

Pulmonary Resection For Solitary Metastasis From Pancreatic Cancer

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ABSTRACT

Pancreatic cancer is still one of the most lethal cancer diseases, and recurrence occurs in more than 80% of the patients even though curative resection was achieved. We experienced a case of pulmonary resection for solitary lung metastasis of the pancreatic cancer that developed after pancreaticoduodenectomy and following adjuvant chemotherapy. The postoperative course was uneventful and long-term survival was achieved. Pulmonary resection could improve the prognosis of selected patients who are suffering from lung metastasis of pancreatic cancer, and can be considered as a treatment option.

Key words: Pulmonary resection; Solitary metastasis; Pancreatic cancer

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LETTER TO THE EDITOR

An 80-year-old man showed elevated serum amylase and CA19-9 levels during his medical check-up. Further examination including CT scan, MRCP and ERCP/EUS revealed the pancreatic head tumor, 1.5 × 1.2 cm in size, with slightly dilated main pancreatic duct and bile duct (Figure 1A-1C), which suggested highly suspected pancreatic cancer. He underwent subtotal stomach-preserving pancreaticoduodenectomy and the tumor was histologically diagnosed as moderately differentiated adenocarcinoma (Figure 1D). Subsequently, he received six cycles of gemcitabine-based adjuvant chemotherapy. He had no evidence of disease for 24 months after surgery, but his following work up including enhanced CT scan revealed new solitary lesion in his left upper lung, 0.5 × 0.5 cm in size, which was suspected for recurrence of pancreatic cancer (Figure 2A). Because the size of the nodule gradually increased (Figure 2B) but no other lesions detected at any organs, he underwent thoroscopic wedge resection of the left upper lung. The nodule was histologically diagnosed as a metastasis from pancreatic cancer (Figure 2C, 2D). The patient received additional gemcitabine-based chemotherapy after the second operation without any significant adverse drug events, and he is still doing well without any recurrence 10 months after the second operation (36 months after the first operation).

Pancreatic cancer is still one of the most deadly cancers, with the 5-year survival rate of less than 20% even after curative resection^[1,2]. Median survival for patients receiving surgical resection is only 12.6 months, and the high recurrence rate is the main reason of the very poor prognosis^[3]. Lung metastasis from pancreatic cancer is often multiple and is accompanied by metastatic lesions of other organs; resection of pulmonary metastasis from pancreatic cancer

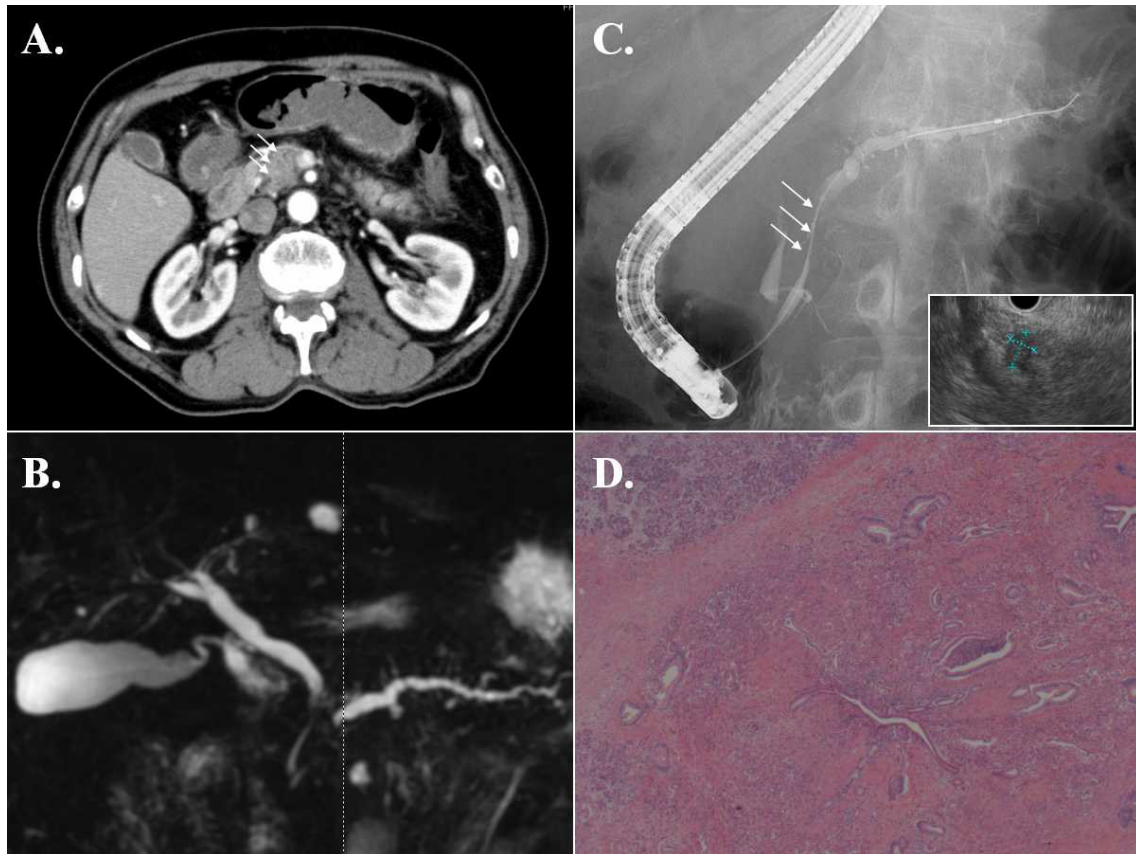


Figure 1 (A) Enhanced CT scan of the abdomen demonstrated undemarcated low-density mass in the pancreatic head (white arrows). (B) MRCP showed slightly dilated extrahepatic bile duct and main pancreatic duct. (C) ERCP showed irregular narrowing of the main pancreatic duct (white arrows), and EUS (small image shown lower right) detected small mass lesion, 1.5 x 1.2 cm in size in the head of the pancreas. (D) The resected tumor was histologically diagnosed as moderately differentiated adenocarcinoma.

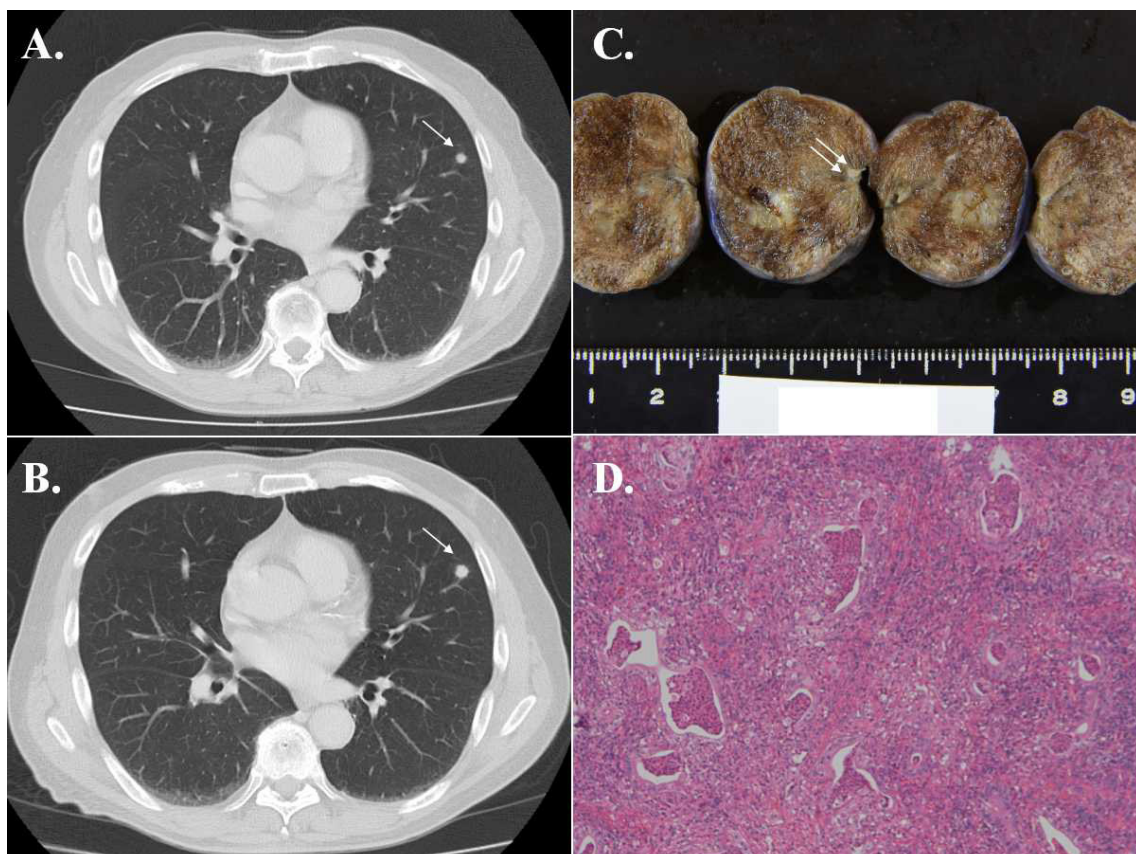


Figure 2 (A, B) Follow-up CT scan 24 months after surgery revealed new solitary lesion in his left upper lung (a white arrow), 0.5 x 0.5 cm in size, which was gradually enlarged during 3-month interval. (C, D) He underwent thoracoscopic wedge resection of the left upper lung, and the nodule (white arrows in Figure 2C) was histologically diagnosed as a metastasis from pancreatic cancer.

is rare and the majority of these patients are treated with palliative chemotherapy. However, lung resection should be considered if the patient met the following criteria; (1) surgical intervention can be tolerated, (2) the primary lesion can be controlled, and (3) extra-pulmonary metastases are not present or can be controlled^[4,5]. When the lesions are multiple, surgical resection might be considered if all the lesions are stable over time and are estimated to be resectable. If the lung lesion is detected after pancreatic cancer resection and it is difficult to differentiate primary lung cancer from lung metastasis, lung resection should also be considered if the patient can tolerate surgery^[6]. Additionally, some reports suggested that a long interval (e.g. 2 years or more) between the initial pancreatic resection and lung resection is related to long-term survival, like the current case^[6,7]. Thus, if patients meet these conditions, lung resection might be considered.

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