Echinococcus Multilocularis Infestation in the Head of the Pancreas

Betül Unal*, Gülsum Ozlem Elpek, Senay Yıldırım, Tekinalp Gelen, Okan Erdoğan and Can Ozkaynak
Akdeniz University, Medical School, Antalya, Turkey

Letter to Editor

Primary hydatid cyst of the pancreas is extremely rare, and occurs at a rate of 0.2-2% [1]. The causative agent is often Echinococcus granulosus (EG), which accounts for 99% of the cases. The hydatid disease caused by Echinococcus multilocularis (EM) is less frequent when compared with EG; however, the differentiation from neoplastic lesions poses a challenge [2-5]. We present a patient who underwent surgery with clinical diagnosis of a malignant tumor of the pancreases, and in whom serological tests and pathological examination revealed EM infection.

A 56-year-old female patient state the duration of pain, and the patient then underwent upper abdominal computerized tomography due to the finding of epigastric tenderness. The imaging of the abdomen revealed a 2 cm mass lesion localized in the head of the pancreas with moderate wall thickness, dense content, and hypodense appearance with peripheral enhancement in all imaging phases, and the patient underwent surgery with a provisional diagnosis of tumor.

The macroscopic examination revealed a 3.5x3.5x2.5 cm lesion in the head of the pancreas with irregular margins and patchy cystic appearance, but without a capsule. There were white-colored areas at the tumor periphery and yellow-brown-colored areas of bleeding and necrosis at the center of the lesion. The lesion was in contact with the pancreatic duct (Figure 1).

The microscopic examination revealed necrotic debris in the lumen of the cystic areas and numerous acute and chronic inflammatory cellular elements including macrophages and multinucleated giant cells (Figure 2a-d). The immunohistochemical examination showed strong cytoplasmic staining for CD68 (Figure 2e). Serial macroscopic sampling and multiple sections showed cuticular membrane fragments in two different areas (Figure 2b, f and g). Based on these findings, the pathological diagnosis of EM infestation in the head of the pancreas was established. The pathological diagnosis was supported by serological tests. There was no evidence for involvement in other organ systems.

Although primary hydatid disease of the pancreas is an extremely rare clinical condition, it must be included in the differential diagnosis of pancreatic tumors with cystic components, particularly in regions endemic for the disease. In the differential diagnosis those lesions should take into consideration such as pancreatic pseudocysts, serous and mucinous cystic tumors, solid pseudopapillary tumors, intraductal papillary mucinous tumors, and osteoclast-like giant cell tumors. The differentiation from malignant lesions was not possible based on the imaging and macroscopic findings. Pseudocyst and osteoclast-like giant cell tumors were suspected at the initial assessment based on the presence of intense inflammatory cells on the cyst walls, lack of epithelium lining the cyst wall, and the presence of multinucleated giant cells. Multiple sampling from the lesion showing cuticular membrane ruled out these possible diagnoses. Furthermore, staining of giant cells with CD68, but negative staining pattern for vimentin ruled out osteoclast-like giant cell tumor. To our knowledge, the current case is the seventh patient in the literature reported to have EM infection on the head of the pancreas [2-6]. Despite the rare...
occurrence of EM infection, its consideration in the differential diagnosis of pancreatic mass lesion is recommended due to the fact that it can mimic neoplastic lesions. Multiple sampling is essential to indicate the presence of a cuticular membrane.

References