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CASE REPORT

Pancreatic tuberculosis in a human immunodeficiency virus positive patient: A case report

Jianfeng Cheng, Kiranmayi Tadi, Michelle Halpern, Mirela Feurdean, Joseph McNelis, Jeffrey Brensilver

Jianfeng Cheng, Kiranmayi Tadi, Michelle Halpern, Mirela Feurdean, Joseph McNelis, Jeffrey Brensilver, Department of Medicine, Sound Shore Medical Center of Westchester, 16 Guion Place, New Rochelle, NY 10801, United States
Correspondence to: Jianfeng Cheng MD, PhD, Department of Medicine, Sound Shore Medical Center of Westchester, 16 Guion Place, New Rochelle, NY 10801, United States. jcheng794@gmail.com
Telephone: +1-347-3068322 Fax: +1-914-3655489
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Abstract

Despite the increased incidence of tuberculosis related to human immunodeficiency virus (HIV) in recent decades, pancreatic tuberculosis has rarely been described. We report a case of pancreatic tuberculosis in a 39-year-old African man who presented with progressive dysphagia, vomiting, weight loss and productive cough, accompanied by localized epigastric pain and one episode of melena. HIV-1 testing was positive and lymphocyte subset profile showed CD_4 count of 9/mm^3. Abdominal computed tomography (CT) scan with contrast revealed a cystic mass in the body of the pancreas, significant portal and retroperitoneal cystic adenopathy, and multiple cystic lesions in the spleen and liver. CT guided cyst aspiration and node biopsy detected Mycobacterium tuberculosis. The patient responded well on antituberculosis and antiretroviral therapy. Tuberculosis rarely involves the pancreas, probably due to the presence of pancreatic enzymes which interfere with the seeding of Mycobacterium tuberculosis. Pancreatic tuberculosis is considered to be the result of dissemination of the infection from nearby lymphatic nodes. Endoscopic ultrasound or CT guided fine needle aspiration for cytology is the recommended diagnostic technique. Although the prognosis is good with anti-tuberculosis treatment, it could be fatal without correct diagnosis and treatment. The clinician's high index of suspicion of pancreatic tuberculosis and application of FNAB to obtain pathological evidence are extremely important to a correct diagnosis, especially in young HIV positive patients.

Key words: Pancreatic tuberculosis; Human immunodeficiency virus infection; CT-guided fine needle biopsy

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INTRODUCTION

Subsequent to the AIDS epidemic, the incidence of tuberculosis has slowly increased in developed countries[1]. However, pancreatic tuberculosis is rarely described in the literature. We report a case of pancreatic tuberculosis with abdominal dissemination which presented with progressive dysphagia, weight loss and epigastric pain.

CASE REPORT

A 39-year-old African man presented with a six months progressive dysphagia, vomiting and 30 lb weight loss, productive cough for three weeks, accompanied by localized epigastric pain and one episode of melena. He had a history of positive PPD 4 years earlier with normal chest radiograph and had not received isoniazid prophylaxis. Physical examination revealed a 101 F temperature, marked pallor, sinus tachycardia, epigastric and right upper quadrant tenderness. Investigations showed a WBC count of 1.7×10^3/mm^3 (normal range, 4.8-10.8 $\times 10^3$/mm^3), anemia with hemoglobin at 5.1 g/dL (normal range, 14.0-18.0 g/dL), amylase 148 U/L (normal range, 30-110 U/L), lipase 29 U/L (normale range, 4-66 U/L) and LDH 551 U/L (normal range, 102-190 U/L). Chest radiograph, liver and renal function were normal. HIV-1 test was positive and lymphocyte subset profile showed CD_4 count of 9/mm^3. A barium swallow showed a normal esophagus. Abdominal ultrasound revealed a cystic pancreatic mass, lymph node enlargement and cholelithiasis. The blood, urine and sputum culture were negative. Abdominal computed tomography (CT) scan with contrast revealed a cystic mass in the body of the pancreas with significant portal and retroperitoneal adenopathy and multiple cystic lesions in the spleen and liver (Figure 1). CT guided cyst aspiration and node biopsy detected inflammatory cells, necrotic tissue and many AFB bacilli. PCR testing was positive for Mycobacterium tuberculosis. The patient clinically improved on antituberculosis medications: ethambutol, isoniazid,

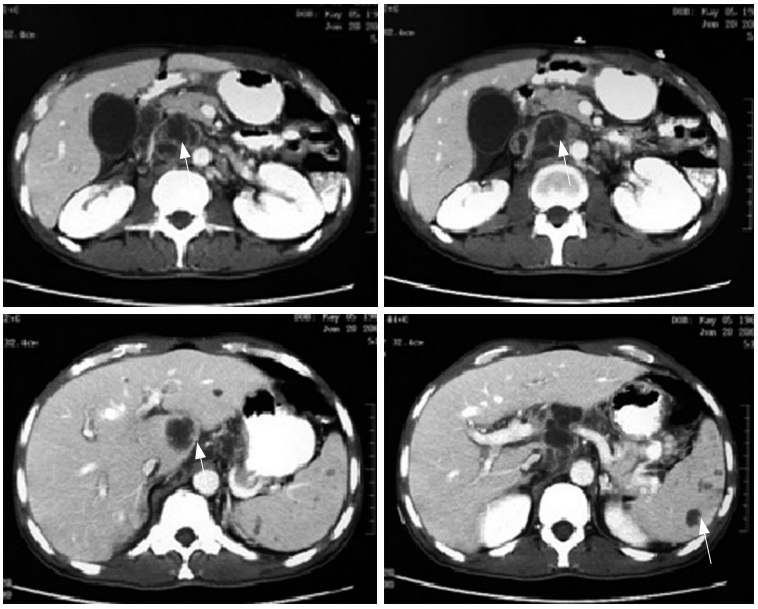

Figure 1 Abdominal CT with contrast showed cystic mass in the region of the body of pancreas and cystic lesions in the spleen and liver.

vitamin B6, pyrazinamide, rifampin and moxifloxacin. Five months later, a repeat ultrasound revealed resolution of the pancreatic cyst and adenopathy.

DISCUSSION

Tuberculosis uncommonly involves the pancreas, which is thought to be biologically protected from the infection of Mycobacterium tuberculosis. Probably, this is because the presence of pancreatic enzymes which interfere with the seeding of Mycobacterium tuberculosis[2]. Pancreatic tuberculosis is considered the result of the dissemination of the infection from near lymphatic nodes. A wide spectrum of symptoms has been reported. It ranges from abdominal pain, constitutional symptoms to such as weight loss, night sweat and anorexia, fever, obstructive jaundice[3,4], to massive gastro-intestinal bleeding[5] and iron deficiency anemia, pancreatic abscess[6]. In addition, acute pancreatitis[7], secondary diabetes[8] and chronic pancreatitis[9] have been also reported. Similar to the present case, the pancreatic cystic mass can mimic pancreatic cystic neoplasm[10,11]. Abdominal tuberculosis is independent of pulmonary disease in most patients, with the reported incidence of coexisting disease varying from 5% to 38%. Endoscopic ultrasound or computed tomography-guided fine-needle aspiration biopsy (FNAB) is recommended for diagnosis[12]. The prognosis is good with anti-tuberculosis treatment. However, it could be fatal without correct diagnosis and treatment[13]. Wide spectrum of symptoms and occurrence in the absence of chest disease make it difficult to diagnose. The clinician's high index of suspicion of pancreatic tuberculosis and application of FNAB to obtain pathological evidence are extremely important to a correct diagnosis, especially in young HIV positive patients.

REFERENCES

1 **Shukla HS**, Hughes LE. Abdominal tuberculosis in the 1970s: a continuing problem. *Br J Surg* 1978; **65**: 403-405
2 **Franco-Paredes C**, Leonard M, Jurado R, Blumberg HM, Smith RM. Tuberculosis of the pancreas: report of two cases and review of the literature. *Am J Med Sci* 2002; **323**: 54-58
3 **Crowson MC**, Perry M, Burden E. Tuberculosis of the pancreas: a rare cause of obstructive jaundice. *Br J Surg* 1984; **71**: 239
4 **Chen CH**, Yang CC, Yeh YH, Yang JC, Chou DA. Pancreatic tuberculosis with obstructive jaundice--a case report. *Am J Gastroenterol* 1999; **94**: 2534-2536
5 **Fan ST**, Yan KW, Lau WY, Wong KK. Tuberculosis of the pancreas: a rare cause of massive gastrointestinal bleeding. *Br J Surg* 1986; **73**: 373
6 **Stambler JB**, Klibaner MI, Bliss CM, LaMont JT. Tuberculous abscess of the pancreas. *Gastroenterology* 1982; **83**: 922-925
7 **Rushing JL**, Hanna CJ, Selecky PA. Pancreatitis as the presenting manifestation of miliary tuberculosis. *West J Med* 1978; **129**: 432-436
8 **Patankar T**, Prasad S, Laxminarayan R. Diabetes mellitus: an uncommon manifestation of pancreatic tuberculosis. *J Assoc Physicians India* 1999; **47**: 938-939
9 **Stock KP**, Riemann JF, Stadler W, Rosch W. Tuberculosis of the pancreas. *Endoscopy* 1981; **13**: 178-180
10 **Schneider A**, Von Birgelen C, Duhrsen U, Gerken G, Runzi M. Two cases of pancreatic tuberculosis in nonimmunocompromised patients. A diagnostic challenge and a rare cause of portal hypertension. *Pancreatology* 2002; **2**: 69-73
11 **Franco-Paredes C**, Leonard M, Jurado R, Blumberg HM, Smith RM. Tuberculosis of the pancreas: report of two cases and review of the literature. *Am J Med Sci* 2002; **323**: 54-58
12 **Woodfield JC**, Windsor JA, Godfrey CC, Orr DA, Officer NM. Diagnosis and management of isolated pancreatic tuberculosis: recent experience and literature review. *ANZ J Surg* 2004; **74**: 368-371
13 **Ezratty A**, Gumaste V, Rose E, Sachar DB, Tiscornia-Wasserman P. Pancreatic tuberculosis: a frequently fatal but potentially curable disease. *J Clin Gastroenterol* 1990; **12**: 74-77

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