

## PANCREATIC TUBERCULOSIS: A CASE REPORT AND LITERATURE REVIEW\*

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**Abstract** The pancreas is rarely affected by *Mycobacterium tuberculosis* infections, probably because of the presence of pancreatic enzymes, and only few cases are reported. The differential diagnosis with pancreatic carcinoma represents a challenge because of clinical and radiological similarities. We report the case of a 39-year-old male patient presenting weight loss, nausea and vomiting. Radiological workup with abdominal computed tomography has demonstrated lesions in the pancreatic tail and spleen. The diagnosis was confirmed by histopathological analysis following laparotomy.

*Keywords:* Tuberculosis; Pancreas; Computed tomography.

**Resumo** *Tuberculose pancreática: relato de caso e revisão da literatura.*

O pâncreas é raramente afetado por infecções pelo bacilo *Mycobacterium tuberculosis*, provavelmente em função da presença das enzimas pancreáticas, e apenas alguns casos são descritos na literatura. O diagnóstico diferencial com carcinoma pancreático é um desafio em virtude das semelhanças clínico-radiológicas. Apresentamos um caso de um paciente de 39 anos de idade, do sexo masculino, com quadro clínico de perda ponderal, náuseas e vômitos. A propedêutica radiológica com tomografia computadorizada de abdome revelou lesões em cauda do pâncreas e baço. O diagnóstico foi confirmado por exame histopatológico após laparotomia.

*Unitermos:* Tuberculose; Pâncreas; Tomografia computadorizada.

### INTRODUCTION

Tuberculosis is a common disease, but the pancreas involvement rarely occurs. The first cases were reported by Auerbach in 1944<sup>(1)</sup>.

Pancreatic tuberculosis pathogenesis is still to be known. It has been suggested that bacilli reach the pancreas by lymphohematogenic dissemination from primary or secondary tuberculosis. The primary lesion may be intestinal, with pancreatic involvement originating from retroperitoneal lymph nodes<sup>(2)</sup>. Clinical features are quite variable, many times mimicking characteristics of a pancreatic adenocarcinoma<sup>(3)</sup>.

This paper presents a case of pancreatic tuberculosis in a 39-year-old male patient manifesting pain in the superior abdomen and constitutional symptoms. The radiological workup and clinical manifestations are discussed.

### CASE REPORT

Male, 39-year-old patient with previous history of alcoholism, reported intermittent epigastric pain for approximately the latest 45 days, associated with nausea, vomiting and body weight loss. There was no history of pulmonary or gastrointestinal tuberculosis in the past.

Clinical signs at physical examination were normal. Total leukocyte counting was 2,700/mm<sup>3</sup>, with the following differential counting: segmented 63%, rods 22%, lymphocytes 9% and monocytes 6%; hemoglobin de 9.3 g/dl. No alteration was found on upper digestive endoscopy. Normal chest x-ray (Figure 1). During the hospital stay, the patient progressed with febrile peaks predominantly at evening.

Computed tomography was requested and demonstrated hypodense lesions in the pancreatic tail and spleen (Figure 2A), with

enhancement after venous contrast injection (Figure 2B).

Exploratory laparotomy revealed multiple whitish nodules in the pancreas, spleen and omentum (Figure 3). The hypothesis of peritoneal carcinomatosis was raised, and omentectomy, splenectomy and hygienization of the peripancreatic area. The histopathological study of the spleen and omentum demonstrated several epithelioid granulomas with central caseous necrosis (Figure 4), associated with few Langhans-type and foreign-body-type giant multinucleated cells. The Ziehl-Nielsen staining for acid-fast bacilli was positive.

### DISCUSSION

The pancreas is rarely affected by tuberculosis. In 1944, Auerbach reported pancreatic involvement in 4.7% of biopsies in cases of miliary tuberculosis<sup>(4)</sup>. Between 1891 and 1961, Paraf et al.<sup>(3)</sup> reported 11 cases of pancreatic involvement in necropsies of miliary tuberculosis, with 2.1% incidence of involvement of this organ.

Between 1980 and 1998, 14 cases were reported in the literature<sup>(5)</sup>, the majority in young adults (mean age 33 years), with

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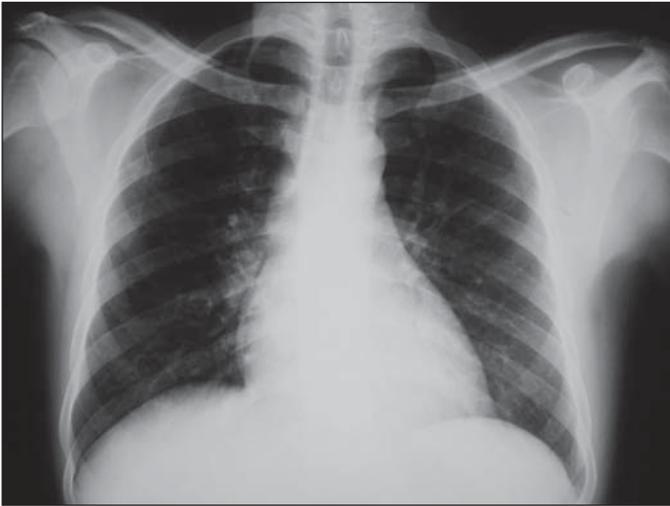
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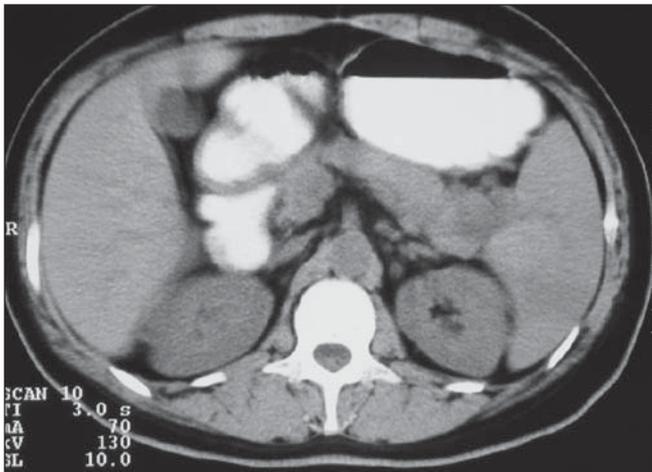
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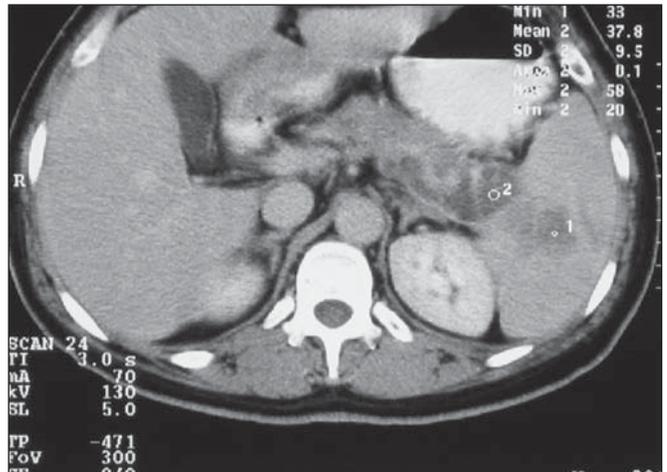
**Figure 1.** Posteroanterior chest x-ray. Lesion suggesting pulmonary tuberculosis were not detected.

constitutional symptoms and epigastric pain. In eight cases, only the pancreas was affected. The diagnosis was made by means of laparotomy in seven cases. Fine needle aspiration biopsy was performed in six cases, two of them under computed tomography guidance. The cytology suggested tuberculosis in four cases. Therefore, fine needle aspiration biopsy is recommended in the suspicion of pancreatic tuberculosis and differential diagnosis with pancreatic tumor<sup>(6,7)</sup>. Of then cases with tuberculinic test, eight were positive. This is a simple and low-cost test that may be useful as a support for the clinical rationale in these cases.

The diagnosis of pancreatic tuberculo-

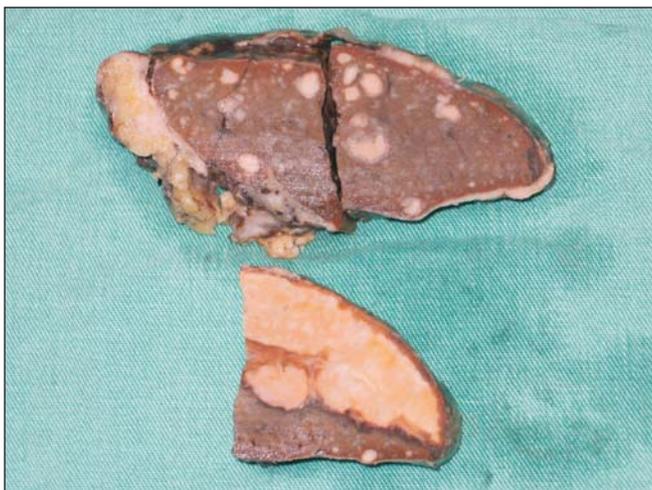


**A**

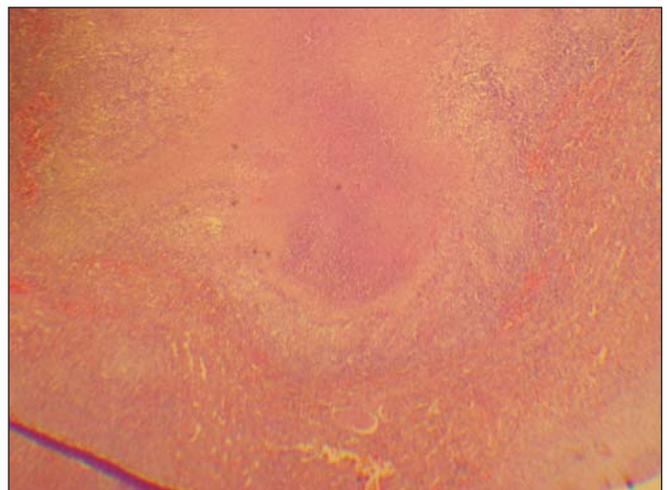


**B**

**Figure 2.** Unenhanced (A) and contrast-enhanced (B) computed tomography. Hypodense lesion in pancreatic tail and spleen with post-contrast enhancement.



**Figure 3.** Surgical piece demonstrating multiple whitish nodules in the spleen.



**Figure 4.** Histopathological study demonstrates epithelioid granulomas with central caseous necrosis.

sis frequently may be disregarded or postponed, unless there is an evidence of pulmonary tuberculosis in another site. However, of the 14 cases in the literature<sup>(5)</sup>, eight did not present extrapancreatic lesions, and only three presented involvement of the lungs.

Pancreatic tuberculosis may present several signs and symptoms, including pain in the upper abdomen, obstructive jaundice mimicking a tumor in the pancreatic head, fever of undetermined origin, and non-specific symptoms like body-weight loss. The majority of cases presented constitutional symptoms and pain in the upper abdomen<sup>(5)</sup>.

## **CONCLUSION**

The diagnosis of pancreatic tuberculosis requires a high level of suspicion and, although is a rare condition, should be considered as a differential diagnosis in patients with pancreatic lesions, particularly those with constitutional symptoms. The tuberculinic test may be of diagnostic value in these cases. However, CT-guided fine needle aspiration emerges as a propedeutic method of choice because of its low-invasiveness and reasonable specificity.

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