



ORIGINAL RESEARCH PAPER

Oncology

UNUSUAL POSSIBLE METASTATIC SQUAMOUS-CELL LUNG CARCINOMA TO THE PANCREAS

**KEY WORDS:** Squamous-cell lung carcinoma, pancreas, metastasis, case-report

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**ABSTRACT** **Background:** Pancreas is a relatively infrequent site of metastasis by squamous-cell lung carcinoma. **Case summary:** We report a case of metastatic lesion in the pancreas from squamous-cell lung carcinoma in a 70-year-old Moroccan male, demonstrated by PET scanner and treated by first line of chemotherapy. **Conclusion:** it is a rare case of pancreatic metastasis from lung cancer found in literature.

**Introduction:**

Squamous-cell lung carcinoma represent one third of all primary pulmonary cancers [1]. Pancreas is a relatively infrequent site of metastasis from this neoplasm. They account about 18% of cases. [2]

We present a case of metastatic squamous-cell lung carcinoma to the pancreas.

**Case-report:**

A 70-year-old Moroccan male with a history of smoking (30 pack-years) and childhood tuberculosis who presented with a persistent cough during six months. A symptomatic treatment was prescribed without any relief. The patient started to have progressive symptoms of dyspnea on exertion and shortness of breath, cough, and wheezing.

A chest x-ray showed an opacity in the lower left lobe with loss of volume and areas of emphysema. A computed tomography (CT) scan of the thorax and abdomen showed a mass in the lower left lobe measuring 4,2x3,6x 4,8 cm (posterior basal segment), bilateral adrenal lesions and a hypodense lesion in the tail of the pancreas 1.2 cm long.

A positron emission tomography (PET) scan was performed and demonstrated a left posterior basal mass with a standard uptake volume (SUV) of 16.9 (fig1), a mass in the tail of the pancreas with a SUV of 3.4; and bilateral adrenal lesions with a SUV of 4.2, all consistent with malignancy. (fig2)

The biopsy of pulmonary tumor showed a squamous-cell carcinoma. The specimen was positive for p63 and CK5/6 and was negative for CK7 and CK20. (fig3)

On the basis of these results, a biopsy of the pancreas was requested, but the appointment was far.

As the patient had progressive symptoms, we decided to treat him by first line palliative chemotherapy using Gemcitabine (1000mg/m<sup>2</sup>, Day1 and Day 8) and carboplatin(AUC 5) every 3 weeks. We want to reassess disease response with PET scan after 3 cycles of treatment, but after the third cycle, the patient's family reported that he died at home.

**Discussion:**

Lung cancer metastasis may occur in every organ system. The incidence of secondary pancreatic tumors has been reported in 15% of autopsy studies [3]. The lung cancers infrequently metastasize to the pancreas (0-18% in different studies) [4-6]. The majority of those with pancreatic metastasis are small-cell ones.

The lung tumor that most commonly metastasizes to the pancreas is small cell carcinoma. In the series of Maeno et al [7], pancreatic invasion was observed in 10%. Pancreatic involvement is much less common in squamous cell carcinoma (1.1%).

Yoonet al.[8] reported 53 pathologically proven metastatic tumors of the pancreas; the primary malignancies were renal cell carcinoma (n=14), gastric cancer (n=11), colorectal cancer (n=5), lymphoma (n=4), non-small cell lung cancer (n=3), gastrointestinal stromal tumor (n=2), melanoma (n=2), SCLC (n=2), gallbladder cancer (n=2) and one case each of hepatocellular carcinoma, thymic carcinoid, liposarcoma, cholangiocarcinoma, osteosarcoma, breast cancer, duodenal cancer and ovarian cancer.

In an autopsy study by Cubilla and Fitzgerald, 261 of 411 neoplasms within the pancreas were metastatic. Among these were 49 metastases from the lung. The majority of these carcinomas were of an epidermoid morphology. [9]

The diagnostic technique of choice is an abdominal CT scan, and the role of PET is to detect up to 10% of unsuspected lung cancer metastases not observed by CT scan [10]

Several studies have demonstrated a poor prognosis with lung cancer metastatic to the pancreas when compared to other primary tumors, especially renal cell carcinoma .The median survival of metastatic lung cancer to the pancreas is approximately 5 months, compared with 12 months in renal cell carcinoma [11].

The treatment features are similar to lung squamous-cell carcinoma metastasis to other sites. If we have limited metastasis to pancreas only, we should discuss aggressive resection of the lesion. But if we have disseminated metastasis, palliative chemotherapy is used, using platine-based protocols, like we did in this case.

**Conclusion:**

Our patient had a metastatic lung cancer with a rare pancreatic localization. Therefore, even if the pancreatic metastases of lung cancer are rare, it must be considered when performing a metastatic workup.

**Abbreviations:**

- PET: Positron Emission Tomography
- CT: computed tomography
- SUV: standard uptake volume
- CK: cytokeratin
- AUC: Area Under the Curve

**Declarations:**

**Consent:**

Written informed consent was obtained from our patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal

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**Authors' Contribution :**

KAS was in charge of the overall care of the patient, reviewed literature, and drafted the manuscript and revised it critically for important intellectual content. AD carried out the literature review. YS and EC participated in the literature review. HE and MI carried out the conception of the case, revised it critically for important intellectual content. All authors read and approved the final manuscript.

**Competing interests:**

The authors declare that they have no competing interests.

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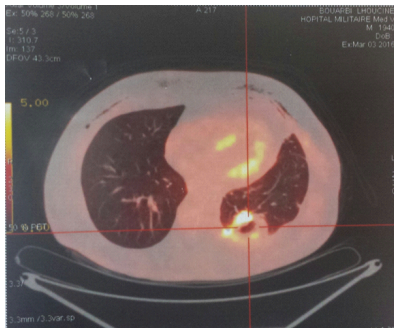
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**Ethics approval and consent to participate:**

Not applicable.

**References:**

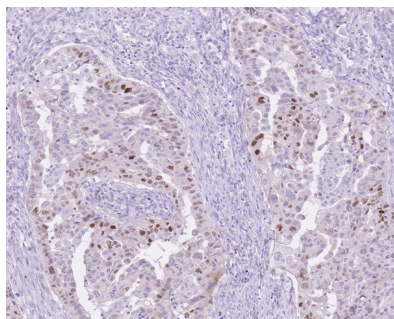
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**Fig1: PET scan showing a left posterior basal mass with a SUV of 16.9**



**Fig2: PET scan showing a mass in the tail of the pancreas with a SUV of 3.4; and bilateral adrenal lesions with a SUV of 4.2**



**Fig3: Cytomorphological features and immunocytochemical staining on lung biopsy: poorly differentiated squamous-cell lung carcinoma showing expression of p63.**