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Anaplastic pancreas carcinoma diagnosed by fine needle aspiration biopsy technique

İnce iğne aspirasyon biyopsi tekniği ile teşhis edilen anaplastik pankreas karsinomu

To the Editor,

Anaplastic carcinoma (undifferentiated) of the pancreas (ACP) is a rare variant of ductal adenocarcinoma, which commonly displays sarcomatoid spindle-cell and pleomorphic growth patterns. Other rare growth patterns have been reported, including rhabdoid and squamous patterns. Diagnosis of this type of tumor may be challenging due to the lack of glandular structures or other features of differentiation. However, it is very important to recognize this distinct entity because of the highly aggressive nature of this type of tumor (1).

A 60-year-old female presented with the complaints of band-like abdominal pain, fatigue, weight loss, and itching. She had been receiving oral antidiabetic treatment with the diagnosis of type 2 diabetes mellitus for the last five months. Her physical examination showed scratches all over her body. A firm, fixed and painful 10-cm mass with indiscernible borders was palpable in the left epigastrium. Laboratory investigations revealed hemoglobin (Hb): 7.3 g/dl, hematocrit (Hct): 22.5%, mean corpuscular volume (MCV): 79.8 fl, white blood cells (WBC): 11,800/mm^3, erythrocyte sedimentation rate (ESR): 130 mm/hour, fasting glucose 132 mg/dl, CEA: 187.3 (0-3.4) ng/ml, and CA19-9: 811.7 (<39) U/ml (high). Esophagogastroduodenoscopy detected external compression that extended to the antrum. Computed tomography showed a mass lesion measuring 13 x 12 x 5 cm in the pancreas that extended to the stomach and the small intestine, hypodense mass lesions in the right lobe of the liver with irregular and indiscernible borders (the largest one with a diameter of 5 cm) and paraaortic/caval millimetric lymph nodes (Figure 1). Percutaneous fine needle aspiration biopsy performed ultrasonographically and pathologic investigation revealed anaplastic carcinoma with pleomorphic and sarcomatoid features (Figure 2). The patient did not receive oncologic treatment due to her poor condition and she died 40 days after the morphologic diagnosis.

Anaplastic carcinoma of the pancreas (ACP) is a rare aggressive pancreatic tumor and accounts for 2-7% of all pancreatic cancers, with a male predo-

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Manuscript received: 01.02.2010 **Accepted:** 12.04.2010

doi: 10.4318/tjg.2011.0223

This study was presented at: 25th National Gastroenterology Week, November 12-16 2008, Adana

Figure 1. A large mass showing enhancement localized in pancreas body and tail is seen in CT scan of abdomen. The mass is more hypodense and heterogeneous than the pancreas and no fatty plane is observed between the mass and the abdominal wall

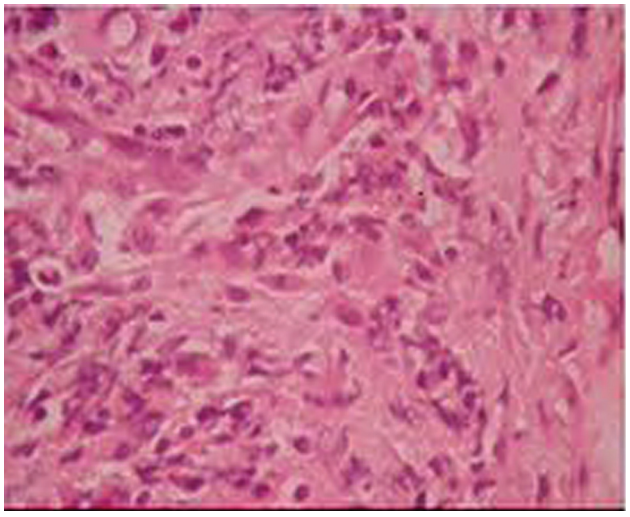

Figure 2. Tumor cells with sarcomatoid features

minance. Symptoms of anaplastic carcinoma include abdominal pain, loss of weight, fatigue, loss of appetite, nausea, vomiting, and diarrhea. Some earlier reports from Japan have described development of diabetes mellitus and leukocytosis, which occurred in our patient (14,15). Compared with poorly differentiated pancreatic ductal adenocarcinoma, anaplastic carcinoma has a loss or impaired expression of surface adhesion molecules, including E-cadherin and alpha- and beta-catenin, which may explain some of the aggressive nature of this tumor (6). Despite various morphology changes, the neoplastic cells usually have reactivity to epithelial markers and vimentin, indicating an epithelial origin with dedifferentiation (1). In our case, pathologic examination of the cell block revealed undifferentiated carcinoma with bizarre, pleomorphic cells in addition to spindle-shaped sarcomatous cells. Immunocytochemical studies showed vimentin positivity in sarcomatoid tumor cells. Cytokeratin and α-fetoprotein (AFP) showed epithelial and nonhepatocellular origins, respectively. There was no adenomatous differentiation. Although the ACP cases reported in the literature are diagnosed by exploratory laparotomy and laparoscopic biopsy, our case could be diagnosed based on examination of the cell block obtained from the fine needle aspiration biopsy (1,2,7).

Anaplastic carcinoma of the pancreas (ACP) is among the very invasive solid tumors of the pancreas. Due to its aggressive nature and ability to rapidly recur, the benefits of surgery, radiotherapy and chemotherapy have not yet been demonstrated. Further studies are required regarding the diagnosis and treatment of these tumors.

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