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LETTER TO THE EDITOR

Isolated Pancreatic Tuberculosis Mimicking Malignancy and Causing Obstructive Jaundice

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Isolated pancreatic tuberculosis (TB) is unusual, but obstructive jaundice secondary to pancreaticobiliary TB is extremely rare. The mechanisms by which tuberculosis causes bile duct obstruction are varied. Here, we describe a patient with pancreatic tuberculosis which mimicked pancreatic carcinoma with biliary obstruction clinically–radiologically.

A 60-year-old woman presented with a history of progressive jaundice, nausea, vomiting, and weight loss. There was no prior history of tuberculosis or family history of contact. Chest X-ray was normal. Abdominal ultrasound examination revealed an irregular hypoechoic lesion of 3 cm in the pancreatic head with dilation of entire bile duct system, mild dilated pancreatic duct, and distended gall bladder. Contrast-enhanced computed tomography (CT) scan showed a heterogeneous hypodense mass in the pancreatic head that cannot be a clear margin from pancreas and mild dilated pancreatic duct (Fig. 1). In addition, peripancreatic peripherally enhancing enlarged necrotic lymph nodes were seen (Fig. 2).

A preliminary diagnosis of a periampullary carcinoma was made. Exploratory laparotomy revealed a mass and multiple peripancreatic lymph nodes. Histological examination of intraoperative frozen section of nodal biopsies showed granulomas with giant cells and no evidence of malignancy. Cholecystectomy and bilioduodenal anastomosis were performed. More lymph nodes and the mass biopsies were obtained for specific histological examination. This confirmed caseous granulomatous inflammation with abundant acid-fast bacilli on Ziehl–Neelsen staining (Fig. 3). Specific antituberculosis treatment was started. Six months later, the patient has no symptoms, neither jaundice; the CT control shows a complete resolution of the pancreatic mass (Fig. 4).

Only 32 patients with obstructive jaundice due to isolated pancreatic tuberculosis have been reported in detail so far [1–25]. Four mechanisms have been identified [26]: Isolated TB of the pancreas itself may cause pseudoneoplastic obstructive jaundice [1–13], as in our case; it may be secondary to TB lymphadenitis causing compression [26–28]; biliary stricture after biliary tuberculosis, mimicking cholangiocarcinoma [29–31]; and TB can create a retroperitoneal mass leading to biliary tree obstruction [32, 33]. Several studies have reported that common bile duct (CBD) and the pancreatic duct are usually normal in patients with pancreatic tuberculosis, even with a centrally located head mass [18, 34, 35]. However, in our case, both the ducts were dilated. A recent study described that pancreatic duct was dilated in approximately 80% patients of pancreatic adenocarcinoma, whereas it was dilated in 17% of patients with pancreatic tuberculosis [7].

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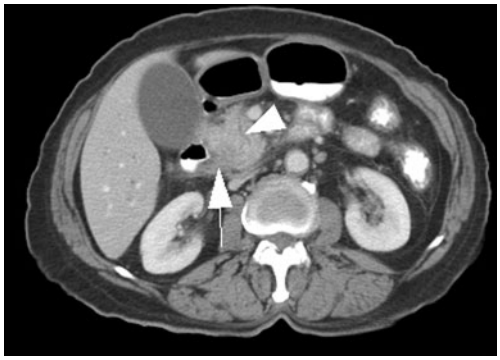

Fig. 1 Contrast-enhanced CT of the abdomen shows a heterogeneous hypodense mass in the pancreatic head (*arrow*) and mildly dilated pancreatic duct (*arrowhead*)

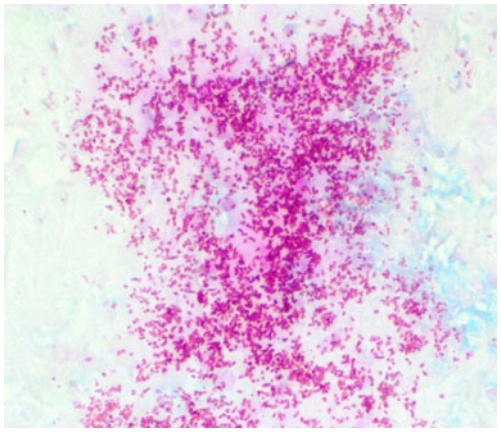

Fig. 3 Photomicrograph showing acid-fast bacilli (Ziehl–Neelsen stain, ×400)

The most appropriate management of CBD obstruction in the setting of isolated pancreatic tuberculosis was not known until recently; the majority of previously reported patients underwent surgery [1, 3, 15]. Nowadays, the mainstay of treatment is to administer antituberculosis therapy when diagnosed via fine needle aspiration cytology or biopsy. Surgical intervention is indicated in cases of localized pancreatic involvement in which malignancy is highly suspected if symptoms continue after antituberculosis therapy, for a positive diagnosis, and for relief of obstructive jaundice with biliary bypass to avoid further injury of the liver [1, 4, 36]. Although percutaneous or endoscopic stenting of the stricture has also been reported [29, 37], recent studies have reported that patients with isolated pancreatic tuberculosis can be successfully treated with antituberculosis therapy without needing biliary stenting [25].

Isolated pancreatic tuberculosis has higher incidences in endemic zones and in the immunocompromised population. The diagnosis of pancreatic TB may be delayed considerably. There are many common features between pancreatic TB and malignancy clinically and radiologically; both conditions have a tendency to occur more commonly in the head and uncinate process, probably a result of the rich blood supply [24]. A great spectrum of imaging findings is observed in pancreatic tuberculosis. On ultrasonography, the pancreas shows heterogeneity and bulkiness. Intrapancreatic collections are seen, which are hypoechoic [34]. Computed tomographic features of pancreatic tuberculosis include hypodense lesions and irregular borders usually in the head of the pancreas, diffuse enlargement of the pancreas similar to that in acute pancreatitis, or enlarged peripancreatic necrotic lymph nodes [34].

Isolated pancreatic tuberculosis is a rare disease and should be considered in the differential diagnosis of a mass in the head of the pancreas. Obstructive jaundice can be a rare presentation of pancreatic tuberculosis, as in our case. Fine needle aspiration cytology or biopsy can be used for diagnosis without laparotomy and these patients can be successfully treated with tuberculosis treatment without needing biliary stenting.

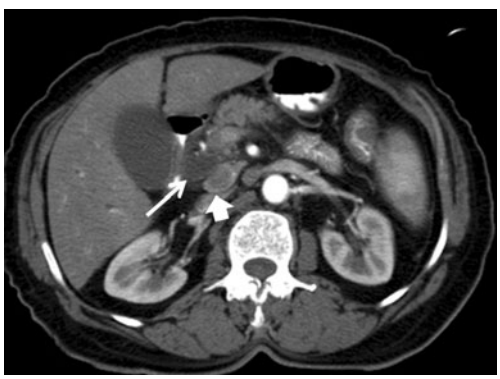

Fig. 2 Peripancreatic peripherally enhancing enlarged lymph nodes (*thick arrow*) and dilated common bile duct (*long arrow*)

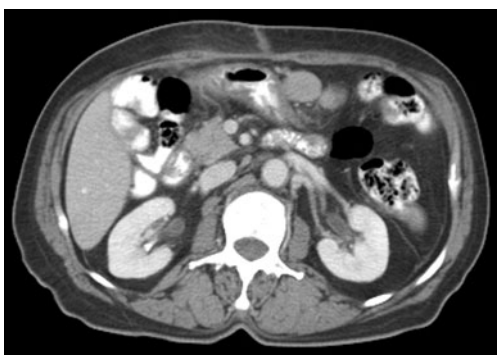

Fig. 4 Contrast-enhanced computerized tomography of the abdomen performed after completion of the therapy showing a normal pancreas with no focal lesion

Conflict of Interest The authors declare that they have no conflict of interest.

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