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Metastatic Small Cell Lung Carcinoma Mimicking Pancreatic Head Tumor: A Case Report

Burak Dinçer

Department of General Surgery, University of Health Sciences, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Türkiye

ABSTRACT

Background: Metastatic masses in the pancreatic head are uncommon, and consensus on their optimal management is lacking. Although renal cell carcinomas are most commonly associated with pancreatic metastases, there are also reported instances of pancreatic metastases originating from lung cancer.

Case Report: A 65-year-old male presenting with jaundice underwent imaging studies, which revealed a mass in the pancreatic head. Subsequent imaging identified a 7 cm tumor in the left lung's hilar region, originating from the bronchus. A bronchoscopic biopsy of this hilar mass confirmed small-cell lung carcinoma. Biopsy results from the pancreatic head mass, obtained through endoscopic ultrasound, confirmed it as a metastasis from the primary small-cell lung carcinoma. The patient commenced systemic chemotherapy.

Conclusion: In the differential diagnosis of pancreatic head masses, clinicians should consider the possibility of rare metastatic masses. The treatment for metastatic cases should be determined through a multidisciplinary approach.

Keywords: Cholestasis, neoplasm, obstructive jaundice, pancreatic head metastasis, small-cell lung cancer.

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Address for correspondence:
Burak Dinçer.
Department of General Surgery, University of Health Sciences, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Türkiye
Phone: +90 212 373 50 00
E-mail:
burak-dincer@hotmail.com

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INTRODUCTION

Metastatic masses in the pancreatic head are rare and may manifest with symptoms of obstructive jaundice. Literature reports have documented pancreatic metastases from renal carcinomas, breast tumors, and lung malignancies.[1] Notably, small-cell lung carcinoma (SCLC) is a tumor with high metastatic potential due to its aggressive biological nature. Metastasis of SCLC to the pancreatic head has been documented in the literature.[2–4] This article presents a case investigated for a mass in the pancreatic head diagnosed with metastatic SCLC.

CASE REPORT

A 65-year-old male patient presented with jaundice and pruritus over the past month. Laboratory tests revealed elevated alkaline phosphatase (ALP) at 312 IU/L, gamma-glutamyl transferase (GGT) at 83 IU/L, and total/direct bilirubin levels of 14.8/9.7 mg/dL. An abdominal ultrasound identified a 35x30 mm mass in the uncinate process, prompting admission to the

Figure 1. Mass in the pancreatic head located in the uncinate process (indicated by a white arrow).

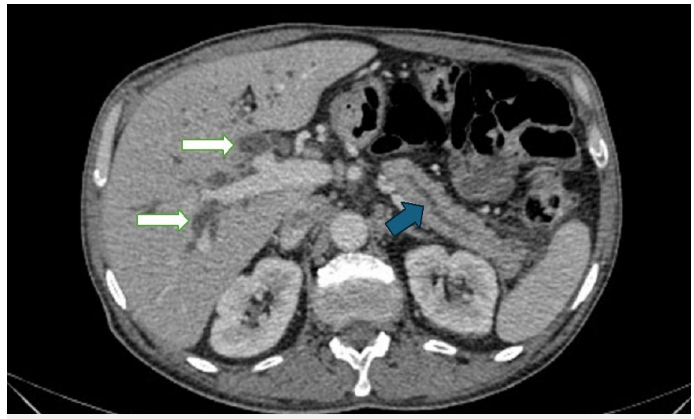

Figure 2. Dilated intrahepatic bile ducts (indicated by white arrows) and the Wirsung duct (indicated by a blue arrow).

general surgery service. Staging thoracic and abdominal computed tomography scans showed a 49x43 mm mass in the pancreatic uncinate process (Fig. 1), which caused secondary dilation of the intrahepatic bile ducts and the Wirsung duct (Fig. 2). Additionally, a 79x55 mm mass in the left hilar region obliterated the anterior segment bronchus of the left upper lobe (Fig. 3). Bronchoscopic biopsy of the lung lesion revealed a Ki67 index of 90%, staining positively for thyroid transcription factor-1 (TTF-1), and was diagnosed as SCLC. The pancreatic head mass was also assessed via endoscopic ultrasound and fine-needle aspiration biopsy. This biopsy also tested positive for TTF-1, supporting the diagnosis of metastasis from SCLC. Over a 14-day hospital stay, the patient's total/direct bilirubin levels decreased to 5.4/3.2 mg/dL. He was then transferred to the oncology unit, and systemic chemotherapy was initiated. Given the patient's newly diagnosed status, lack of prior chemotherapy, spontaneous improvement in bilirubin levels during hospitalization without any interventional procedure, and the high initial response rates of small-cell lung tumors to chemotherapy, systemic chemotherapy was chosen as the preferred treatment.

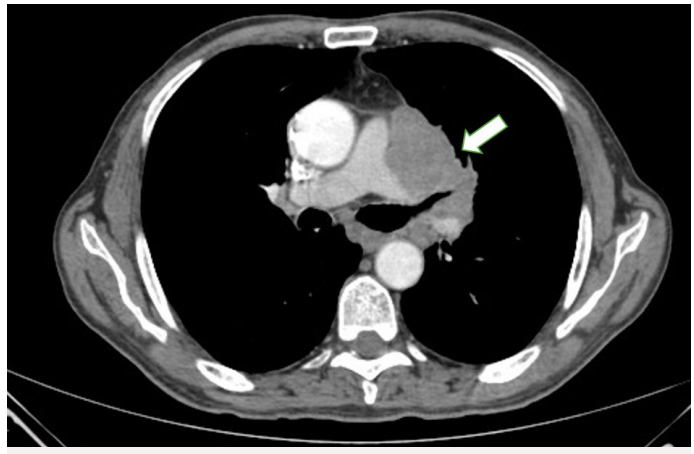

Figure 3. Mass lesion in the left hilar region (indicated by a white arrow).

DISCUSSION

Small-cell lung cancer is characterized by its aggressive biological nature and high metastatic potential.[5] Although initially responsive to chemotherapy due to high mitotic rates, SCLC frequently develops recurrences and metastases at a high rate. Consequently, the 5-year survival rate for metastatic small-cell lung carcinoma is reported to be between 4–6%.[6] At diagnosis, metastases are detected in two-thirds of SCLC cases. Common sites for metastasis include the hilar and mediastinal lymph nodes, contralateral lung, brain, bone, liver, and adrenal glands. Systemic chemotherapy is the primary treatment for metastatic SCLC.[5] The pancreas, however, is a rare site for SCLC metastasis. In a systematic review by DeLuzio et al.,[4] which evaluated 32 cases, survival rates were compared across curative surgery, palliative surgery, and non-surgical treatment modalities. It was observed that cases undergoing curative surgery achieved longer survival, though the majority of patients in the study had non-small cell lung cancer (NSCLC), with SCLC cases showing statistically significantly shorter survival. Therefore, there is no consensus on whether surgical resection, palliative methods such as endoscopic retrograde cholangiopancreatography (ERCP) with stenting, or systemic chemotherapy should be preferred for resectable pancreatic metastases from SCLC.[4,7,8] While surgical treatment may be applied in selected cases, it is important to consider that its contribution to overall survival may be limited.

CONCLUSION

In cases of obstructive jaundice, pancreatic head masses, although rare, may be metastatic. Systematic screening and, when necessary, histopathological verification will assist in establishing an accurate diagnosis. For metastatic pancreatic head lesions, the appropriate approach—whether pancreatic resection, endoscopic intervention, or systemic chemotherapy—should be based on the type of the primary tumor, the expected survival time, and the patient's clinical condition.

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