Pancreatic tuberculosis: A close mimicker of malignancy

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Dear Editor,

Tuberculosis (TB) is a common disease in developing countries and remains a prevailing issue in developed countries. Isolated abdominal TB is a rare disease, with isolated pancreatic TB being even rarer (1,2). Pancreatic TB frequently poses problems in diagnosis because of its vague clinical presentation and unclear histopathological features. It has a relatively high incidence rate in immunocompromised individuals and is most often associated with miliary TB. TB is a curable disease, early diagnosis of which can help avoid unnecessary interventions including laparotomy.

A 34-year-old male patient presented with the complaints of abdominal pain and fever for 2 months. The patient had no history of TB and was HIV-negative. His clinical examination findings were unremarkable. Serum biochemistry revealed elevated SGOT and SGPT levels. His hematological parameters and renal function test results were within normal ranges. Ultrasound (USG) abdomen revealed a cystic lesion in the head of the pancreas; furthermore, computed tomography (CT) showed a well-defined cystic lesion measuring 65×46×30 mm in the head of the pancreas, with significant retro-peritoneal lymphadenopathy. USG-guided fine-needle aspiration cytology (FNAC) of the lesion showed epithelioid cell granulomas with pancreatic acinar cells and ductal cells against a background of necrosis (Figure 1,2). Ziehl-Neelson (ZN) staining for acid-fast bacilli (AFB) was positive (Figure 2 inset). The patient was started on anti-tubercular treatment. He responded well to it and is free of symptoms at 2 months.

Extrapulmonary TB involving the pancreas is very rare. This organ is rich in digestive enzymes, making it biologically resistant for tubercular infection. Primary pancreatic TB is more commonly seen in immunocompromised individuals. Secondary pancreatic TB may occur as contiguous spread from pancreatic lymph nodes or as a result of lympho-hematogenous spread from an occult focus in the lungs (3-5). Pancreatic involvement in TB can be either focal or diffuse.

The mean age of presentation is approximately 40 years, with men and women affected equally. Pancreatic TB has a very vague clinical presentation. The main symptoms at the presentation of pancreatic TB are pain (81%), weight loss (55%), fever (36%), recurrent vomiting (19%), and jaundice (17%) (6). Pancreatic TB may lead to acute pancreatitis, portal hypertension, intra-abdominal hemorrhage via direct invasion of a peripancreatic artery, chronic pancreatitis, and diabetes (7,8).

Pancreatic TB most commonly affects the head of the pancreas, although a few cases of isolated involvement of the pancreatic tail have also been reported.

There are no specific diagnostic radiological or histological findings for pancreatic TB. USG, CT, and magnetic resonance imaging (MRI) usually show multicystic lesions. On CT, pancreatic TB appears as a hypodense lesion with irregular borders, whereas MRI findings include a sharply delineated mass with heterogenous enhancement. These lesions are characteristically hypointense on fat-suppressed T1-weighted images and show a mixture of hypo/hyperintensity on T2-weighted images (8). The common bile duct and pancreatic duct are reported to be normal in pancreatic TB cases, irrespective of the location of the lesion. This is in contrast with pancreatic adenocarcinomas (situated centrally in the head of pancreas), where the pancreatic duct is found to be dilated.

Pancreatic TB is mostly diagnosed after laparotomy. A definitive diagnosis of TB on image-guided FNAC pre-

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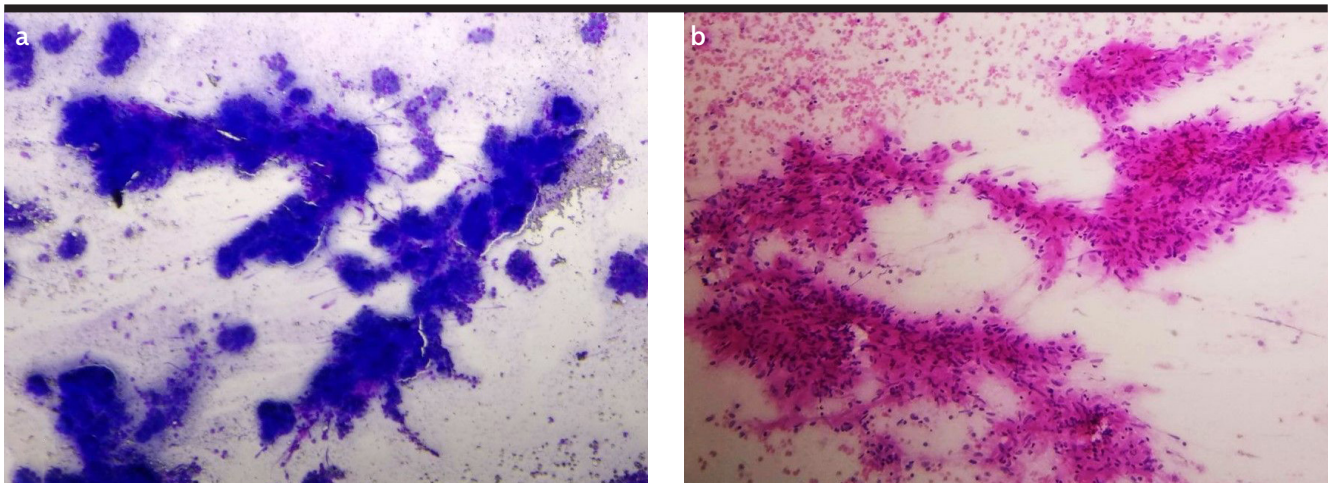

Figure 1. a, b. Epithelioid cell granuloma with scattered acinar cells (a. MGG, b. H&E; 100x).

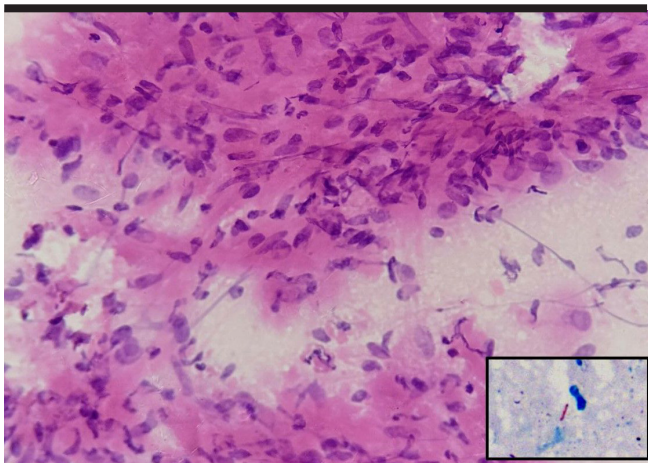

Figure 2. High power view of epithelioid cell granulomas (H&E, 400x). Inset showing AFB on Zeil Neelson stain (1000x).

vents unnecessary interventions. In the settings of clinico-radiological suspicion of pancreatic TB, image-guided FNAC/biopsy is highly recommended.

The sensitivity of image-guided percutaneous FNAC for detecting pancreatic TB is 50%-80%. However, EUS-FNA/biopsy has been proved to be a better tool with a sensitivity of 80%-95% (1).

Cytological findings in pancreatic TB include epithelioid cell granulomas with positivity for AFB on ZN staining or culture studies. The sensitivity of ZN staining (20%-60%) is lower than that of culture studies (approximately 77%) for the detection of AFB (1,2).

Abdominal TB is a very rare disease, with pancreatic TB being even rarer. Pre-operative diagnosis of pancreatic TB can be made on image-guided FNA or biopsy to avoid unnecessary surgery.

To conclude, the author emphasizes considering pancreatic TB as a differential diagnosis of pancreatic cystic lesions in endemic regions like India.

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