



Case Report

Pancreatic Tuberculosis: A Case Report

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Abstract

Pancreatic tuberculosis is a rare condition but as a result of increasing migration, tuberculosis is expanding internationally. We present a case of pancreatic tuberculosis in a 25 years old woman who presented with fever, and epigastric mass with pain. CT scan finding was compatible with pancreatic abscess, laparoscopic finding showed caseous materials. Granuloma was found in histology of pancreatic tissue and peri-pancreatic lymph nodes along with Acid Fast Bacilli (AFB). A multi-cystic heterogenous mass with some peri-pancreatic adenopathies on CT scan imaging may be good evidence for pancreatic tuberculosis diagnosis. Fine Needle Aspiration (FNA) to confirm a diagnosis of pancreatic tuberculosis may preclude unnecessary laparatomies.

Keywords: Pancreas; Tuberculosis; Iran

Introduction

Pancreatic tuberculosis is a rare condition but as a result of increasing migration, tuberculosis is expanding internationally. Epidemiological, clinical and radiological findings have improved the precision of diagnosis of pancreatic tuberculosis and therefore, should be included in the differential diagnosis of young patients with clinical symptoms and signs of tuberculosis (fever, weight loss and a developed pancreatic lesion) and living in endemic areas.¹ Pulmonary tuberculosis is a common disease in developing countries while extrapulmonary tuberculosis is not so common.^{1,2} Abdominal tuberculosis is often accompanied by enlarged abdominal lymph nodes involving the ilio-cecal region. Hepatic, splenic, and peritoneal involvement are less common.³

Case Report

A 25 year-old woman was admitted with fever, chills, night-sweating, weight loss, and abdominal pain of three month duration. There were no significant findings in personal and familial medical histories and no known contact with tuberculosis patients. Physical examination showed an elevated temperature (38.7°C), 6 kilogram weight loss, pallor and a painful tender mass in the epigastrium with no other abnormal symptoms or signs.

White Blood Cell count was 7700 per mm³ (PMN 73%, Lymphocytes 24%); Hb, 10 grs/100 ml; ESR, 91; liver function tests, normal; amylase, lipase, and LDH, normal; PPD with 16 mm induration and chest x-ray was normal (Figure 1).

Sonographic imaging of the last month was normal but showed pancreatic enlargement (Figure 2). Sonographic imaging upon hospitalization showed a non-homogenous mass of 41x36 millimeters in diameters located in the pancreas. There were no hepatic, splenic, or biliary duct abnormalities. Ascites was not observed. Spiral CT scan with contrast media (oral and

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Received: July 7, 2008 Accepted: October 5, 2008



Fig 1: Chest X ray of the patient.



Fig 2: Sonography of the patient.



Fig 3: CT scan before treatment.

injected) of hepatic and biliary ducts revealed no abnormalities. There was inflammation in the pancreatic corpus and the head parenchyma, with some non-homogenous, fluid-filled, and air-filled foci.

There was a high density of peri-pancreatic fat tissue which expanded to the small intestine. Additionally, there was compression of the gastric greater curvature and duodenal C-loop and a small amount of fluid in sub-hepatic space. Findings also showed necrotic tissue and abscess formation (Figure 3). The pancreatic abscess was drained by laparotomy (Figure 4) which revealed adenopathies in the pancreatic and para-aortic areas. Lymph node biopsy for pathologic investigation was performed and the pus was sent for Acid Fast Bacile (AFB) stain (Figure 5). Pathology revealed granulomatous inflammation in lymphatic nodes and pancreatic tissue and some AFB by Kinyoun staining (Figure 6).

The patient was treated with three medications (isoniazid, rifampicine, and pyrazinamid). She had no fever in three weeks and was doing well thereafter. Abdominal CT-scan six months later showed normal pancreatic size and parenchyma (Figure 7).

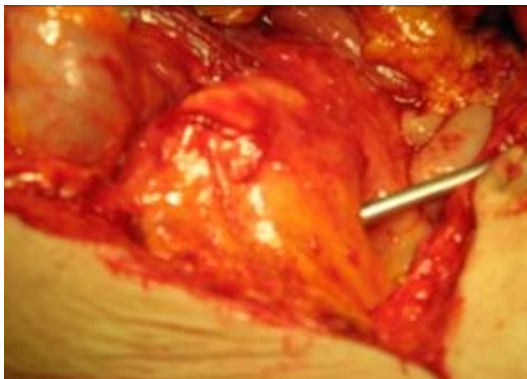


Fig 4: Pancreatic abscess in laparotomy.

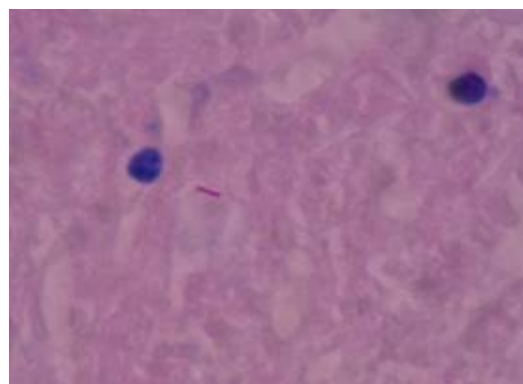


Fig 5: Acid Fast Bacile (AFB) stain.

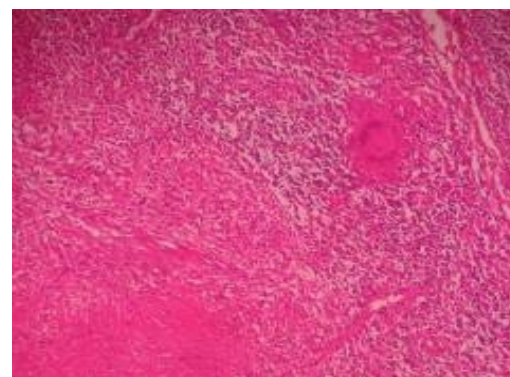


Fig 6: Granulomatous inflammation in lymphatic nodes and pancreatic tissue.

Discussion

Although pulmonary tuberculosis is increasing in endemic areas,³ pancreatic tuberculosis involving adjacent lymphatic nodes is very rare. In a report of 300 tuberculosis cases by Bhansali et al. covering a 12 year period, there were no pancreatic tuberculosis cases.⁴

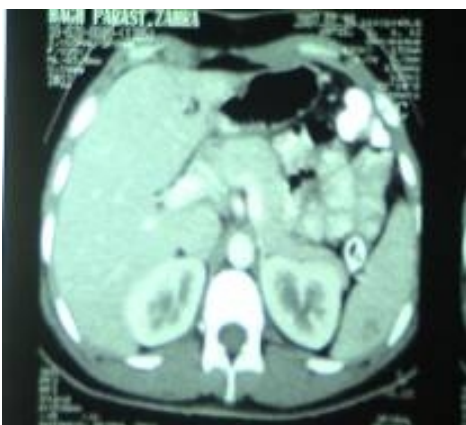


Fig 7: CT scan after treatment.

In two autopsy reports, pancreatic tuberculosis was reported in only 2.1% to 4.7% of cases.^{3,5,6} Pancreatic tuberculosis prevalence is similar in males and females, with the mean age of forty years and it is more prevalent in North-East Asian countries.^{7,8}

More pancreatic tuberculosis cases have been reported in recent years.⁷ The most complete report of pancreatic tuberculosis includes 42 cases from 1991 to 2001.⁸ Up to year 2004, 75 cases of pancreatic tuberculosis in patients without immunodeficiency were reported in literature.⁹ Till now, 80 cases of pancreatic tuberculosis were reported.¹ The increase in pancreatic tuberculosis cases is attributed to immigration from tuberculosis endemic regions to non endemic countries.⁷ Additionally, there is an association

between tuberculosis prevalence and HIV infection. It is recommended that all pancreatic tuberculosis patients be tested for HIV infection.^{8,10}

Signs and symptoms of pancreatic tuberculosis are as follows: abdominal pain in 81% of cases, weight loss in 55%, fever in 36%, vomiting in 19%, jaundice in 17%, and pancreatic mass. Often patients have a high erythrocyte sedimentation rate (ESR) and 70% of patients have positive PPD.^{7,8,11} Pancreatic mass is the most common form of pancreatic tuberculosis (more than 50% of cases).^{3,5,6,7} Pancreatic tuberculosis may presents as acute or chronic pancreatitis, cholestatic jaundice or may cause portal vein thrombosis, splenomegaly, thrombocytopenia and ascitis.²⁻¹⁵

Radiographic features are non-specific. Sonographic imaging shows hypoecho or heterogenic masses, and hypodense image on CT-scan. There may be multicystic lesions on imaging. Presence of a thick margin around the pancreatic lesion is indicative of pancreatic tuberculosis.^{9,12,16} Peri-pancreatic hypodense lymphatic nodes in adjacent mesentery is evidences of pancreatic tuberculosis.³ Conclusive diagnosis may be by histological investigation, performed by fine needle aspiration (FNA) or laparatomic biopsy and looking for AFB.⁷ Success rate with FNA examination is estimated at 50%.⁹ AFB can be seen only in 20-40% of cases.³⁻⁷ Interestingly, AFB was found in histologic slides in our case, too.

Conflict of interest: None declared.

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