ORIGINAL RESEARCH PAPER
Volume-9 | Issue-1 | January-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ISOLATED PANCREATIC TUBERCULOSIS MASQUERADING AS PANCREATIC CANCER

General Surgery

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ABSTRACT

Isolated pancreatic tuberculosis (TB) remains a rarity despite the high incidence of tuberculosis in many of the African and Asian countries. Presentation as discrete pancreatic mass often masquerades as pancreatic neoplasm and diagnosis may require histology. We report here a case of isolated pancreatic TB with pancreatic head mass mimicking neoplasm. The possibility of TB should be considered in the list of differential diagnoses of pancreatic mass and an endoscopic, ultrasound-guided biopsy might help to clinch the diagnosis of this potentially curable disease.

KEYWORDS

pancreatic tuberculosis; pancreatic cancer

CASE PRESENTATION

A 75-year-old male patient presented with epigastric dull aching pain, anorexia and loss of weight, vomiting of three months duration. He had no history of altered bowel habits, overt gastrointestinal bleed, fever, jaundice, no sig- nificant co-morbid illnesses nor any addictions. Examination was unremarkable, except for emaciation and a palpable spleen. Haemogram revealed anaemia (haemoglobin 13.5 g/ dL), elevated erythrocyte sedimentation rate (100 mm/h). Serum electro- lytes, renal and liver function tests were within normal limits. Abdominal ultrasound revealed dilated CBD and PD with ,mass at lower and of CBD with dilated IHBR. Contrast enhanced computerized tomography (CECT) of the abdomen showed a heterogeneously enhancing soft tissue density lesion in the pancreatic head causing mass effect over the posterior body of stomach with narrowed portal vein(Figure 1). Tiny peripancreatic lymph node were also noted. Serum CA 19-9 was within normal limits. Endoscopic ultrasound (EUS) revealed a hypoechoic lobulated mass in relation to the pancreatic head, with anechoic areas and floating echogenic material within it, suggestive of necrosis (Figure 2). The portal vein was narrowed, at 1.5 cm, in proximity to the mass lesion. ERCP-guided biopsy from the lesion revealed multiple granulomas, composed of epitheloid cells and occasional multinucleated giant cells. Sheets and clusters of lymphocytes, as well as background caseation necrosis, were also noticed and cannulation done of CBD which show irregular block in lower CBD. Sphincterotomy done and a 10×10 fr stent placed. Aspirate smears were negative for acid-fast bacilli. The patient tested negative for human immunodeficiency virus (HIV) infection. A Mantoux test was strongly positive, while chest X-ray and AFB stain on induced sputum were non-contributory. The patient was started on antitubercular therapy (ATT). The patient operated for cholecystectomy and gastro-jejunostomy for his symptomatic improvement (Figure 3). Repeat CECT after completion of ATT showed resolution of the pancreatic head mass and the peripancreatic node (Figure 4).

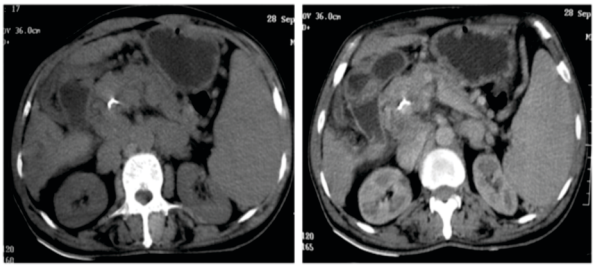

Figure 1. Plain and contrast CT images showing heterogeneously enhancing lesion in the pancreatic head region and narrowing of portal vein

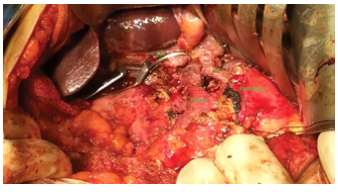

Figure 2. EUS image showing hypoechoic lobulated mass in relation to the pancreatic head, with anechoic areas and floating echogenic material within

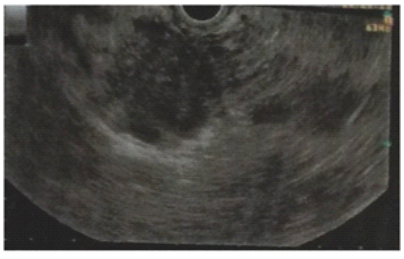

Figure 3. Intraoperative picture of BD bile duct; HA hepatic artery; Portal portal vein

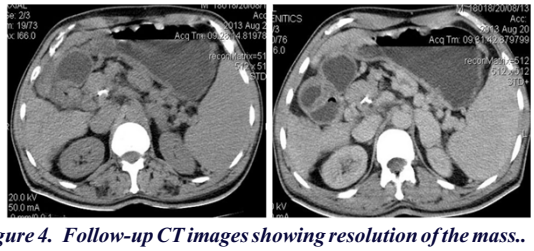

Figure 4. Follow-up CT images showing resolution of the mass..

DISCUSSION

TB caused by mycobacterium tuberculosis is an endemic infectious disease in the developing world, with an estimated 9.7 million cases reported annually [1]. Although the lung is most commonly affected, in immunocompetent hosts extra-pulmonary TB accounts for one-fifth of cases [2]. Pancreatic involvement is reported in less than 5% of cases and it often occurs in the setting of disseminated TB and immunodeficiency states [2,3]. Isolated pancreatic TB is still rare, with only a handful of cases reported to date [4–6]. The disease often emerges insidiously with non-specific constitutional symptoms, while the most common presentations of pancreatic TB include abdominal pain, jaundice and weight loss [5,7]. Patients may rarely present with gastro-intestinal bleed, secondary to splenic vein thrombosis [7]. Tuberculin skin testing may be beneficial, as it is reported to have sensitivity in the range of 58–100% in patients with abdominal TB [2]. Abdominal imaging may reveal solid or cystic lesions, typically in the pancreatic head; however the appearance is non-specific, since

pancreatic neoplasms and pseudocysts can have similar appearances [2,5,7]. Clinical and radiological features being non-specific, histology is required for diagnosis. Available options for biopsy include percutaneous ultrasonography or computed tomography (CT)-guided biopsy, open or laparoscopic surgical biopsy and the EUS biopsy. Currently EUS biopsy is considered the 'gold standard' for diagnostic modality for pancreatic mass [5,6]. Biopsy cytology in pancreatic TB shows granulomatous inflammation, epitheloid histiocytes, plasma cells and lymphocytes, while acid- fast bacilli are rarely seen [5,8]. A positive mycobacterium tuberculosis culture is highly specific but is less sensitive and requires long incubation periods [8]. Once diagnosed, pancreatic TB is treated with standard ATT of at least six months' duration. Symptomatic response and repeat abdominal imaging guides the clinician regarding treatment response and duration [5].Our patient presented with non-specific epigastric pain and constitutional features consistent with the published literature to date on pancreatic TB [4, 5, 7, 9]. He had non-specific markers of chronic inflammatory disease/TB in the form of elevated ESR and a positive tuberculin skin test. There were no features of TB elsewhere and he was negative for HIV infection. Abdominal imaging had revealed a lesion in the pancreatic head with cytology consistent with TB. AFB staining was negative; however according to Farar et al., nearly 40% of patients with abdominal TB can have negative AFB staining [10]. The relatively low yield of EUS biopsy might have caused the negative staining. Development of portal hypertension—as evidenced by splenomegaly, venous collaterals and isolated gastric varix—is exceedingly rare, although Saluja et al. had described splenic vein thrombosis complicating pancreatic TB [7]. Normal liver functions and imaging virtually rule out the possibility of an underlying chronic liver disease causing portal hypertension. The possibility of a patient with preexisting portal vein thrombosis with partial recanalization developing superadded pancreatic TB cannot be ruled out; however the patient had no past history of gastro-intestinal bleeding or acute abdominal pain pointing towards such an event. Visualization of the portal vein and demonstration of portal venous flow through the narrowed portal vein segment is unlikely in portal vein thrombosis although the possibility of a partially recanalized thrombus in portal vein cannot be discounted with certainty, especially in the presence of portal vein wall calcification, which in turn can be a calcified remnant of the thrombus. The splenomegaly might have caused thrombocytopenia and contributed to anaemia. Pancreatic head neoplasm is a close differential diagnosis but the excellent response to ATT, tumour marker negativity and lack of disease progression over the last year of follow-up argues against this.

CONCLUSION

Isolated pancreatic TB is an exceedingly rare clinical entity but should always be in the list of differential diagnoses in a patient with pancreatic mass, especially in the developing world, where the infection is endemic. Utilization of EUS with biopsy might aid in differentiating this benign disorder from pancreatic neoplasm.

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