Widespread skin metastases: Could it be small cell?

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Abstract
Small cell lung cancer (SCLC) is a neuroendocrine tumor usually presents with disseminated disease. The majority of patients have distant metastases and initial therapeutic management is systemic chemotherapy. SCLC patients almost never survive without treatment and most important factor is than prompt diagnosis of the disease. A case of SCLC with extensive stage disease that was accurately diagnosed via excised skin nodule is presented in this report.

Keywords: Small cell, skin metastase, surgery, lung cancer, thorax

INTRODUCTION
Cancer is an important health problem worldwide and 1.7 million new cancer case and 610,000 cancer deaths are projected to occur in the United States in 2018.1 Lung cancer (LC), is the most common type of cancer seen in human body. It has been reported that there are approximately 1.6 million new LC case and 1.4 million deaths caused by LC each year. Small cell lung cancer (SCLC) constitutes about 10-15% of the newly diagnosed LC cases. LC can metastasize to a wide variety of organs and the incidence of skin metastasis in LC is between 1-12%.2 A case of SCLC, which has metastasized to many organs including skin and diagnosed with an excisional biopsy performed on one of the skin metastases.

CASE
72-year-old male patient presented to a clinics with cough, malaise and widespread pain throughout entire body. Physical examination and radiological tests revealed two masses in the right upper lobe of the lung. Patient was referred to our clinics for transthoracic fine needle aspiration biopsy (TTFNAB). His medical history revealed that he had malaise and unproductive cough for two months. Physical examination revealed a blood pressure of 128/88 mm
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Hg, a fever of 36.3°C, a heart rate of 78/min, and a diminished lung auscultation sounds on the right upper zone. He had several deeply located, fixed and rigid right supraclavicular lymphadenopathies. He also had skin nodules at bilateral arcus costarum which were about 15x15 mm in diameter, rigid and fixed to the surrounding tissues and several expansive masses in several bilateral ribs. He had a smoking history of 90 packages/year and was currently smoking 4-5 cigarettes a day. Patient’s posterior-anterior chest x-ray revealed two separate masses one in the right upper zone at 30x20 mm in diameter with irregular borders and one in the right middle zone at 60x50 mm in diameter and irregular borders. Positron emission tomography with computerized tomography (PET/CT) was performed. PET/CT revealed increased fluorodeoxyglucose (FDG) levels in both lesions in the right upper lobe of the lung. In addition to these, there were multiple lesions in brain, various lymph nodes (submandibular, lower cervical, all mediastinal, bilateral axillary and intraabdominal stations), liver, bilateral adrenal glands, subcutaneous lesion throughout the body, bones (left clavicle, thoracic 2nd and 11th, lumbar 4th and 5th vertebrae, left humeral head, multiple ribs pelvic bones, left femoral neck and bilateral femoral trochanters) with increased FDG levels (Figure 1). According to the multiple lymph nodes and multi organs smooth limited opacity, patient is diagnosed as broad metastatic L. Excisional biopsy was performed to the skin nodule located on the left arcus costarum under local anesthesia (Figure 2). Patient was discharged on the same day as he had no additional symptoms in postoperative period and his physical examination didn’t reveal any significant change. The pathological diagnosis of the mass was SCLC, thus the patient was diagnosed as stage IV LC and referred to the Oncology clinics.

DISCUSSION

SCLC, which is one of the neuroendocrine tumors of lung, can be described pathologically as a malignant tumor that includes low amount of cytoplasm, has fine granular chromatin, usually does not have a nucleolus and constitutes epithelial tumors with uncertain borders. SCLC is usually seen in men older than 70 and have a history of long term smoking. The complaints of these patients usually start 8-12 weeks before admission. A central large tumor with widespread mediastinal lymph node involvement is usually the findings at the time of admission. Our case is also compatible with this knowledge as he was older than 70 and presented with cough,
malaise and widespread pain which started 2 months ago.

SCLC usually grows fast and metastasizes to mediastinal lymph nodes and remote organs in an early period. This situation causes the patients to be diagnosed at a later stage. Our case also had widespread mediastinal lymph node involvement and remote organ metastases similar to this knowledge. Metastatic skin nodules are usually seen in adenocarcinomas but they are also reported in SCLC. The presence and high number of metastatic skin nodules, the presence of remote organ metastasis and the primary tumor being SCLC are considered to be bad prognostic factors in LC. Our case had all these criteria.

SCLC is highly susceptible to chemotherapy. Because of this the mainstay of treatment in these patients is chemotherapy. Etoposide and platinum derived salts (carboplatin, cisplatin) are usually chosen at the initial phase. Radiotherapy can also be added to the treatment regime if the disease is limited. But the role of surgery is very limited because of fast spreading of the disease at an early phase. Surgery can only be performed in stage 1 or 2 disease with adjuvant chemo-radiotherapy. Many researchers report that surgery does not improve the prognosis significantly and some even report an adverse effect on the prognosis of these patients.

LC is one of the deadliest cancers on earth with the 5 year overall survival rates of 15%. This ratio changes between 5-8% for SCLC. This can be attributed to the disease’s advanced stages at the time of diagnosis. Skin metastasis on the other hand decreases the median survival in LC to 5-6 months.

If we evaluate through our case, we did exactly the only thing we should do as standard in a patient who admitted to our outpatient clinics in order to undergo a biopsy from a mass found in his lung: a proper physical examination. Work in a small or large medical center, this simple but effective method established the diagnosis without the need of more advanced techniques. Excisional biopsy can also be performed in almost every center and under every condition. But performing TTFNAB or taking CT requires advanced machines and personnel. In addition to these facts their complications are much more severe than excising a skin nodule’s.

As a conclusion, prompt and accurate diagnosis is the primary procedure in LC. All physicians’ primary goal is not to neglect proper physical examination especially in high-risk patients without complaining the deficiencies of the present conditions.
REFERENCES
Figure 1. Widespread metastases of the patient in positron emission tomography
Figure 2. Excised skin nodule