PERIPANCREATIC TUBERCULOUS LYMPHADENITIS MIMICKING PANCREATIC CANCER

PANKREAS KANSERİNİ TAKLİT EDEN PERİPANKREATİK TÜBERKÜLOZ LENFADENİTİ

Suna ÖZHAN OKTAR, M.D., Devrim KARAOSMANOĞLU, M. D., Mehmet ARAÇ, M.D., Mustafa ŞARE*, M.D., Aslı KÖKTENER**, M.D.

Gazi University, School of Medicine, Departments of Radiology and General Surgery*, Ankara-Turkey.
Fatih University, School of Medicine, Department of Radiology, Ankara-Turkey**
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SUMMARY: Isolated involvement of peripancreatic lymph nodes is a very rare manifestation of tuberculosis. We report the computed tomography (CT) findings of tuberculous lymphadenitis presenting as a pancreatic mass causing biliary obstruction. Although very rare, tuberculosis lymphadenitis should be considered in young adults presenting with biliary obstructive symptoms, especially in endemic parts of the world.

***Key Words:** Tuberculosis, Pancreatic Cancer, CT.*

ÖZET: Peripankreatik lenf nodlarının izole tutulumu, tüberkülozun çok nadir bulgularından biridir. Bu yazıda, bilier obstrüksiyona neden olan pankreatik kitle şeklinde presente olan bir tuberküloz lenfadenitin BT (Bilgisayarlı Tomografi) bulgularını tanımladık. Çok nadir olmasında rağmen, tüberküloz lenfadeniti bilier obstrüktif semptomlarla gelen genç erişkin hastalarda, özellikle dünyanın endenik bölgelerinde, ayırıcı tanıda akılda tutulmalıdır.

***Anahtar Kelimeler:** Tüberküloz, Pankreatik Kanser, BT.*

INTRODUCTION

Tuberculosis (TB) is a common and devastating disease. It is primarily a disease of the respiratory system and most patients suffer from pulmonary disease, but no part of the organism is safe from the pathogen. Extrapulmonary dissemination of TB is not a rare clinical problem. The liver, spleen, intestines, peritoneum and mesenteric lymph nodes can be involved in disseminated form of the disease but isolated peripancreatic lymph node involvement is extremely rare (1). Peripancreatic tuberculous lymphadenitis is a tough challenge both to the radiologists and to the clinicians involved in the treatment of patients. Obstruction of the bile flow may cause obstructive jaundice and the clinical picture may mimic pancreatic and periampullary tumors.

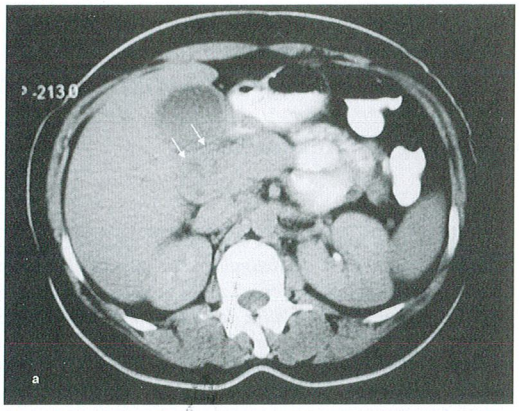
Here we report a young patient presenting with obstructive jaundice secondary to TB lymphadenitis of the peripancreatic lymph nodes.

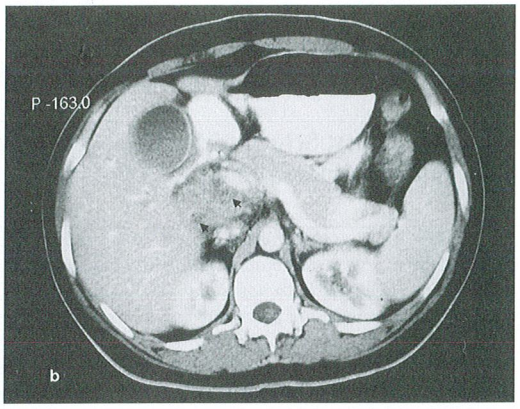
CASE REPORT

A 36-year-old woman was admitted to the emergency department with a two-week history of fatigue, pruritus, jaundice and pain in the epigastric region. Her medical and personal histories were unremarkable. The laboratory investigation revealed an elevated erythrocyte sedimentation rate of 22 mm/h and a slightly increased blood bilirubin level (total bilirubin 6.2 mg/dl, direct bilirubin 2.5 mg/dl). The other laboratory findings were normal. The emergency ultrasound (US) examination of the abdomen revealed dilated intra- and extrahepatic bile ducts, hydropic gallbladder having normal wall thickness filled with bile sludge and a mass with heterogeneous echotexture, suspected to have originated from the pancreatic head that is

indistinguishable from the duodenum, pancreas and portal vein. The abdominal computed tomography (CT) performed before and after IV contrast injection verified the sonographic findings and delineated a heterogeneously enhancing ill-defined mass indistinguishable from the pancreatic head, measuring 40 x 58 x 28 mm, containing scattered hypodense regions each showing peripheral contrast enhancement presumed to be consistent with necrosis (Fig. 1a-c). Dilated intra- and extrahepatic bile ducts were also observed on the CT scan (Fig. 2). No ascites was observed and the other abdominal organs and the thorax CT examinations were normal. The patient was referred to the surgery clinic with a presumptive diagnosis of invasive pancreatic cancer and an exploratory laparatomy was planned.

Surgery revealed a fungating mass at the pancreatic head that infiltrated the splenic artery,





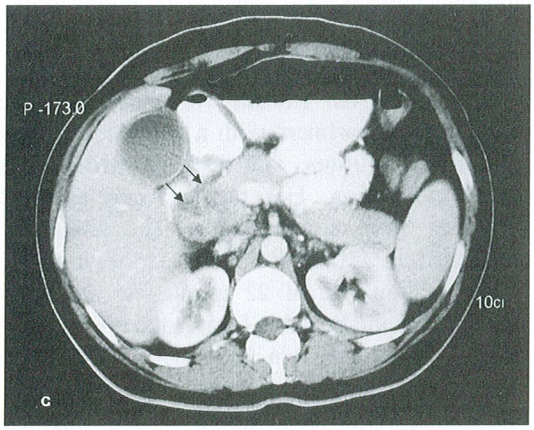


Fig. 1 (a, b, c): Abdominal CT examination without IV contrast reveals a mass (arrows) that is indistinguishable from the pancreatic head (a). Consecutive CT sections with IV contrast demonstrate a heterogeneously enhancing mass with scattered hypodense regions consistent with necrosis (short arrows), indistinguishable from the head, suggesting pancreatic cancer (arrows) (b, c).

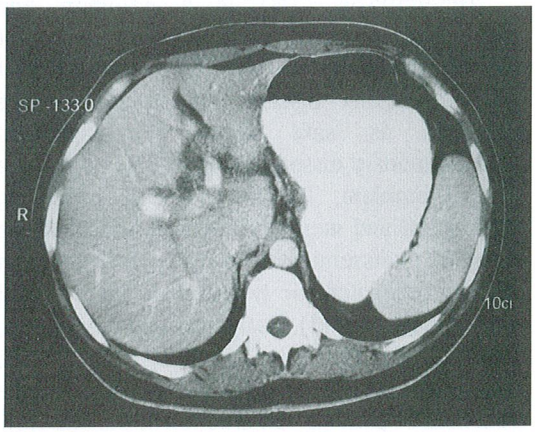


Fig. 2: Dilated intrahepatic bile ducts are observed on the CT scan through the level of porta hepatis.

portal vein, inferior vena cava and duodenum. The gallbladder was prominently distended and a lymph node was also noted at its neck. During the operation, frozen sections from the mass and above-mentioned lymph node revealed no evidence of malignancy but showed histologic findings suggesting a chronic necrotizing process. The mass was hardly adherent to the splenic artery and a minor injury to the splenic artery occurred during the dissection of it from the mass that was primarily repaired with no subsequent evidence of splenic infarction. Cholecystectomy and choledochojejunostomy were performed to relieve bile flow. The postoperative definite pathologic examination of the specimen revealed necrotizing granulomatous lymphadenitis consistent with TB. The specimen stained negative with Ziehl-Nielsen dye for acid fast bacilli.

A purified protein derivative (PPD) test performed during the early postoperative period was positive with 25 mm induration at the forearm after 48 hours. The patient did well postsurgically and anti-TB therapy was started with a standard protocol without any major adverse effect. The early postoperative abdominal CT examination revealed a collection at the surgical site that responded to conservative therapy. After a year, the follow-up CT examination of the abdomen was completely normal and the patient showed no evidence of TB in any other organ system.

DISCUSSION

TB involvement of abdominal organs is unusual but not a rare clinical entity. Although the incidence of TB has been reported to have decreased, the number of patients with extrapulmonary manifestations has been reported to have increased. A TB focus in the lung may suggest abdominal TB; however, only 15% of patients with abdominal involvement have primary infection of the lung (2,3).

Lymphadenopathy is the most common manifestation of abdominal TB. TB lymphadenitis is usually associated with TB of the gastrointestinal tract or less commonly with solid organ or peritoneal involvement. However, it may be the only sign of disease, especially when observed in the periportal region (4-6). Solitary tuberculous lymphadenitis of the peripancreatic region without clinical signs or symptoms of TB in the lungs or abdomen, as in our case, is very rare (7-10). In such cases, the mass is often mistaken for a malignant neoplasm. The diagnosis and treatment of this entity continue to be a challenge.

CT has been reported to be a more reliable modality in detecting enlarged lymph nodes than US. However, the radiologic appearances and contrast enhancement patterns of TB adenopathies are nonspecific and highly variable. A mass lesion at the head of the pancreas or peripancreatic region is usually indistinguishable from other benign or malignant pancreatic diseases radiologically and clinically, including lymphadenopathies. In our case, CT showed a heterogeneous mass located at the head of the pancreas, suggesting a malignancy of the pancreas or distal common bile. The absence of clinical and radiologic findings of TB also made the accurate diagnosis harder. Obstruction in such cases may be due to the mass effect of the enlarged and inflamed lymph node or strictures in the neighboring structures secondary to periductal inflammation (5,6,11,12).

Imaging guided minimally invasive sampling methods are recommended by some authors to prevent unnecessary laparotomies in the tuberculosis of the hepatobiliary system and the pancreas (13,14). However, the potential risks of dissemination of cancer cells and TB through the needle tract and neighboring structures must be kept in mind.

The pathogenesis of peripancreatic lymph node involvement is not easy to explain in the absence of any detectable lesion in the lungs, liver, bones or any other organ. In a recently published article it was speculated that, in the absence of any apparent active disease in any part of the body, the TB bacilli may have reached the peripancreatic lymph nodes from an occult focus in the lung by lymphatic dissemination (12). The primary diagnostic criteria are a positive PPD test, the presence of granulomas in any organ system and the demonstration of the causative microbial agent in the sampled specimens. Efforts to confirm the presence of the bacilli by means of culture or microscopic examination are generally unsuccessful (15).

When the obstructive symptoms are

considered, surgery is generally necessary to relieve the bile flow and for the definitive tissue diagnosis. Although the diagnosis of a benign process was made during the operation in our patient, cholecystojejunostomy should be performed in order to restore the bile flow and prevent the complications of bile stasis. Supplementary pharmacologic therapy was applied to eradicate the occult focuses of TB infection.

Our case demonstrates that, although not at the top of the list, TB must be considered in young adults in the endemic parts of the world with pancreatic or peripancreatic masses causing obstructive jaundice.

Correspondence to: Suna ÖZHAN OKTAR, M.D.
Gazi Üniversitesi Tıp Fakültesi
Radyoloji Anabilim Dalı
06510, ANKARA-TURKEY
Phone: 312-222 97 30
Fax: 312-212 19 40
E-mail: sunaoktar@gazi.edu.tr

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