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Pancreatic tuberculosis mimicking inoperable pancreatic cancer

İnoperable pankreas kanseri ile karışan pankreas tüberkülozu

To the Editor,

Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*, also known as Koch bacillus (1). This disease is a public health problem in emerging countries, and due to its reemergence with the appearance of acquired immunodeficiency syndrome (AIDS), it is also a problem in developed countries (2). It is most often seen in the lungs and with necrotic granulomas. Extrapulmonary tuberculosis accounts for 10-30% of all cases (3). More than 5% of patients with tuberculosis have abdominal involvement (4). In the abdominal cavity, it usually affects the peritoneum, gastrointestinal tract (especially ileum and cecum), liver, spleen, and lymph nodes (1,3). Pancreatic and peripancreatic involvements are rare (2). There is often confusion between pancreatic tuberculosis and malignancy, both clinically and radiologically. A review of 58 patients with pancreatic tuberculosis revealed that 35 patients were initially diagnosed as pancreatic cancer. There were even cases in which Whipple procedure was applied to these pancreatic masses on the assumption of pancreatic cancer, in whom tuberculosis was consequently diagnosed (5). The diagnosis is as challenging in

the intraoperative and postoperative periods as in the preoperative period. Caseating granuloma is seen in 75-100% of cases, and acid-fast bacilli are identified in 20-40% of cases. Even when an intraoperative specimen is sent for direct smear and culture, results are positive in approximately 77% of cases (6-8). We present here a case of pancreatic and peripancreatic tuberculosis, with peritoneal dissemination mimicking peritonitis carcinomatosa, which was treated with cholecystostomy and medical treatment.

A 79-year-old female presented with a two-week history of right abdominal hypochondriac pain, fatigue and high fever, and a weight loss of 5 kg in one month. According to her medical history, she had no particular medical or surgical history or family history of tuberculosis, and no immunosuppressive disease such as human immunodeficiency virus. She never consumed alcohol. Abdominal examination showed right upper hypochondriac sensitivity with no hepatosplenomegaly or ascites, and no mass was observed on palpation. Her laboratory investigations were as follows: white blood cells (WBC) 7.5 U/L (reference range: 4.3-10.3), to-

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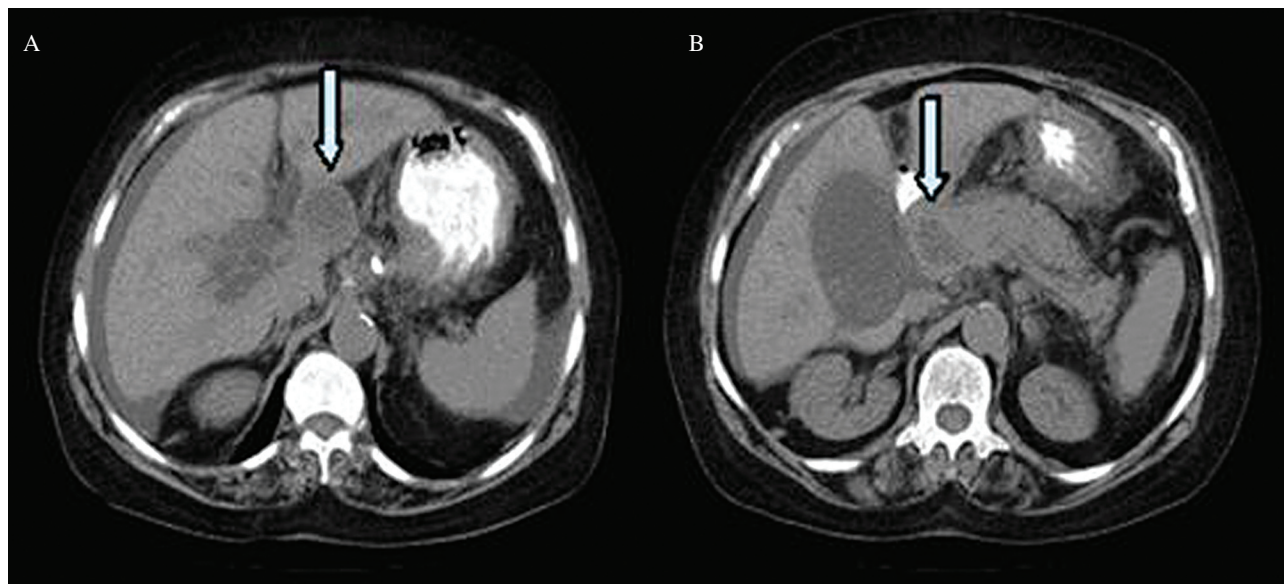


Figure 1. Abdominal CT images without contrast showing hydropic gallbladder, dilated bile ducts and choledochus, minimal thickening of the mesentery due to inflammation, and cystic lesions in the head of the pancreas: (A) superior, (B) inferior.

tal bilirubin (T. bil) 0.74 mg/dl (reference range: <1.2), direct bilirubin (D. bil) 0.09 mg/dl (reference range: <0.5), alanine aminotransferase (ALT) 26 U/L (reference range: 7-35), aspartate aminotransferase (AST) 32 U/L (reference range: 12-50), and gamma glutamyl transpeptidase (GGT) 19 U/L (reference range: 7-40). Ten days later, these values were: T. bil 7.76 mg/dl, D. bil 5.69 mg/dl, ALT 78 U/L, AST 161 U/L, GGT 144 U/L, and lactate dehydrogenase (LDH) 412 U/L.

Abdominal ultrasound showed hydropic gallbladder with multiple stones, dilated bile ducts and choledochus, and a cystic mass close to the head of the pancreas. Similar images were observed on the computerized tomography (CT), and CT additionally showed cystic lesions in the head of the pancreas and multiple peripancreatic lymphadenopathies, reaching 17 mm in size, some of which were calcific, with thickening of the colon and mesentery due to inflammation (Figure 1). Magnetic resonance imaging (MRI) findings revealed a hypointense lesion in the pancreas, and related to the pressure of this mass, the proximal part of the choledochus was dilated and the distal part had an abrupt ending. Therefore, we decided to perform endoscopic retrograde cholangiopancreatography (ERCP), which revealed nothing because of the ulcer in the bulbous and apical stenosis. She was operated for acute abdominal pain, and intraoperative findings were ascites, hydropic gallbladder, a solid heterogeneous 5x4x4 cm mass in the

head of the pancreas involving the choledochus, duodenum and other peripancreatic tissues, and miliary infiltrations in the falciform ligament and omentum majus. We conducted an incisional biopsy on the pancreatic mass, falciform ligament and omentum majus, and performed tube cholecystostomy.

Histopathological analysis revealed granulomatous disease and the culture confirmed the tuberculosis diagnosis (Figure 2). In the postoperative period after the histopathological analysis, antituberculosis treatment with isoniazid 300 mg/d, rifampicin 600 mg/d, pyrazinamide 1.5 g/d, and et-

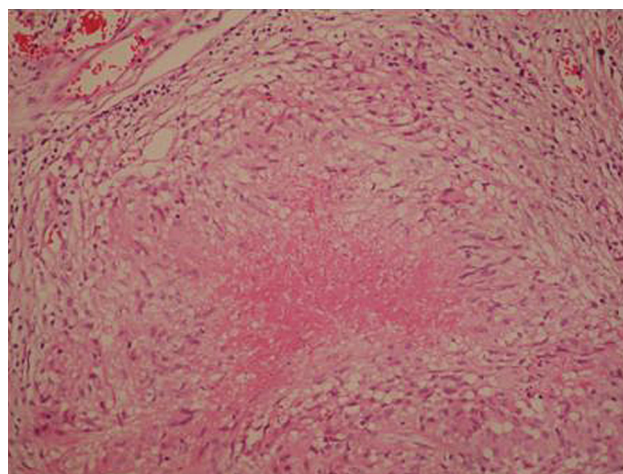


Figure 2. Granuloma identified in peripancreatic tissue (x400 H&E stain).

hambutol 25 mg/kg/d was started. In the clinical observations, hepatic function tests had decreased to the normal levels in a one-month period, and after a decrease in cholecystostomy tube drainage to under 10 cc/day in three months, the catheter was removed. The oral intake and body weight of the patient reached the regular level, as before the disease, in the subsequent observations.

In conclusion, pancreatic tuberculosis is a rare condition and usually resembles malignancy. It

should be remembered by clinicians and radiologists that tuberculosis can be seen as a malignant pancreatic mass. Clinical presentations such as mechanic icterus, massive gastrointestinal bleeding, pancreatic abscess, and acute or chronic pancreatitis can be observed, especially in endemic regions and immunosuppressed individuals. With meticulous investigation, a redundant surgery process can be prevented and accurate and proper treatment can be achieved.

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