Extrahepatic Biliary Obstruction Due to a Solitary Pancreatic Metastasis of Squamous Cell Lung Carcinoma. Case Report

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Abstract

A 53-year old male, with a history of squamous cell lung carcinoma, was presenting with jaundice. Examinations showed a pancreatic tumor infiltrating the common bile duct and a percutaneous biopsy proved that the lesion was metastatic from the lung carcinoma. The decision was taken to perform a laparotomy. During laparotomy, a palliative operation was performed to relieve the jaundice. According to the literature, symptomatic metastatic lesions of the pancreas from squamous cell carcinoma of the lung are infrequent.

Key words
Obstructive jaundice - pancreatic metastasis - lung cancer - squamous cell carcinoma

Rezumat

Prezentăm cazul unui pacient de 53 ani, cu antecedente de carcinom pulmonar cu celule scuamoase, care s-a internat pentru icter. Examinările efectuate au decelat o masă tumorală pancreatică care infiltra calea biliară principală. Biopsia percutană a arătat că tumora era o determinare secundară a carcinomului pulmonar și s-a decis efectuarea unei laparotomii în cursul căreia s-a realizat o procedură paliativă pentru rezolvarea icterului. Conform literaturii carcinomul pulmonar cu celule scuamoase evoluează rareori cu determinări secundare pancreatice.

Introduction

Metastatic tumors of the pancreas are a rare clinicopathological entity (3-12%) (1). The most common primary site is lung cancer (18-27%) (1,2). Although lung cancer can often cause solitary metastatic lesions to the pancreas (21%), their frequency ranges according to the histological subtype of the primary neoplasm. The most frequent type is small cell carcinoma with a pancreatic metastasis incidence of 10%, adenocarcinoma (2.4%), large cell carcinoma (1.9%) and finally squamous cell carcinoma with an incidence of 1.1% (3). These metastatic tumors are usually asymptomatic or the symptoms are unspecific, facts that lead to the misdiagnosis of the metastasis. The main complications of these lesions, although rare, are acute pancreatitis and obstructive jaundice. In this study, a rare case of obstructive jaundice caused by a metastatic tumor to the pancreas from a squamous cell carcinoma of the right lung is reported.

Case report

A 53 year old patient presented with jaundice, loss of appetite, nausea, and mild abdominal pain. A clinical examination revealed that the abdomen was soft, with mild tenderness especially in the right hypochondrium and epigastrium, normal-sounding peristaltic waves and normal blood pressure, with a body temperature of 37.2°C. He had a history of squamous cell carcinoma of the lower lobe of the right lung, which was diagnosed six months before by a cytologic examination of sputum and transbronchial biopsy using fiberoptic bronchoscopy. He underwent 8 chemotherapy sessions (Docetaxel with Amifostine and Carboplatin with Gemcitabine). The laboratory tests showed a 30% hematocrit, 13,500 white blood cells count, 17.1 mg/dl bilirubin, 215 U/L SGOT, 330 U/L SGPT. The renal function was normal.

The patient was admitted and treated conservatively by inserting a nasogastric tube for upper-intestinal decompression, central venous catheter for intravenous fluid administration and a Foley tube in the urinary bladder to record urinary output. He was also given wide-spectrum antibiotics, octreotide and proton pump inhibitors. Brain, chest and abdominal CT scans showed the known carcinoma of the lower lobe of the right lung (Fig.1),
a tumor in the pancreatic head, measuring 4x4.1x3.5 cm (Fig 2), dilatation of the biliary tract, and multiple enlarged lymph nodes in the cervical area, the mediastinum and the abdomen. A percutaneous fine needle aspiration of the pancreatic tumor under CT guidance revealed that the histological type was the same type as the primary site in the lung. Taking into account all findings, an investigatory laparotomy was undertaken.

During laparotomy, a tumor of the pancreatic head was found, which was infiltrating the endopancreatic segment of the common bile duct resulting in dilatation of the biliary tract, accompanied by enlarged lymph nodes near the pancreas and the aorta. The tumor was not surgically resectable and a palliative operation was decided. A cholecystojejunostomy was performed to relieve the jaundice, completed by a side-to-side enteronanastomosis, and a large lymph node near the pancreas was excised for cytopathological examination.

The cytopathological examination of the lymph node showed that it was a metastasis of the squamous cell carcinoma of the lung. Postoperatively, there were no complications involving the abdomen and bilirubin levels normalised on the 5th postoperative day. However, on the third postoperative day, the patient presented with respiratory distress because of atelectasis of the lower lobe of the right lung and pleural effusion, which was successfully treated conservatively. On the 8th postoperative day the patient presented with Adult Respiratory Distress Syndrome and died in the ICU, on the 19th postoperative day, due to Multiple Organ Failure.

Discussion

Metastatic tumors of the pancreas are a rather unusual autopsy finding in patients with malignant disease (3-12%) (1). The route of metastases is lymphatic (28%), vascular (27%), lymphatic-vascular (19%) and through direct invasion (18%) (2). These lesions usually appear in patients aged 60-70 years and the most common pattern of metastasis is a solitary tumor located in the head of the pancreas (4).

There is disagreement in the literature about the frequency of the primary sites that give rise to metastases in the pancreas. This could be due to the differences in the frequency of the various malignancies in these studies. In most studies, lung cancer is the most frequent type of malignancy causing pancreatic metastases (1,3,5-7), followed by renal carcinoma, breast cancer, colorectal cancer, hepatobiliary tract cancer etc. Regarding lung cancer, small cell carcinoma is the most frequent cytological type of lung malignancy that metastasizes to the pancreas (10%), followed by adenocarcinoma, large cell carcinoma and squamous cell carcinoma (3).

Patients with pancreatic metastases remain asymptomatic, the disease therefore is at an advanced stage at the time of diagnosis. In many cases, the metastatic lesions are discovered incidentally and are mistaken for primary pancreatic tumors (8). The diagnostic approach includes abdominal CT, percutaneous fine needle aspiration of the pancreatic tumor under CT guidance and, where needed, laparotomy for a possible resection of the tumor or a palliative bypass operation (9,10). The choice of bypass is often made during laparotomy and this could be cholecystojejunostomy, choledocho-jejunostomy or choledocho-duodenostomy, followed by enteroentero-anastomosis or Roux-en-Y jejunal loop to avoid the development of cholangitis due to reflux of the bowel contents into the biliary system. Because of advanced disease at the time of diagnosis, only 2% of pancreatic tumors requiring operation are resectable, a fact that leads to a mean survival of 8.7 months after the diagnosis of the metastatic lesion (11).

To our knowledge, pancreatic metastases from squamous cell carcinoma of the lung are unusual, they are rarely symptomatic and obstructive jaundice due to these lesions is very infrequent.

References