

Tuberculous Mesenteric Lymphadenitis Simulating Cystic Pancreatic Head Cancer

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Abstract—A case of tuberculous mesenteric lymphadenitis is reported. Radiologic findings including computed tomography simulated those of cystic pancreatic head cancer. Diagnosis could be established only after a laparotomy was performed. Abdominal tuberculosis should be included in the differential diagnosis of pancreatic mass.

Key Words: *Tuberculous mesenteric lymphadenitis, Abdominal tuberculosis, Pancreatic mass*

INTRODUCTION

Diagnosis of abdominal tuberculosis can be difficult because of its protean manifestations. It is often not considered in the differential diagnosis of abdominal disorders, particularly when tuberculosis is not present elsewhere. In the era of computed tomography, although there has been much improvement in the evaluation of abdominal disorders, the differential diagnosis of an abdominal mass, especially a pancreatic mass, could sometimes be a perplexing problem for clinicians. Here, we present a case with very unusual clinical and radiologic features whose diagnosis proved to be tuberculous mesenteric lymphadenitis simulating cystic pancreatic head cancer in its computed tomographic findings.

CASE REPORT

A 40-year-old female was admitted because of an epigastric pain for 3 months. She complained of intermittent dull epigastric pain which occurred from about 30 minutes after a meal and lasted

for several hours postprandially. The pain didn't radiate to the back or to the flank and was not relieved by antacid or defecation. She denied pulmonary symptoms such as cough, sputum, dyspnea, or night sweat and didn't have a past history or family history of tuberculosis. She didn't have any history of trauma or severe epigastric pain which could be considered as acute pancreatitis. On admission, the patient was thin and in chronic debilitative state. Physical examination was unremarkable except for mild epigastric tenderness. There was no crackle or palpable lymph node.

Laboratory data showed mild anemia (Hb 10.2 gm/dl) and reversed A/G ratio (3.9/4.0). The ESR was 92 mm/hr, and the level of C-reactive protein was 3+. The total and differential counts of WBC were essentially normal. The levels of serum amylase, lipase, CEA, and CA-125 were 88 U/dl (normal, 60 to 180 U/dl), 0.1 U/ml (normal, 0 to 1 U/ml), 1.1 ng/ml (normal, 0 to 2.5 ng/ml), and 23 U/ml (normal, 2 to 48 U/ml), respectively. Other laboratory data including liver function test, urinalysis, stool examination, BUN, creatinine, electrolyte, VDRL, calcium, phosphorus, cholesterol, triglyceride, HDL-cholesterol, EKG, and coagulation te-

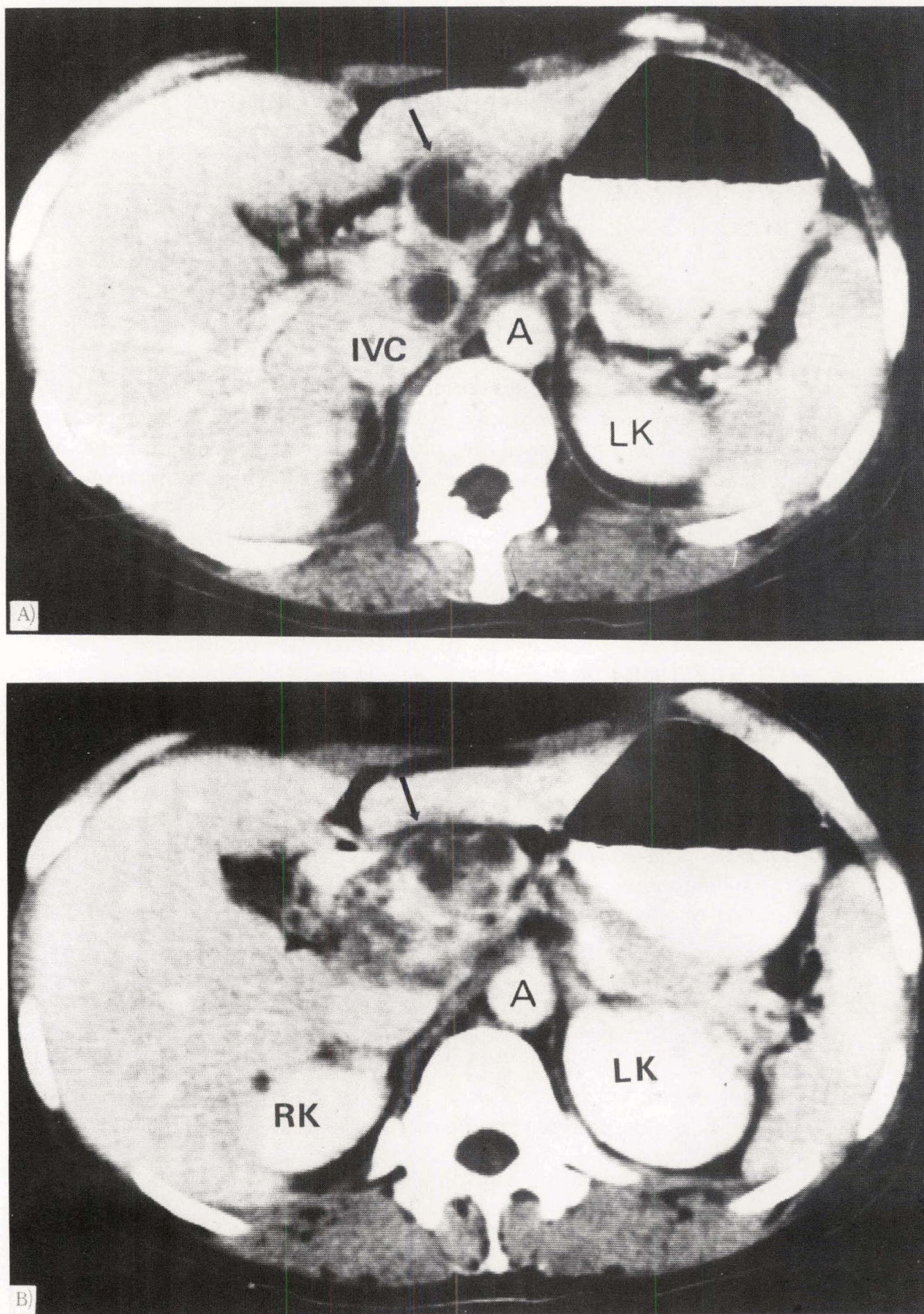


Fig. 1. A) A CT scan through upper-abdomen. A large, multi-septated irregular mass in pancreatic head area (arrow). A = aorta, IVC = inferior vena cava, LK = left kidney.
B) Area 3 cm below A. Multi-loculated appearance with rim enhancement with intravenous contrast medium (arrow). A = aorta, LK = left kidney, RK = right kidney.

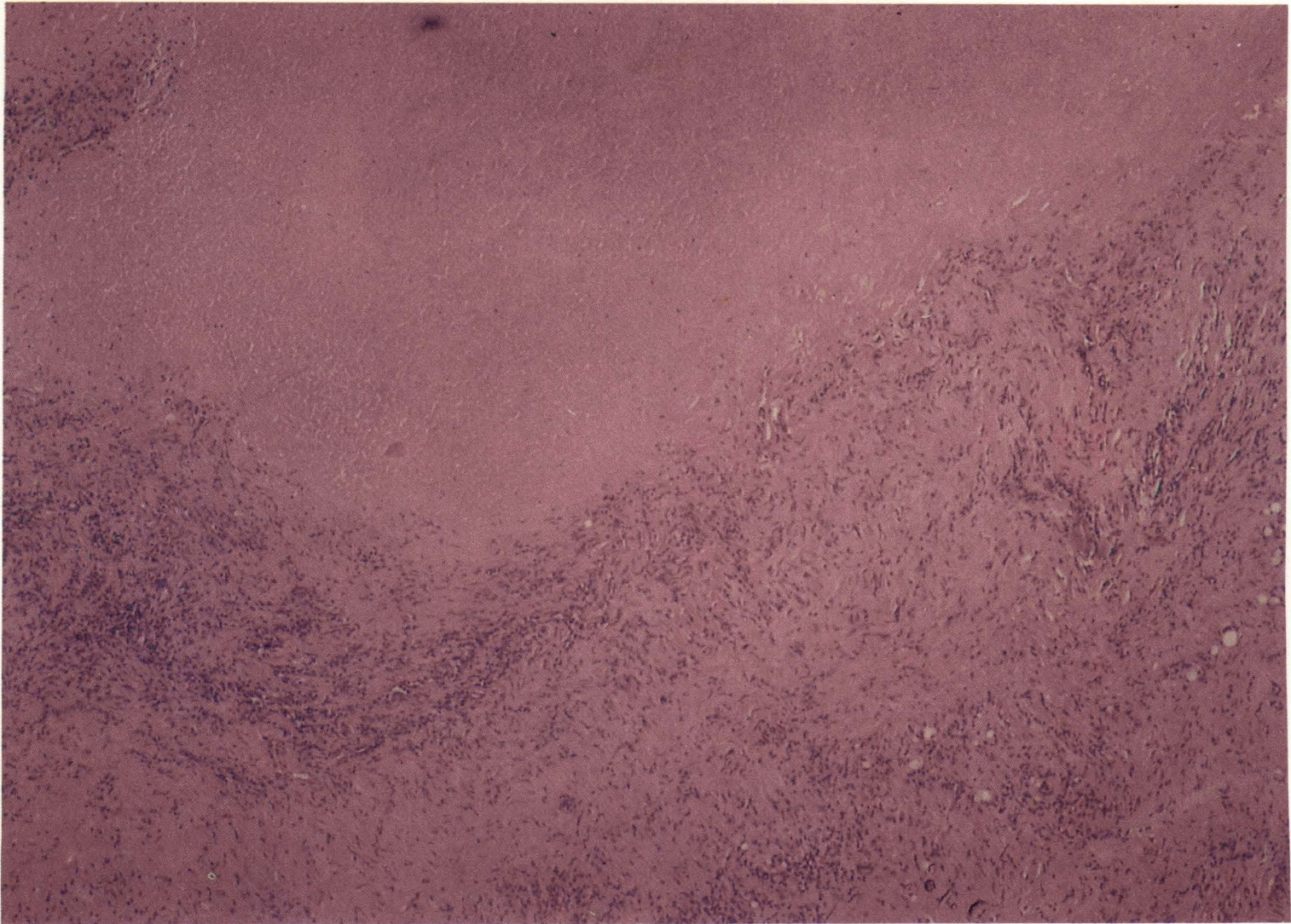


Fig. 2. Microphotograph of a lymph node. A tubercle with central caseation necrosis and epithelioid cells (H&E staining, x40).

sts were within normal limits. The smear and culture of acid-fast bacilli in sputum were negative, 3 times. Fiberoptic gastroscopy, as well as simple x-ray films of the chest and abdomen showed no abnormal finding.

Sonographic examination of the abdomen showed 3 low-echoic lesions in the pancreatic head area. A computed tomography of the abdomen showed multi-septated cystic masses in the pancreatic head area (Fig. 1a,1b). There was no dilatation in the CBD or in the pancreatic duct. The distal body and tail of the pancreas looked normal. The liver and spleen were normal.

Sono-guided aspiration of the cyst was done. The aspirated material was amorphous and contained many inflammatory cells but no malignant cells. Acid-fast staining showed no acid-fast bacillus. A tuberculin skin test was positive. She received an exploratory laparotomy for a definite diagnosis.

DISCUSSION

At operation, there were no ascites, adhesion, or exudate in the peritoneal cavity. Swellings of multiple lymph nodes at the mesenteric root around the superior mesenteric vein and around the pancreatic head area were noticed. The biopsy of one of them showed chronic granulomatous inflammation with caseation necrosis (Fig. 2).

Extrapulmonary tuberculosis is still a commonly encountered disease entity in developing countries, and abdominal tuberculosis still occurs in developed countries and is not limited to the low socioeconomic levels (Haddad *et al.* 1987). Moreover, tuberculosis is common in patients with acquired immune deficiency syndrome and is often extrapulmonary or disseminated (Sunderam *et al.* 1986). Although intraabdominal tuberculosis has been re-

ported rarely in this setting, it may become more common (Barnes *et al.* 1986). Also, tuberculous peritonitis is an uncommon complication of continuous ambulatory peritoneal dialysis (Holley *et al.* 1982; Ludlam *et al.* 1986; Cheng *et al.* 1989).

The protean manifestations of intraabdominal tuberculosis sometimes make it difficult for clinicians to consider the possibility of tuberculosis in the differential diagnosis of abdominal disorders, particularly when tuberculosis is not present elsewhere. It may present as gastrointestinal tuberculosis, tuberculous peritonitis, or mesenteric lymphadenitis. Typical symptoms of abdominal tuberculosis are fever, abdominal pain, loss of weight, and other gastrointestinal disturbances (Barrow *et al.* 1943; Bhansali, 1977; Wells *et al.* 1986; Jakubowski *et al.* 1988). However, it may present with acute manifestations such as intestinal obstruction, perforation, or simulated acute peritonitis due to ruptured lymph nodes (Bhansali, 1977). It may also present with intraabdominal masses resembling a carcinoma of the pancreas or lymphoma. It is in this type of presentation that computed tomography may prove valuable. Bhansali (1977) reviewed 300 cases of intraabdominal tuberculosis, 96 of which had palpable lumps. At operation, the tumefaction was found to be due to hyperplastic cecal tuberculosis, enlarged lymph nodes, and/or rolled-up omentum. In spite of the widespread applications of ultrasonography and computed tomography in abdominal disorders, only a few reports have described the features of computed tomography in abdominal tuberculosis. Despite the small number of cases, 5 features consistent with a CT diagnosis of intraabdominal tuberculosis are suggested: (1) irregular soft tissue densities in the omental area; (2) low-density masses surrounded by thick solid rims; (3) a disorganized appearance of soft-tissue densities, fluid, and bowel loops forming a poorly defined mass; (4) low-density lymph nodes with a multilocular appearance after intravenous contrast administration; and (5) possibly high-density ascites (Epstein and Mann, 1982). Besides the 5 features mentioned above, high-density ascites, mesenteric thickening, and enlarged mesenteric nodes were also described in another report (Dahlene *et al.* 1984). In spite of the small number of cases, only

2 patients, Epstein and Mann (1982), suggested that low-density lymph nodes and rim enhancement with intravenous contrast medium producing a multi-loculated appearance would prove to be characteristic of tuberculous nodes with caseation necrosis. In this case, the multi-septated cystic masses in the pancreatic head area on computed tomography also proved to be multiple enlarged mesenteric lymph nodes with caseation necrosis.

Gastrointestinal tuberculosis often induces vague symptoms, and this may partly explain the delay in presentation of some patients. Although abdominal pain, loss of weight, fever, diarrhea, malaise, and abdominal distension are the most common presenting symptoms, none of these is pathognomonic for tuberculosis (Wells *et al.* 1986). Several blood tests are often abnormal, but they are also nonspecific. An abnormal chest x-ray is seen in less than 50% of cases with abdominal tuberculosis (Shukla and Hughes, 1978; Lambrianides *et al.* 1980; Addison, 1983). A positive tuberculin skin test does not suggest active tuberculosis in developing countries, and also a negative test does not exclude an active disease (Gonnella and Hudson, 1966; Dineen *et al.* 1976). For these reasons, abdominal tuberculosis was overlooked in this case. Because the radiologic features of tuberculous lymphadenitis had not been described in sufficient numbers, we experienced confusion in reaching a proper diagnosis. Similarly, although sonographic and computed tomographic findings in this case mimicked those of cystic pancreatic neoplasms, other tests including blood chemistry, tumor marker studies, aspiration cytology, and culture didn't give any suggestion of a pancreatic cancer. But, although elevated levels of CEA, CA-125, or CA 19-9 favors the diagnosis of a malignancy, normal values of these tests does not exclude it necessarily. These tests are not sensitive enough to exclude the possibility of a malignancy (Haglund, 1986; Haglund *et al.* 1986; Steinberg *et al.* 1986). Likewise the absence of malignant cells in aspiration cytology cannot exclude the possibility of a malignancy. Repeated aspirations for acid-fast staining or fine needle biopsy might be helpful in arriving at a correct diagnosis without operation in this case.

Abdominal tuberculosis is not a relic of the

past and seems to be a new challenge in the developed countries as the number of patients with acquired immune deficiency syndrome continuously increases. Just as in this case, in many patients with abdominal tuberculosis, the diagnosis was established at operation and by the appearance of caseating granuloma in the histologic examination and isolation of the causative organism (Wells *et al.* 1986). Further radiologic features including the CT features of abdominal tuberculosis should be described in order that laparotomy be avoided and less invasive procedures be instituted. Also, in cases with suggestive radiologic findings in the appropriate clinical setting, abdominal tuberculosis should be included in the differential diagnosis of many abdominal disorders.

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이한주 · 정현재 · 윤용범 · 송인성 · 최규완 · 김정룡

전산화 단층 촬영을 포함하는 방사선학적 소견이 낭포성 췌장 두부암과 유사했던 결핵성 장간막 임파선염의 환자 1례를 보고하는 바이다. 이 증례에서는 여러 진단적 검사가 시행되었지만 개복 수술 후에야 확진을 내릴 수 있었다. 복부 결핵은 췌장 종괴의 감별 진단에 반드시 포함되어야 한다.