsy for further possible adjuvant and supportive treatments.

REFERENCES

1. Perng DW, Chen CH, Lee YC, Perng RP. Cutaneous metastasis of lung cancer: an ominous prognostic sign. *Zhonghua Yi Xue Za Zhi (Taipei)*. 57:343-7, 1996.
2. Schoenlaub P, Sarraux A, Grosshans E, et al. Survival after cutaneous metastasis: a study of 200 cases. *Ann Dermatol Venereol*. 128:1310-5, 2001.
3. Terashima T, Kanazawa M. Lung cancer with skin metastasis. *Chest* 106:1448-50, 1994.
4. Rosen T. Cutaneous metastases. *Med Clin North Am* 64: 885-900, 1980.
5. Coslett LM, Katlic MR. Lung Cancer with skin metastasis. *Chest* 97:757-9, 1990.
6. Brownstein MH, Helwing EB. Patterns of cutaneous metastasis. *Arch Dermatol* 105: 862-8, 1972.
7. Dreizen S, Dhingra HM, Chiuten DF, Umsawadi T, Valdivieso M. Cutaneous and subcutaneous metastases of lung cancer: Clinical characteristics. *Postgrad Med* 80: 111-6, 1986.
8. Brownstein MH, Helwig EB. Metastatic tumors of the skin. *Cancer* 29: 1298-1307, 1972.
9. Hidaka T, Ishii Y, Kitamura S. Clinical features of skin metastasis from lung cancer. *Internal Medicine* 35: 459-62, 1996.

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