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CASE REPORT

Isolated Tuberculosis of the Ampulla of Vater Masquerading as Periampullary Carcinoma: A Case Report

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ABSTRACT

Context Isolated tuberculosis of the ampulla of Vater has not yet been reported. The clinical features of isolated periampullary tuberculosis are at times similar to those seen in patients with periampullary carcinoma. Diagnosis is difficult, and biopsy and culture of the suspected lesion are often negative for *Mycobacterium tuberculosis*. **Case report** We herein describe one such case masquerading as periampullary carcinoma in a 70-year-old woman. Due to comorbid conditions only a local excision of the ampulla was carried out. Histopathology revealed giant cells in the absence of caseation necrosis and the presence of *Mycobacterium tuberculosis* was proven using the polymerase chain reaction. **Conclusion** Isolated tuberculosis of ampulla of Vater is extremely rare but must be kept in mind when making the differential diagnosis of isolated ampullary lesion.

INTRODUCTION

Isolated pancreatic tuberculosis is very rare [1]. We report a hitherto undescribed case of tuberculosis of the ampulla of Vater in an elderly woman.

CASE REPORT

A 70-year-old woman presented to us with episodes of mild upper abdominal pain and vomiting of 3 months duration. She had also had a history of mild jaundice two months which had subsided on its own. There was no history of fever, hematemesis, melena or any surgical intervention. Her liver function tests were within normal limits (total bilirubin 0.5 mg/dL, reference range: 0.1-1.2 mg/dL; alkaline phosphatase 108 IU/L, reference range: 15-112 IU/L). Her chest skiagram was normal. Ultrasonography of the abdomen revealed intrahepatic biliary radical dilatation and a dilated common bile duct. The gallbladder was contracted and contained a few calculi. Computed tomography of the abdomen showed intrahepatic biliary radical dilatation, dilated common bile duct (14 mm), and no lymph nodal involvement. Upper gastrointestinal endoscopy revealed a slightly deformed ampulla, with a suspected growth, but its biopsy was unremarkable. MRCP could not be performed due to the patient's economic constraints and an ERCP was carried out instead. The ERCP revealed a dilated common bile duct with dilation of the right hepatic, left hepatic and pancreatic ducts. There was no filling defect but there was obstruction at the lower end of the common bile duct. The patient had poor performance and nutritional status. A Whipple's pancreatico-duodenectomy was proposed but was not indicated owing to her associated comorbid conditions, namely, chronic obstructive pulmonary disease and diabetes mellitus. Thus, we decided to proceed with a triple bypass procedure or, if feasible, wide local excision of the ampullary growth under general anesthesia.

After laparotomy, the duodenum was kocherised. The common bile duct was carefully palpated for a possible stone/tumor. There were no periportal or peripancreatic nodes. A longitudinal duodenotomy was performed, centered over the ampulla. The ampulla looked distorted and stenosed with a small 2 cm growth. The growth was carefully excised. The cut end of the common bile duct and the pancreatic duct were loosely anastomosed to the duodenal mucosa. Both the bile duct and the pancreatic duct were dilated and anastomosis was completed without difficulty. The duodenotomy was then closed in 2 layers. The patient made a good recovery and was discharged on postoperative day 6 on a semisolid diabetic diet.

The histopathology revealed granulomatous inflammation without caseation but with giant cells, although typical Langerhans type cells were not identified

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Key words Ampulla of Vater; Endemic Diseases; Tuberculosis, Gastrointestinal

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(Figure 1). The acid fast bacillus stain was negative but a polymerase chain reaction using nested heat shock protein 60 primers showed amplification pattern for *Mycobacteriun tuberculosis* (Figure 2). A diagnosis of tubercular ampullary papillitis was made. The patient is on antitubercular treatment.

DISCUSSION

Periampullary non-neoplastic lesions are rare and are often grouped as 'pseudotumors'. These include adenomyomatous hyperplasia of the ampulla of Vater, hamartomas (namely a cellular, spindle-cell variant with c-kit (CD117) expression), pseudolymphoma, foreign-body deposits, congenital lesions and granulomatous inflammations (such as sarcoidosis or tuberculosis) [2].

At times, these mimic pancreatic and periampullary tumors often producing obstructive jaundice, bleeding and gastric outlet obstruction [3]. It is estimated that up to 5% of pancreatectomies performed with the preoperative clinical diagnosis of carcinoma will prove to be non-neoplastic [2].

Periampullary granulomatous 'pseudotumors' are of interest especially in patients hailing from regions endemic for tuberculosis, although only a few cases have been reported in the literature [3, 4, 5]. They are often associated with miliary tuberculosis with enlarged peripancreatic lymph nodes and occur more often in immunocompromized patients [6].

A chest X-ray may show evidence of pulmonary tuberculosis in up to 20% of cases [3]. Preoperative endoscopic biopsy, even in ulcerated lesions, rarely reveals granulomas because these lesions are predominantly submucosal, and endoscopic biopsies often fail to include the submucosa. In a review of 27 patients who underwent endoscopic biopsies for duodenal tuberculosis, granulomas were found in only 7 patients although 20 had images of non-specific duodenitis [5]. In another series, only 2 of 20 patients had positive endoscopic biopsies [3]. Acid-fast bacilli are rarely recovered from the biopsy material, although fine-needle aspiration cytology may have a higher yield [3]. *Mycobacteria* are only rarely cultured from gastric lavage samples [5]. Polymerase chain reaction amplification of mycobacterial DNA may improve the rate of detection [7]. However, false negatives are reported in 40-65% of cases [8]. For treatment, whenever possible, appropriate resection with curative intent is advised in patients presenting with 'pseudotumor', followed by antitubercular treatment [3].

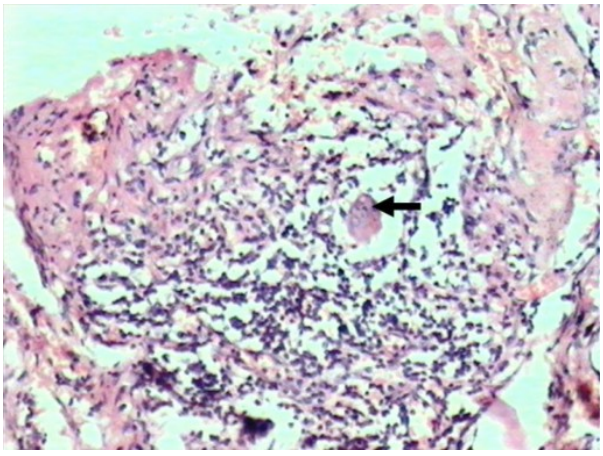

Figure 1. Hematoxylin and eosin stain showing granulomatous inflammation of the ampulla of Vater (arrow) (magnification, x40).

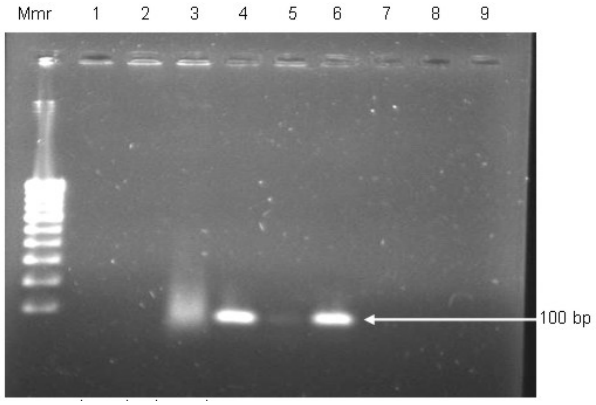

Figure 2. Polymerase chain reaction (PCR) showing amplification with nested heat shock protein 60 primers of *Mycobacterium tuberculosis*.
Mmr: 100 bp molecular marker
Result of primary cycle. Lanes 1 to 3: no amplification (lane 1: test sample DNA; lane 2: negative control; lane 3: positive reference DNA). Result of secondary cycle. Lanes 4 to 6: amplification pattern was obtained (lane 4: test sample DNA; lane 5: negative control; lane 6: positive reference DNA)

CONCLUSION

Isolated tuberculosis of the ampulla of Vater is a rare disease which must be kept in mind when making differential diagnosis of patients from regions endemic for tuberculosis. Local excision of the lesion of the ampulla in our patient was satisfactory and may be a general therapeutic approach for the elderly with poor performance status.

Conflict of interest The authors have no potential conflicts of interest

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