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Case Report

Pancreatic tubercular abscess in a patient of disseminated tuberculosis

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ABSTRACT

Pancreatic tuberculosis is a rare clinical entity, despite the high prevalence of tuberculosis worldwide. When present pancreatic TB is seen usually associated with military/ disseminated TB in immuno-compromised patients with HIV topping the list in recent times. Here we present an unusual case of an immuno-competent individual with disseminated tuberculosis including pancreatic tubercular abscess a 30-year- old female was admitted with 3 months history of productive cough, constitutional symptoms and persistent epigastric discomfort. Patient had pallor and was febrile with no mass palpable per abdomen. Ultrasonography (USG)/ Contrast enhanced computed tomography (CECT) of abdomen showed cystic pancreatic lesion. Acid fast bacilli (AFB) were demonstrated in sputum as well as material obtained from USG guided fine needle aspiration (FNA) of pancreatic lesion which after 6 weeks of incubation showed growth of mycobacterium tuberculosis (MTB) confirming diagnosis of disseminated tuberculosis with pancreatic involvement. Patient was put on antitubercular therapy (ATT) and response was excellent. This case highlights that TB can affect nearly every organ of the body. It should be kept among differentials while evaluating pancreatic lesions. With adequate treatment it is curable.

Keywords: Disseminated tuberculosis, Pancreatic abscess, Acid fast bacilli

INTRODUCTION

Disseminated tuberculosis is defined as active TB disease characterized by concurrent involvement of at least two non-contiguous organ sites; or demonstration of *M. tuberculosis* in the blood and or bone marrow. Although TB usually involves lungs, about 20% of all TB cases have extra-pulmonary TB, nearly 50 per cent of them are human immunodeficiency virus (HIV)-positive.[1-3] By definition, extra pulmonary tuberculosis (EPTB) is when TB occurs at sites other than the lung. It can occur in almost any organ system; most commonly in the lymph nodes, pleura, genitourinary system, and bone.[2,3]

Abdominal TB is also common site for EPTB, It accounts for 5-12% of patients with tuberculosis (with the highest prevalence in developing countries) and almost 11-16% of patients with EPTB have abdominal involvement.[1,3-5] Abdominal TB includes infection of different combinations of gastrointestinal tract (especially ileocecal region), lymph nodes, peritoneum, and intraabdominal organs such as the spleen, liver, and very rarely pancreas.[3,6]

Pancreatic tuberculosis, either with or without peripancreatic lymphadenitis, is a rare occurrence in either immunocompetent or immunosuppressed host. Pancreatic tuberculosis have been reported in patients with military/ widely disseminated tuberculosis with pulmonary and extra-pulmonary involvement including pancreas, especially in acquired immunodeficiency syndrome (0.46%).[1,2,7,8]

But even HIV infected patients have an incidence of 0.46% only. We present a case of immuno-competent individual who presented with a cystic pancreatic lesion and was subsequently found to have disseminated TB with pancreatic tubercular abscess.

CASE REPORT

30 years old female with no significant past history presented with 3 month history of cough initially dry later productive associated with constitutional symptoms of low grade fever, weight loss, night sweats, anorexia. In addition patient also complained of persistent discomfort in the epigastric region unrelated to meals or a particular posture. Physical examination revealed patient was febrile, had pallor, mild to moderate epigastric tenderness with no palpable mass. No peripheral lymphadenopathy or icterus was present.

Laboratory results showed patient had normocytic normochromic anemia (Hb- 7.5gm/dl) with raised ESR (50 mm). LFT and other baseline laboratory investigations were normal including serum amylase. Sputum for AFB came positive in two sputum samples.

AFB staining of bone marrow aspiration was negative. ELISA for human immunodeficiency virus (HIV) was non-reactive. During imaging workup of patient, USG abdomen revealed Cystic lesion (3.6x2.8 cm) in relation to head of pancreas along with enlarged peripancreatic nodes (Figure 1).

Figure 1: USG showing cystic lesion in relation to head of pancreas.

This was further confirmed by CECT abdomen which showed a well-defined fluid attenuation cyst lesion with thin septations involving pancreatic head region with subcentimetric para aortic para caval lymph nodes. Also a CECT chest was obtained in this patient in which lung parenchyma was showing multiple small peri bronchovascular nodules in bilateral upper lobes and right lower lobe with minimal bilateral pleural effusion, multiple enlarged mediastinal nodes with central necrosis were also seen (Figure 3).

Finally USG guided aspiration of pancreatic cystic lesion was carried out, about 10 ml of thick pus like material was aspirated whose AFB staining came positive and later MTB culture was also positive with patient being already started on ATT with a diagnosis of disseminated tuberculosis- sputum positive pulmonary tuberculosis with pancreatic tubercular abscess.

After completing two months of ATT patient was symptom free with sputum smear being negative twice and follow up USG showing complete resolution of pancreatic cystic lesion (Figure 4).

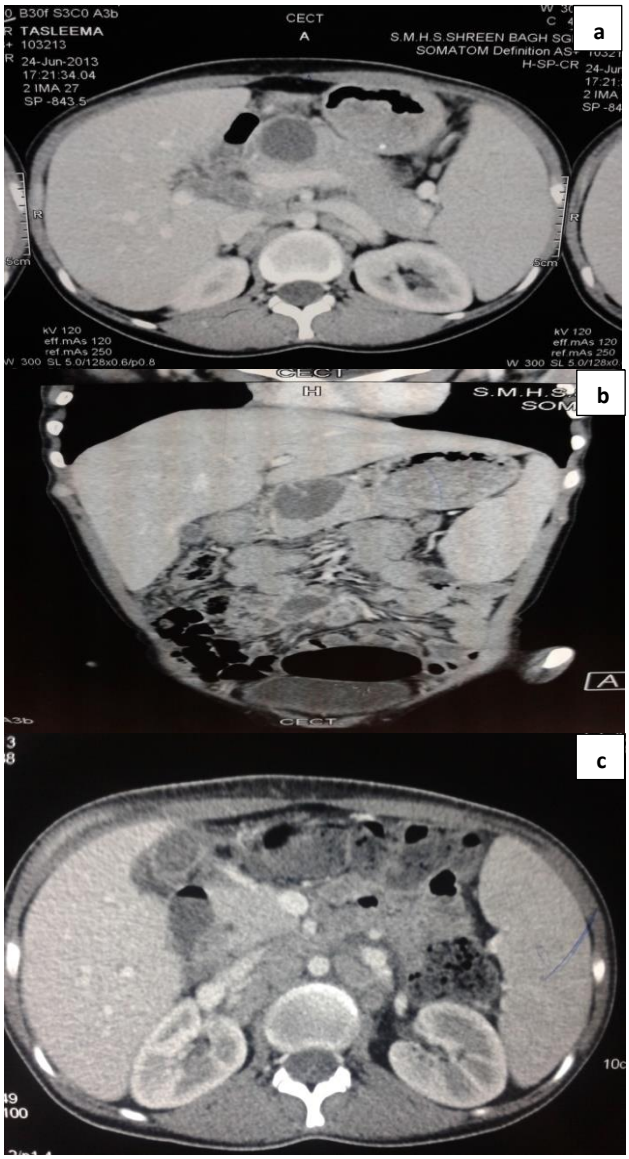

Figure 2(a-c): CECT abdomen showing bulky pancreas with a fluid attenuation cystic lesion involving pancreatic head region (A, B) with small peripancreatic lymph.

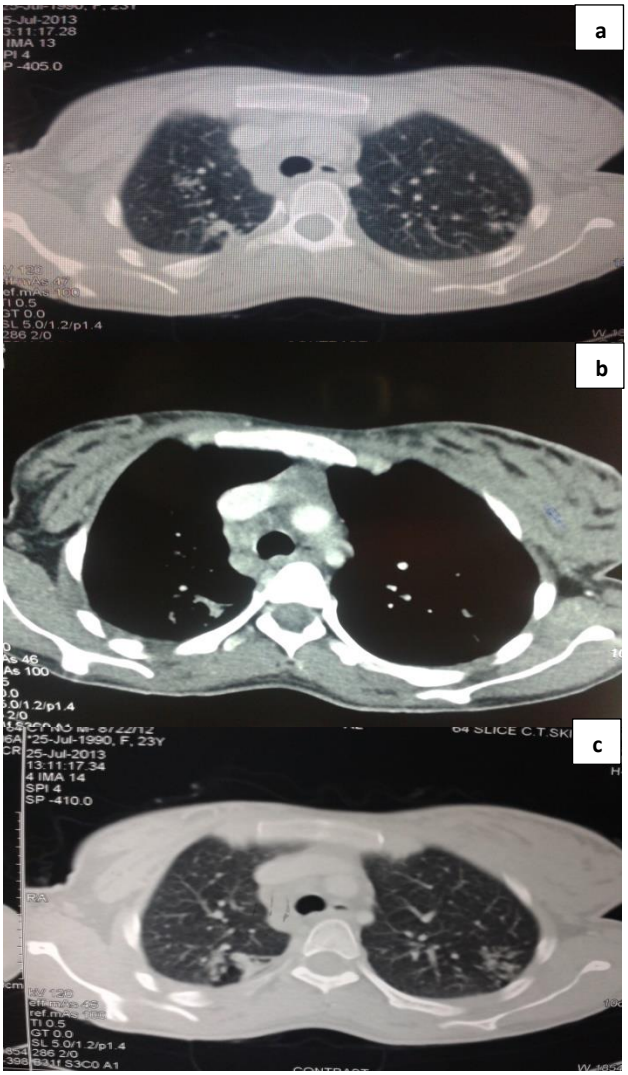

Figure 3(a-c): CECT chest showing multiple small peri bronchovascular nodules in bilateral upper lobes and right lower lobe with minimal bilateral pleural effusion (A, B), also seen are enlarged mediastinal nodes (C).

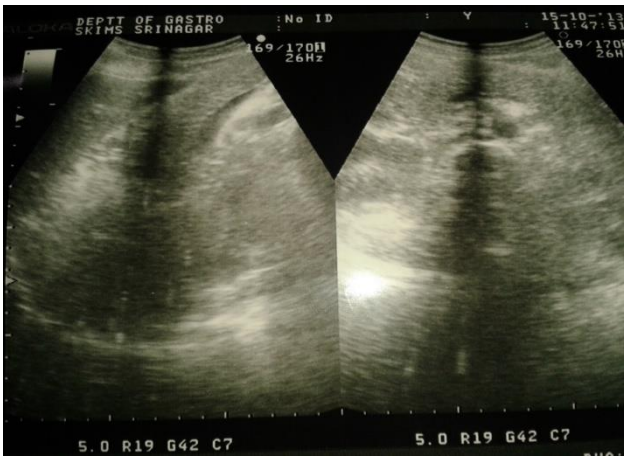

Figure 4: Follow up USG showing resolution of pancreatic lesion.

DISCUSSION

Globally, tuberculosis (TB) still remains a major public health problem. It is a multi-systemic bacterial infection caused by different strains of mycobacteria, usually Mycobacterium tuberculosis. In 2014, there were an estimated 9.6 million new TB cases: 5.4 million among men, 3.2 million among women and 1.0 million among children. India, Indonesia and China had the largest number of cases: 23%, 10% and 10% of the global total, respectively.[9] Though pulmonary TB is most common presentation of disease, 20% extrapulmonary tuberculosis is seen in immunocompetent individual.[1] The proportion may rise up-to 50% in cases of HIV-TB coinfection.[2,3] Pancreatic involvement in TB is rare with worldwide reported incidence of 4.7% annually. First case of pancreatic TB was reported by Auerbach in 1944.[10] There are reported incidences of pancreatic tuberculosis mimicking malignancy which led to extensive surgeries only for histopathology to reveal tuberculosis. Involvement of pancreas in TB is seen usually in case of miliary or disseminated cases mainly in immunodeficient hosts.[1] In our case the patient was immunocompetent. Pancreatic TB has higher incidence in younger persons, usually female with past history of TB or those residing in endemic area for TB. Presentation of pancreatic TB is usually insidious with constitutional symptoms being predominant feature. In a study conducted by Xia et al, abdominal pain (75%), anorexia (69%), weakness (64%), fever (50%) and jaundice (31%) were common symptoms.[11] Jaundice was absent in our case. Radiological features usually mimic that of pancreatic tumors.[11] While the presentation as pancreatic mass is seen in most of cases, pancreatic TB can also present as pancreatic abscess as in our case, acute or chronic pancreatitis, obstructive jaundice or portal vein thrombosis causing portal hypertension.[12] Techniques used to diagnose TB of pancreas can be invasive or non-invasive. Ultrasonography (USG) or computed tomography (CT) are often first-line diagnostic modalities. USG abdomen can show presence of hypoechoic or cystic lesion as seen in our case.[12] On CECT pancreatic involvement typically appears as an enhancing hypodense mass, with irregular borders.[13] These findings are usually nonspecific, as cystadenocarcinomas, pancreatic adenocarcinomas and pancreatic pseudocysts have similar appearances. Histological and bacteriological evidence is 'gold standard' for diagnosis. Percutaneous USG-guided fine needle aspiration of the pancreatic lesion have been reported for establishing a diagnosis of pancreatic tuberculosis.[14-16] CT-guided biopsy, endoscopic ultrasound-guided biopsy, open surgical or laparoscopic biopsy are other options. There is no significant difference between accuracy of these techniques.[12] Acid fast bacilli (AFB) from bile by using ERCP is another technique which can be used for diagnosis, but has low sensitivity. The American Joint Commission on Cancer has recommended use of EUS-FNA as a method of choice for diagnosis of pancreatic mass and has found it

to be most specific and sensitive.[12] The microscopic features of tuberculosis are presence of acid fast bacilli and caseation necrosis. Caseating granuloma is seen in 75%-100% of cases, and acid-fast bacilli are identified in 20%-40% of cases.[14] In our case AFB was identified in the aspirated material as well as sputum. TB culture even though requires prolonged incubation, is the most specific method for confirming diagnosis.[1] In our case after 6weeks of incubation MTB was grown from culture of aspirated material thus confirming the diagnosis. As of now RNTCP guidelines recommend 6 months ATT. But definite studies regarding exact duration of treatment are lacking. External drainage of the abscess may rarely be necessary, but there is as yet no published experience with percutaneous drainage alone.[17] Follow-up can be done usually with the use of CECT / USG abdomen to look for regression of pancreatic lesion and treatment response to ATT can be documented objectively, which was done in our case. Partial regression of lesion can prompt physicians for longer duration of therapy rather than standard 6 month regime.

CONCLUSION

In conclusion, we described a case of disseminated tuberculosis with simultaneous pulmonary and pancreatic involvement. Such presentation in immunocompetentent individuals is unusual, even HIV infected patients incidence of pancreatic TB is low.

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