

Metastatic Disease to the Pancreas from Squamous Cell Lung Cancer: a case report

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Abstract- We present a one clinical case of patient with metastasis of squamous cell non-small-cell lung cancer in pancreas. A 49-year-old Caucasian male patient presented to our Medical Oncology department with obstructive jaundice and severe abdominal pain, after the last course of chemotherapy. Six months prior to presentation the patient had undergone right bronchoscopy, due to stage IV, moderate-grade squamous cell lung carcinoma. After the bronchoscopy, the patient receive chemotherapy and radiotherapy. Abdominal computed tomography on admission after the last course of chemotherapy, revealed lesion located at the head of the pancreas, causing biliary obstruction. The abdominal computer tomography reveals also lesion in left adrenal gland. Histological examination reveals and change in grade of the histology from moderate in primary foci in lung to low-grade in metastasis in pancreas. Due to the severe pain in the abdomen and jaundice of the metastatic disease, surgical resection was proposed and the patient underwent pancreaticoduodenectomy. Histological examination of the resected specimen from pancreas confirmed a low-grade squamous cell carcinoma form the lung.

Keywords: squamous cell carcinoma, pancreatic, adrenal glands, metastasis, lung cancer.

Introduction

Lung cancer is the leading cause of cancer-related mortality not only in the United States, but also around the world ^[1]. The 2 main types of lung cancer are small cell lung cancer (SCLC) and non-SCLC (NSCLC), accounts for approximately 85% of all cases of lung cancer ^[2]. The prognosis of patients with metastatic non-small cell lung cancer (NSCLC) is poor, and their 1-year survival rate after cytotoxic chemotherapy is only 29% ^[2].

Case Presentation

A 49 year-old Caucasian male patient, current smoker with a 35-pack year history, diagnosed in May 2019 after bronchoscopy with moderate-grade squamous cell carcinoma of the lung and pulmonary contralateral lung metastases. After an X-ray examination was performed, osteolytic metastases was found of the right femur and of the right ischial spine were proved bone 24/4 mm. After discussing of his medical case, a decision made from multidisciplinary team to pass 6 courses of chemotherapy, osteomodulators and radiation. In May 2019, he started cytostatic chemotherapy with Cisplatin and Vinorelbine (1, 8 in 21 days). After the first course of chemotherapy, he started therapy with Zoledronic acid. In July, after 3 chemotherapy sessions with Cisplatin and Vinorelbine, the patient begins radiation with 6 MeV photons in the right thigh area for treatment of bone metastases with 20 Gray, completed with a realized total dose of 20 Gray and performed symptomatic therapy.

In August 2019, the patient continues with prescribed chemotherapy regimen with Cisplatin and Vinorelbine.

In September 2019 he started radiotherapy with 6 Mev photons in the left lung area with 40 Gray, as ended with a total realized dose of 40 Grays. In November 2019, immediately after the last chemotherapy the patient began to experience complaints of increased abdominal pain, black stools and a constant temperature of 37.7 degrees C. Abdominal ultrasound examination was performed with an established lesion of the pancreas measuring 42/29 mm and enlarged ductus choledochus - 12 mm.

Abdominal computed tomography, revealed lesion located at the head of the pancreas with size of 25.4 mm, causing biliary obstruction (*Fig. 1*).

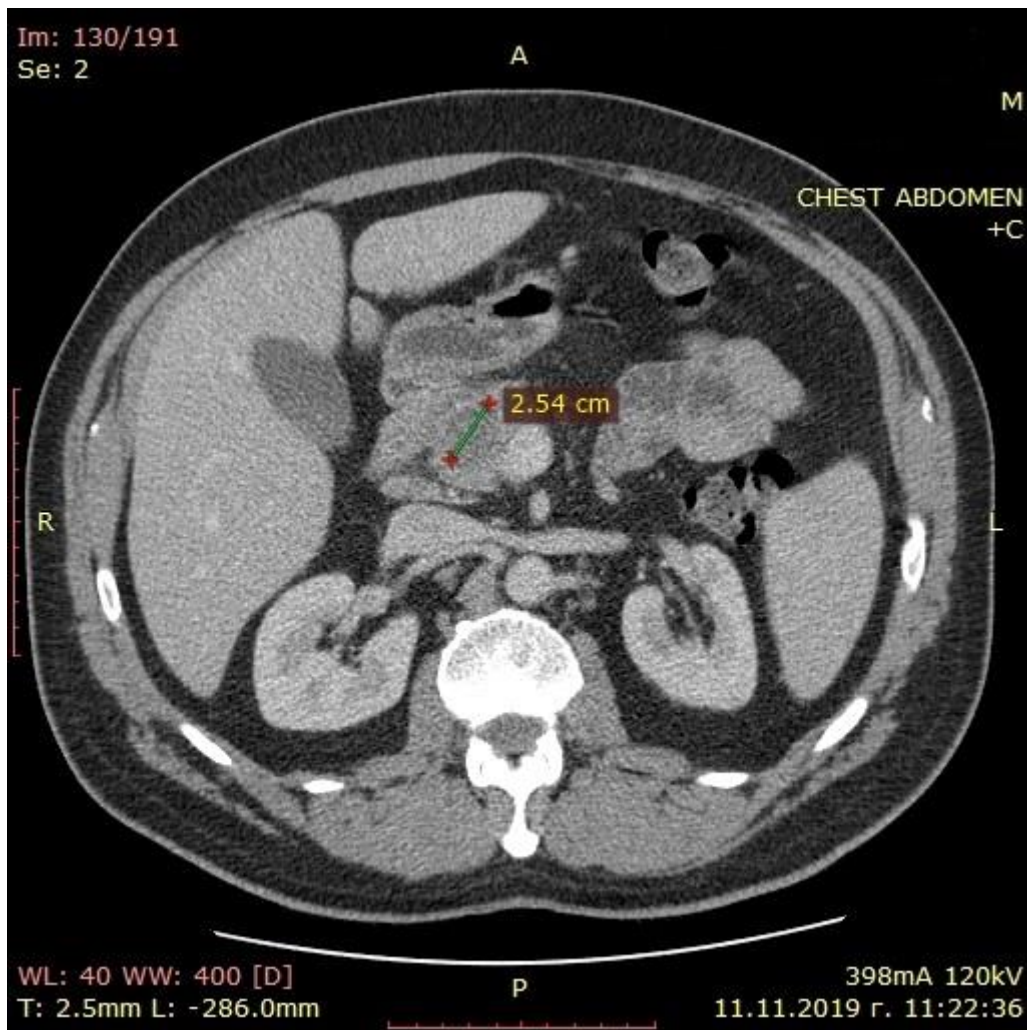


Fig. 1

The abdominal ultrasound, established lesions in adrenal glands. After that a decision was made by a multidisciplinary team to initiate Pembrolizumab treatment (with PD-L1 expression >1%). It was conducted 1 course on treatment. Immediately after the first course of immunotherapy, the patient receive complaints of very severe abdominal pain, black stools, general fatigue, yellowing and high fever. Low blood hemoglobin levels were detected from the blood picture.

He was consulted immediately with surgeon with decision for surgical intervention. Laparotomia was performed. Operationally was established a tumor formation in the pancreatic head region and thickening of his body with enlarged and intense gallbladder and dilated ductus choledochus. Infiltration of the duodenum from changes in the head of the pancreas was detected, also and dilatation of the stomach. As an accidental lesions in the terminal ileum was found 3 suspected metastatic tumors in the abdominal wall and mesenterium.

Adrenal histology has not been taken. No further follow-up for histology of adrenal gland were performed at that time. It was sent histological specimens from the pancreas for examination. The pathologic examination confirm of pulmonary histology squamous cell carcinoma, but with change grade of differentiation from moderate in primary foci in the lung to low grade found in metastasis in pancreas.

However, despite the efforts made with a picture of multiple organ failure and carcinoma intoxication, the patient passed away.

Discussion

To date, several have been detected in the English-language literature clinical cases that describe the occurrence of such pathology. In the searches made in PubMed, only 7 cases were reported the findings as clinical case.^[13,14,3,4,5,6,7] Metastasis to the pancreas and adrenal glands from squamous cell carcinoma of the lung is a severe manifestation of the disease.

Metastasis from a non-biliary and non-gastrointestinal tract cancer to the common bile duct is also rare and is an unusual presentation for lung cancer^[16].

Different types of lung carcinomas, have preferential metastatic site, such as liver metastasis in small-cell lung carcinoma (SCLC) and brain metastasis in SCLC and adenocarcinoma [15].

For example, squamous cell carcinomas in many cases have a tendency to locally invade the thoracic wall [15].

We can not, however, to disagree with the opinion of Laurie Matt and Rajesh Sehgal, that the presence of pancreatic [14] and eventually adrenal glands, in our case, metastases is probably a much more common phenomenon, that deserves attention on the part of clinicians because it is detected at a late stage in the development of the disease and can dramatically impair the quality of life of patients. According Laurie Matt and Rajesh Sehgal the incidence of radiographically evident metastatic disease to the pancreas is relatively low [14]. Its early detection and recognition can add months to these patients and improve their overall condition.

According Tamura et al. among 729 metastatic NSCLC patients, 250 (34.3%), 234 (32.1%), 207 (28.4%), 122 (16.7%), 98 (13.4%) and 69 (9.5%) had bone, lung, brain, adrenal gland, liver and extrathoracic lymph node metastasis, respectively [10]. Metastasis in adrenal glands are more frequent in small cell lung cancer [8]). According Milovanovic et al., the most frequent hematogenous metastases occur in the liver and adrenal glands, various histological types of lung cancer show specific dissemination patterns [9]. Apparently in non-small cell lung cancer they are more uncommon.

Our patient was with metastatic disease to the pancreas and was present with abdominal pain, weight loss, acute pancreatitis, jaundice, or diabetes and hyperglycemia. This are common statement in such patients, but metastatic disease can be asymptomatic [17]. Asymptomatic disease makes the detection of pancreatic metastases a hardship.

Conclusion

Metastasis of squamous cell carcinoma of the lung in the pancreas is a severe and rare occurrence and there are currently several reported cases in the English language literature. Detection of squamous cell lung metastasis in the pancreas is a rare case, unlike metastases in the adrenal glands. To data metastasis in the pancreas and adrenal glands remains with very poor prognosis and poor survival.

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Patient consent for publication

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