Primary Pancreatic Tuberculosis


Abstract

Abdominal tuberculosis is common but pancreatic tuberculosis is rare. Its occurrence may pose a diagnostic problem in differentiating it from inflammation and carcinoma of the pancreas. We report a case of 52 year old male who presented with clinical picture of acute pancreatitis. Ultrasound and CT scan showed picture of pancreatitis and pseudocysts. Fluid aspiration of pseudocyst showed acid-fast bacilli. Antikoch’s treatment (AKT) was started and patient responded well.

Introduction

Tuberculosis of pancreas is very rare. However, nowadays the incidence is increasing because of increase in HIV infection or any other immunocompromised state or drug resistance. The nonsurgical diagnosis of this entity continues to be a challenge, as it may present as pancreatitis or may mimick mass lesion i.e. malignancy. Investigations unless specific may be misleading. The disease, though potentially curable, if left untreated might prove to be fatal. We present a case of pancreatic tuberculosis.

Case Report

A 52 year old male diabetic patient presented with acute pain in abdomen radiating to back, vomiting and loose motions since 6 days. There was no history of alcoholism or gall bladder disease. Abdominal examination revealed tenderness and guarding in umbilical and epigastric region. Bowel sounds were absent. Investigations showed total counts of 14000/cumm with polymorphocytosis. Random blood sugar was 160 mg%. Serum amylase was 453 I.U. Erythrocyte sedimentation rate (ESR) was 56 mm at the end of 1 hour. Ultrasound was showing bulky pancreas. Computed tomogram (CT) scan of abdomen was showing an increased density and stranding of the peripancreatic fat in the region of tail of pancreas with focal splenic lesions probably intra splenic pseudo cysts which were unusual (Figs. 1, 2). There was splenic vein thrombosis. Hence a clinical diagnosis of acute pancreatitis was established. In view of his age and no aetiological factor in history, cystic malignancy of pancreas had to be ruled out. Hence, CT guided aspiration of the pseudo cyst was done which was positive for acid fast bacilli. Anti Koch’s treatment (AKT) on five drugs regimen of cap. rifampicin 450 mg(R), tab. isoniazid 300 mg (H), tab. ethambutol 800 mg (E), tab. pyrazinamide 1500 mg (Z) along with the inj. streptomycin 1 gm (S) was started and patient responded well within one month. Patient gained weight and his ESR came down. A repeat CT-scan was done after 3 months which showed the previous lesion at tail of pancreas regressed in size however peripancreatic fat stranding was persistent but minimal (Fig.3). After 3 months three drug regimen (HER) was continued till 9 months of regimen. After completing the AKT for 9 months CT scan was done, this showed previous lesions decreasing in size. His ESR came back to normal limits and he had gained weight. Follow up of one year has shown him to be disease and symptom free.

Discussion

The pathogenesis of isolated pancreatic
tuberculosis is difficult in the absence of any detectable lesions in the other parts of the body. It is speculated that the tubercle bacilli reach the pancreas through haematogenous dissemination from an occult lesion in the lungs or abdomen. Secondly, the route by direct spread from contiguous lymph nodes may be responsible for most of the cases with isolated pancreatic tuberculosis. The third possible way is that dormant bacilli in an old tubercular lesion can reactivate in an immunosuppressive state.\textsuperscript{1,2}

In 1944, Auerbach reported that the pancreas is affected in 4.7\% of cases of miliary tuberculosis, although the low incidence may have been due to under-diagnosis.\textsuperscript{3} Paraf et al in 1966 reviewed autopsy studies of miliary tuberculosis between 1891 and 1961 and found only an incidence of 2.1\% of pancreatic or peripancreatic lymph nodes.\textsuperscript{4} Both the studies were done in patients with miliary tuberculosis. Isolated tuberculosis of pancreas is rare. Because of difficulty of obtaining the pathological evidence, it is very difficult to confirm the diagnosis, which is always misled by pancreatic neoplasms.\textsuperscript{5,6}

Pancreatic tuberculosis can present with symptoms of upper abdominal pain, pyrexia of unknown origin, ascites, abdominal mass, obstructive jaundice, acute or chronic pancreatitis, and upper gastrointestinal haemorrhage due to splenic vein thrombosis, diarrhoea and weight loss.\textsuperscript{1,7} This makes it difficult to be diagnosed clinically.

Abdominal CT and ultrasound may show an enlarged pancreas with focal hypodense or hypoechoic lesion, usually in the head

\textbf{Figs. 1 and 2 : Computed tomogram (CT) scan of abdomen showing irregularly marginated homogenously enhancing bulky pancreas with peripancreatic fat stranding in the region of tail of pancreas with multiple hypodense cystic lesions in the spleen.}

\textbf{Fig. 3 : Computed tomogram (CT) scan of abdomen showing normal pancreas with minimal fat stranding and resolving cystic lesions in the spleen.}
region, sometimes with irregular multilobular cyst arising from pancreas.\textsuperscript{7} However, these findings are nonspecific and simulate solid or cystic pancreatic neoplasms. The nonspecific clinical and laboratory investigations combination with pancreatic masses on CT scan frequently lead to an erroneous primary diagnosis of a carcinoma, cystadenocarcinoma or pseudocyst.\textsuperscript{1, 5-7} In fact, there are no cardinal differences between radiologic appearances of cystic neoplasm and tuberculous abscess of pancreas; both of them have septa within mass, cyst with internal echos, and nearby hypodense lymphadenopathy.\textsuperscript{7} To establish diagnosis image guided pancreatic biopsy is indicated. Endoscopic ultrasound with fine needle aspiration (FNA) for cytology is likely to become the preferred technique.\textsuperscript{6} However, the aspiration of material from peripancreatic tumours or lymph nodes may be difficult; even if we get a biopsy the acid-fast stain for exact sampling is positive only in 33-41\% of cases of abdominal tuberculosis. In view of age, of our patient and CT findings there was a need to rule out malignancy so FNA was needed. In our patient the CT guided aspiration of pseudocyst was positive for acid-fast bacilli (AFB).\textsuperscript{1}

Early diagnosis will lead us to start with the anti Koch’s treatment which includes either four (cap. rifampicin 450 mg (R), tab. isoniazid 300 mg(H), tab. ethambutol 800 mg(E), tab. pyrizanamide 1500 mg(Z)) or five drug (RHZE and inj streptomycin 1 gm(S)) depending on the patient’s status. Usually patient responds well and clinicoradiologically improves within 3-4 weeks. The period may vary between 6-12 months.\textsuperscript{1, 7-9} If patient does not respond then patient has to undergo surgery for aspiration or drainage of abscesses.\textsuperscript{1, 6-9} Sometimes resection of a part of pancreas may be required. However, this must be the last resort. Usually patients respond well and need of surgery is rare.\textsuperscript{9} Our patient also responded well to the AKT within 3-4 weeks on five drug regimen which was given for 3 months and remaining 6 months three drug regimen of RHE was given.

Follow up of patient includes monitoring patient’s weight, ESR and ultrasound or CT scan to review for the changes in the lesions of pancreas. In our patient after completion of AKT of nine months, he gained weight and is asymptomatic.

**Conclusion**

Pancreatic tuberculosis should be considered in the differential diagnosis of focal pancreatic lesions, especially for people in developing countries and those with constitutional symptoms. The tuberculin skin test can be of diagnostic value. The clinician’s high index of suspicion of tuberculosis and application of fine needle aspiration (FNA) to obtain pathological evidence are extremely important to a correct diagnosis especially in young. Even radiological appearance may be simulating mass so a biopsy or culture is important. Provided diagnosis is established, anti-tuberculous chemotherapy together with aspiration or pigtail drainage may be sufficient. Surgery should be reserved either to establish diagnosis or to deal with associated complications.

**References**


