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# A case of a small cell lung carcinoma presenting with jaundice due to pancreatic metastasis

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## ÖZET

**Pankreas metastazına bağlı sarılıkla gelen küçük hücreli akciğer karsinomu olgusu**

*Otopsi serilerinde akciğer kanseri pankreas metastazı yüksek oranlarda bildirilmesine rağmen, sarılıkla seyreden semptomatik olgular oldukça nadirdir. Pankreasa en sık metastaz yapan histolojik tip küçük hücreli karsinomdur ve prognoz kötüdür. Bu makalede, sarılık, bulantı-kusma, kilo kaybı ve karın ağrısı gibi gastroenterolojik yakınmalarla hekime başvuran ve daha sonra primer küçük hücreli akciğer karsinomunun pankreas metastazı tanısı alan bir olgu sunuldu. Hastaya tıkanma sarılığı nedeniyle palyatif cerrahi uygulandı. Solunumsal yakınmalar yerine, öncelikle gastroenterolojik yakınmalarla başvuran bu olgu, bu yönüyle ilginç bulundu.*

**Anahtar Kelimeler:** Akciğer kanseri, küçük hücreli karsinom, pankreas metastazı, sarılık.

## SUMMARY

**A case of a small cell lung carcinoma presenting with jaundice due to pancreatic metastasis**

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*Though the high incidence of pancreatic metastasis of lung cancer has been reported in autopsy series, symptomatic cases with jaundice due to that is very rare. Dominant histological type with pancreatic metastases is small cell carcinoma and prognosis is poor. Hereby, we report a case initially presenting with gastroenterologic symptoms as jaundice, nausea, vomiting, weight loss and abdominal pain and then diagnosed as primary small cell carcinoma of the lung with metastasis to pancreas. He underwent a palliative surgery due to obstructive jaundice. This presented case is a rare one with its priority of gastroenterologic symptoms rather than pulmonary complaints.*

**Key Words:** Lung cancer, small cell carcinoma, pancreatic metastasis, jaundice.

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Although the rate of pancreatic metastasis have been reported very high rates in autopsy findings of lung cancer especially small cell carcinoma of the lung, pancreatic metastasis is an infrequent clinical condition. Jaundice due to pancreatic metastasis is very rare clinical sign in lung cancer. We report a case initially presenting with gastroenterologic symptoms as jaundice, then diagnosed as primary small cell carcinoma of the lung with metastasis to pancreas.

### CASE REPORT

A 64 year-old man was admitted to gastroenterology department of our hospital due to abdominal pain, nausea, 14 kg of weight loss and jaundice for six days. He had no significant features in personal history except being a heavy smoker for 40 pack-years. His father and brother were died due to lung cancer. In physical examination, he had ictericia. All other system examinations were normal. Laboratory findings were as: Erythrocyte sedimentation rate: 75 mm/hour, Hb: 12 g/dL, Htc: 32%, AST: 94 U/L, ALT: 122 U/L, LDH: 761 U/L, GGT: 765 U/L, Total bilirubine: 9.5, conjugated bilirubine: 8.5 and protein (++) and bilirubine (++) in urine analysis. Abdominal ultrasonography demonstrated intrahepatic biliary duct dilatation dominantly at left lobe and the diameter of common duct was 13 mm. Besides, a hypoechogenic lesion with diameter of 33 x 25 mm in the head of pancreas, one lymph node with 2 x 2 cm diameter were localized in parachoeliac region, 1 x 1 cm opaque stone in the middle third of right kidney and hypertrophy of prostate was shown. Abdominal computed tomography (CT) revealed a lesion with 3 x 2.5 cm in the head of pancreas, two lesions with 1 x 1 cm at right and one with 1 x 1 cm in diameter at left surrenal gland, a stone with 1 x 1 cm diameter at right kidney (Figure 1). Endoscopic examination of upper gastrointestinal tractus showed two ulcers in the distal of esophagus, erosive gastritis, bulber ulcer and suspicious segmental invasion at the second portion of duodenum. Histopathologic examination revealed chronic esophagitis, chronic active gastritis with intestinal metaplasia and duodenitis.

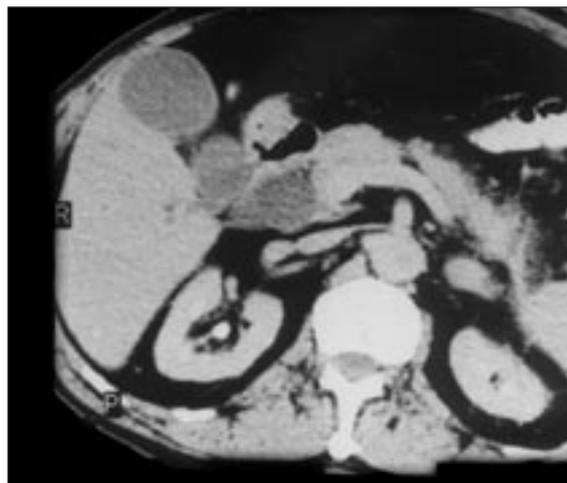


Figure 1. CT of the abdomen showed a lesion with 3 x 2.5 cm in the head of pancreas and a lesion with 1 x 1 cm in diameter at left surrenal gland.

He had no pulmonary symptom. PA chest radiogram demonstrated a hilar-infrahilar mass in 3 x 4 cm diameter with regular borders without erasing mediastinal line and linear densities at inferior zone of right thorax. CT of thorax showed bilaterally axillary lymph node enlargement (1 x 1 cm), 5 x 6 x 5 cm of a mass localized from the hilus through the infrahilar area at right hemithorax and peripheral atelectasia (Figure 2). Fiberoptic bronchoscopy demonstrated two endobronchial lesions obstructing the entrance at right median and inferior basal lobes. Biopsy was taken and histopathological examination confirmed small cell carcinoma of the lung.

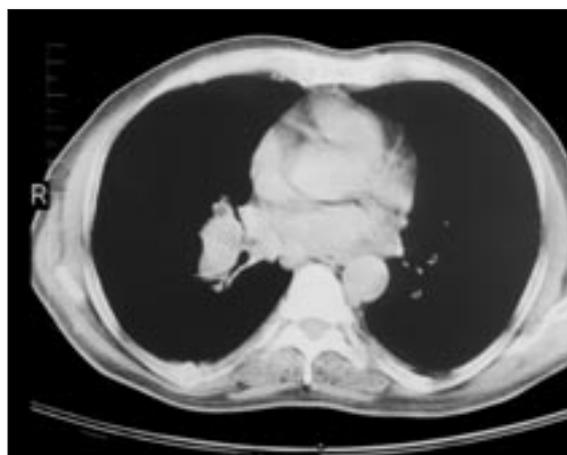


Figure 2. CT of the chest showed a mass localized from the right hilus through the infrahilar area.

In the patient's clinical course, serum bilirubine levels and all other liver function tests were elevated. He was consulted for palliative surgery and underwent surgical exploration. A mass with diameter of 8 x 6 cm localized at the head of pancreas invading retroperitoneal region and major vessels with multiple metastatic deposits on the whole surface of the visceral organs and multiple paraaortic lymph node metastasis were seen in the operation. He was accepted as peritonitis carcinomatosa and gastrojejunostomy + cholecystojejunostomy + Braun anastomosis were performed as palliative procedures. Metastatic lesions excised from peritoneal surfaces confirmed metastasis of small cell carcinoma of lung histopathologically (Figure 3). He was dead due to multiorgan failure on the third postoperative day.

### DISCUSSION

Metastatic involvement of the pancreas is not an uncommon autopsy finding, however, pancreatic metastasis is an infrequent clinical condition. Maeno et al reported 26 patients with pancreatic metastasis out of 850 lung cancer patients (3%). In their series, the usual pattern of pancreatic metastasis involved a solitary nodule in 73%, multiple nodules in 11.5%, and diffuse swelling in 15.4% of the patients. Nineteen (73.1%) and 18 (69.2%) of 26 patients had liver and adrenal gland metastases, respectively. Finally, it was pointed out that pancreatic metastasis represented as a common site of extrathoracic spread of disease for the small number of

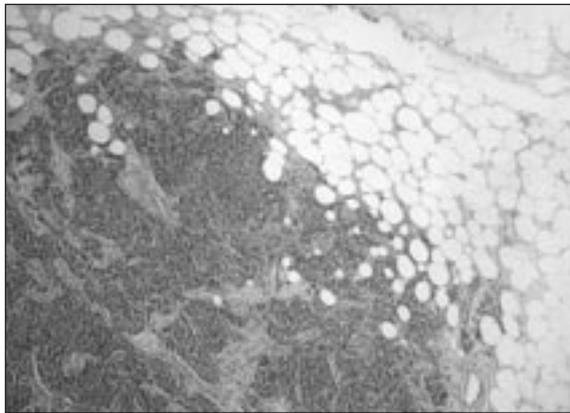


Figure 3. The areas of infiltration of small cell carcinoma in around of pancreatic tissue (HE, x100).

patients with advanced lung cancer, especially in small lung cancer. Abdominal CT scan should be necessary in the diagnosis of metastasis (1).

On the other hand, various case reports of pancreatic metastasis have been reported in the literature. Aimino et al reported a case of small cell carcinoma with solitary pancreatic metastasis confirmed by ultrasound guided biopsy (2). Shamelian et al reported a case of extrapulmonary small cell carcinoma with pancreatic origin whom gave partial response to chemotherapy (3).

Jaundice is a rare clinical sign of lung cancer. Johnson et al reported 12 patients presenting jaundice with small cell lung cancer at diagnosis (4). Five patients had a pancreatic metastasis resulting in extrahepatic biliary obstruction, and seven had diffuse hepatic metastasis without extrahepatic obstruction. They also reported that small cell lung cancer can present with jaundice due to diffuse hepatic parenchymal involvement, which is associated with a poor prognosis, or as a result of extrahepatic biliary obstruction, which has potential for rapid palliation and prolonged survival (4). In the present case, the initial clinical signs are jaundice and abdominal pain. In the further examination of the patient in terms of pancreatic mass, small cell lung cancer was diagnosed.

In the Turkish literature, there is only one case of lung adenocarcinoma with pancreatic, liver, bone, brain metastasis and disseminated intraabdominal lymph node involvement published by Oner et al (5).

Acute pancreatitis is associated with not only primary carcinoma of the pancreas but also metastatic cancer of the pancreas in cancer patients (6-9). Among patients with pancreatic cancer, acute pancreatitis caused by metastases has been reported in up to 3%. However, pancreatitis caused by metastatic carcinoma is uncommon and a review of the literature showed few reports of this condition (6,7). Small cell carcinoma of the lung has been reported to be the most common tumor in the causes of metastasis-induced acute pancreatitis (MIAP) (6-9). In 1993, Chowhan and Madajewicz reported that

small cell carcinoma of the lung was found in 6 of 10 patients with MIAP (10). Small cell carcinomas are known to metastasize to the pancreas with a higher frequency than other lung cancers. Prognosis is poor and cause of death is commonly due to acute pancreatitis or disseminated metastatic disease (7). Therapeutic approach should be proposed for those patients with more severe symptoms and signs and should receive supportive care only, although chemotherapy may be appropriate in some instances as severe pancreatitis (7,8). Our case did not have acute pancreatitis, his survey was very short. If he had long survey, chemotherapy would have been a proper therapotic approach.

Although the rate of metastasis to the pancreas have been reported up to 40% in autopsy findings of small cell carcinoma of the lung, it wasn't so much in terms of clinical manifestations in patients (8). Mechanisms implicated for the development of jaundice include acute pancreatitis, mechanical obstruction of ducts by pancreatic mass and/or metastatic lymph nodes. Nevertheless, a case of lung cancer whose initial clinical manifestation was jaundice has been rarely reported (8).

In conclusion, this present case is reported due to its interesting initial clinical manifestations as jaundice and abdominal pain. It should be kept in mind that jaundice and abdominal pain may be a rare way taking the clinician to lung cancer.

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