A case of anaplastic carcinoma of pancreas diagnosed with endoscopic ultrasound-guided fine needle aspiration cytology

Endoskopik ultrasonografi rehberliğinde ince iğne aspirasyon sitolojisi ile tanı konulan bir anaplastik pankreas karsinomu

To the Editor,

Anaplastic carcinoma of the pancreas is a rare and very aggressive tumor. It accounts for 2-7% of all pancreatic malignancies and occurs usually in older male patients (1,2). Three major histologic types have been described: spindle cell, sarcomatoid and pleomorphic carcinoma (3). While diagnosis can be made with surgical excision or surgical biopsy, diagnosis with endoscopic ultrasound (EUS)-guided fine needle aspiration (FNA) biopsy has become useful to obtain tissue samples in order to recognize this distinct entity. There have been only a few reports describing diagnosis of anaplastic carcinoma with EUS-FNA (4-6).

A 60-year-old male was admitted complaining of abdominal pain, nausea, vomiting, and weight loss (8 kg/3 months). The patient had jaundice and had been examined in another center two weeks before, and was referred to us after placement of a plastic stent in the common bile duct. Laboratory investigations revealed hemoglobin (Hb): 12 g/L, total/direct bilirubin: 2.5/1.9 mg/dl, CEA: 8.5 (0-3.4) ng/ml, and CA19-9: 218.7 (<39) U/ml. Transabdominal US showed suspected pancreatic mass lesion, and abdominal computed tomography (CT) revealed a hypoechoic mass lesion in the head of the pancreas. Thin-section pancreatic-phase sequence showed circumferential encasement of the celiac axis as well as hepatic artery and peripancreatic lymphadenopathies. Tumor stage was determined as T4N1M0 and classified as unresectable. The pancreatic duct measured 5 mm at the body of the pancreas. EUS showed a hypoechoic, heterogeneous mass lesion (26x32 mm) in the pancreatic head and peripancreatic lymphadenopathies (Figure 1). EUS-FNA was performed to obtain histological confirmation of the lesion. Cytologically, the tumor, which consisted of distinctive pleomorphic cells, was diagnosed as an anaplastic carcinoma (Figure 2). The patient received two cycles of chemotherapy (gemcitabine). He had stent exchange due to occlusion of the stent at the common bile duct. He is still alive four months after the diagnosis.

Anaplastic carcinoma of the pancreas is a rare and very aggressive tumor with survival prognosis of

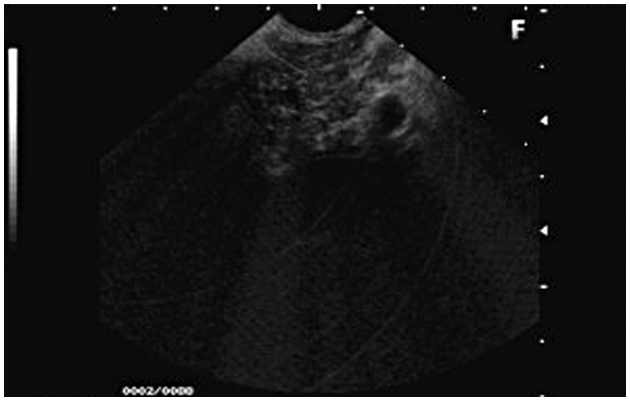

Figure 1. Endoscopic ultrasound revealed a hypoechoic heterogenous mass lesion in the pancreatic head.

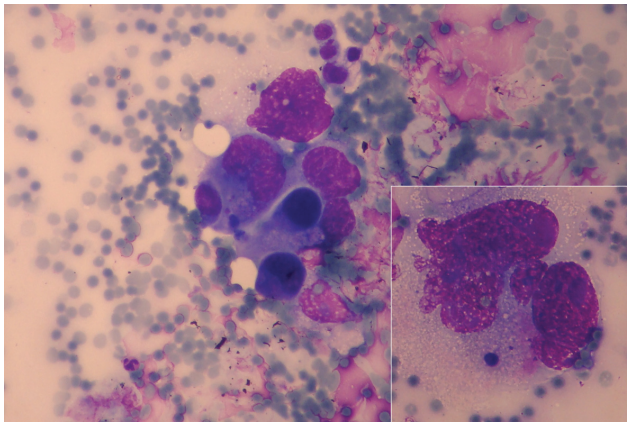

Figure 2. Cytopathologic examination showed multinuclear, bizarre, pleomorphic cells (May Grunwald - Giemsa).

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several months. A variety of terms have been used to describe these tumors, including undifferentiated or pleomorphic carcinoma, pleomorphic giant cell carcinoma, small cell carcinoma, and sarcomatoid carcinoma (2,3). Weight loss, fatigue, loss of appetite, abdominal pain, nausea, and vomiting are the usual clinical presenting symptoms.

There are two large series of anaplastic pancreatic carcinoma in the literature. Paal et al. (2) and Khashab et al. (4) described 35 and 13 anaplastic carcinomas of the pancreas, respectively. Paal's study was based on pathologic specimens of surgical materials, whereas in Khashab's study, the diagnosis was performed with cytologic samples of EUS-FNA biopsies (n=5) and surgical pathologies. There are also a limited number of case reports of anaplastic carcinoma diagnosed with EUS-FNA biopsy (5,6). Our case could be diagnosed based on cytologic examination obtained from the FNA biopsy. Cytopathologic examination revealed undifferentiated carcinoma with bizarre, pleomorphic cells in addition to spindle-shaped sarcomatous cells.

EUS-FNA has become a widely accepted modality for the tissue diagnosis of pancreatic lesions. Moreover, EUS-FNA of pancreatic masses is safe and has an overall accuracy of 90% (7). EUS-FNA plays an important role in differentiating ductal carcinoma from other rare pancreatic mass lesions such as small cell carcinoma and pancreatic lymphoma, and from benign conditions like autoimmune pancreatitis, although the necessity of obtaining a cytologic or tissue diagnosis in pancreatic cancer prior to surgery remains controversial and is highly dependent on the institution (8). Arguments in favor of preoperative biopsy include its ability to provide proof of pathology prior to surgery, to exclude unusual pathologies, and to provide evidence of disease before the initiation of a multidisciplinary treatment, such as neoadjuvant chemotherapy. There can be only one potential problem for EUS-FNA, i.e. tumor seeding, but it is a very rare entity, with only two case reports at present (9,10). For unresectable cases, histologic confirmation and typing are absolutely necessary for chemotherapy.

Although there are some CT and EUS features for discriminating between malignant and benign processes, their ability is limited, and EUS-FNA is one of the best procedures for obtaining a tissue diagnosis.

Anaplastic carcinoma usually presents with giant mass lesion, and diagnosis is based on histology. In our case, the patient presented with jaundice, which enabled the definition of early diagnosis and better survival. Definitive diagnosis was made by EUS-FNA.

Anaplastic pancreas carcinomas are associated with poorer survival when compared to invasive ductal adenocarcinomas. Neither curative resection nor chemotherapy or radiotherapy has been shown to have any benefit due to the aggressive nature and rapid recurrence rates of the disease (11). Palliative care and close monitoring are the only therapeutic options in most of the cases. Treatment alternatives for this dismal disease remain to be defined.

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