

A case report on a rare case of tuberculosis of the pancreas presenting as pancreatic mass

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Statement of the Problem: Tuberculosis is an ubiquitous organism that attacks all organ tissues of its host. Abdominal TB accounts for about 5-12% of patients with tuberculosis and is most common in developing countries. Autopsy studies have shown that the pancreas is affected by about 2.1-4.7% of those with miliary tuberculosis. Pancreatic tuberculosis is a rare condition that can present mimicking signs and symptoms of pancreatic malignancy and in abdominal imaging as pancreatic mass. The purpose of this study is to report a rare case of Pancreatic Tuberculosis in an immunocompetent Filipino, Male.

Methodology & Theoretical Orientation: A literature search and review was done to extract information about Pancreatic Tuberculosis prevalence and incidence, diagnostic approach and treatment approaches considering both international and local guidelines.

Findings: Pancreatic tuberculosis is a rare condition that can present mimicking signs and symptoms of pancreatic malignancy and in abdominal imaging as pancreatic mass. It occurs in the setting of miliary tuberculosis, most frequently in immunocompromised patients, very rarely in immunocompetent. Pancreatic tuberculosis was first reported in 1944 by Auerbach et. al. His study of 1656 autopsies revealed 14 cases with pancreatic involvement but none with isolated pancreatic tuberculosis. 6 Reported cases of Pancreatic tuberculosis from 1966 to 2004 in a MEDLINE search of English language articles around 116 cases of pancreatic tuberculosis were identified. From 2005 up to 2014, based on PUBMED search using the MeSH terms Tuberculosis and Pancreas including literature from English and other languages, there were 49 case reports and 11 case series which include about 164 patients identified. From 2015 until 2018, using the same search engine, there were 5 case reports and 1 case series (5 cases). Based on Google Scholar search, there were 6 cases of pancreatic tuberculosis reported and published.

Conclusion & Significance: Pancreatic tuberculosis is a rare infection most especially in an immunocompetent host.

It must be considered in patient presenting to have signs and symptoms of pancreatic malignancy and with radiographic findings of pancreatic mass. It is must be entertained in patients living in areas where Tuberculosis infection is endemic. The treatment of Pancreatic tuberculosis is straightforward and follows treatment protocol for extra-pulmonary tuberculosis infection.

It is therefore necessary to confirm diagnosis histologically because response to therapy is predictable and complete with full compliance to regimen. Recent Publications 1. Velasco M(2018) A Case Report on Warfarin-Induced Spontaneous Sub-Mucosal And Mesenteric Hematoma In The Gastrointestinal Tract (Small Bowel) Causing Bowel Obstruction. International Digestive Disease Forum. Abstract No. IDDF2018-ABS-0258.

Introduction

one among the foremost common extrapulmonary manifestations of tuberculosis (TB) is tuberculous meningitis (TBM). Any a part of the body are often suffering from TB although it rarely affects the guts, skeletal muscles, or pancreas. [1] Cases involving primary pancreatic TB are increasingly reported perhaps due to evolutionary changes within the biology of the mycobacterium, drug resistance, and new population of immunocompromised patients. [2],[3],[4] However, TBM with pancreatic involvement has been reported rarely. [5] We present an 8-year-old daughter with TBM who presented persistent vomiting likely thanks to pancreatitis.

Case Report

An 8-year-old female child presented with fever, headache, and drowsiness for 8 days. She also had neck stiffness and nonprojectile, nonbilious vomiting. There was no history of contact with a TB patient. Her weight was 24 kg (normal weight for age). Other than being febrile, her vital parameters were normal. She was arousable and the Glasgow Coma Scale was 13/15. Fundoscopy revealed no papilledema. No additional neurological manifestations were found. Her hemoglobin was 9.9 g/dl (normal: 11.5-16.5 g/dl) and white blood cell count was 6300/mm³. Differential leukocyte count showed 36% neutrophils and 63% lymphocytes. The Mantoux tuberculin test was negative. Chest radiograph was normal. Cerebrospinal fluid (CSF) analysis revealed 380 cells/mm³ of which 90% were lymphocytes and 10% were polymorphs, CSF glucose (52 mg/dl) versus blood glucose (109 mg/dl) ratio was <50% of blood glucose, and CSF proteins were 149 mg% (normal = 20-50 mg%). Computed tomography revealed a moderate hydrocephalus with basal exudates suggestive of TBM. CSF TB polymerase chain reaction and culture was not done due to nonaffordability. The patient was started on four-drug antituberculous therapy (ATT) consisting of isoniazid (H), rifampicin (R), pyrazinamide (Z), and streptomycin (S) along with steroids and acetazolamide.

Her fever and meningeal signs decreased, but vomiting persisted. She had no other signs of raised intracranial pressure and no abdominal pain. She was started on antacids and ranitidine but with no improvement. Ultrasound of the abdomen was normal. Serum glutamic pyruvic transaminase was 21 IU/L (normal: 7-56 IU/L). Her serum lipase was 824 U/L (normal: 0-160 U/L) and serum amylase was 2280 IU/L (normal: 23-85 IU/L). HIV ELISA was negative. Her vomiting gradually subsided and lipase and amylase returned to normal after 21 days of ATT. Steroids were omitted after 2 months of ATT, and the patient was continued on HR after 2 months of intensive phase. Magnetic resonance imaging of the brain after 6 months of therapy was normal and ATT was stopped after 1 year of therapy. On follow-up 3 months after stopping ATT, the child was asymptomatic.

Discussion

Acute pancreatitis in children is predominantly caused by multisystem diseases, like viral, sepsis, shock, and hemolytic-uremic syndrome in 33%, injury in 15%, acquired or congenital structural defects in 10%, metabolic diseases in 10%, and drug toxicity in 3%. [6] In up to 25% of youngsters with acute pancreatitis, no identifiable etiology are often found. [6] Pancreatitis could also be caused by variety of viruses, most notably mumps, coxsackie B, cytomegalovirus, varicella zoster, and hepatitis B viruses. Other viral diseases, including hepatitis A and HIV infection, are more weakly related to pancreatic injury.

Bacteria like Salmonella and Mycoplasma are implicated during a few cases of pancreatitis. [7] Pancreatitis caused by infections usually subsides once the infections have resolved. [7] Although pancreatic involvement in TB is extremely rare, it's possible for TB to spread hematogenously to the pancreas. [7] Pancreatitis also can be induced by isoniazid or corticosteroids. [8] In cases of pancreatitis recorded thanks to isoniazid, the pancreatitis subsided on withdrawal of isoniazid therapy. [8] In our patient, the lipase and amylase normalized after 21 days of ATT without requiring modification of treatment; therefore, pancreatitis was likely not drug induced and more likely caused by TB or the other infection. On reviewing the literature; we found one case report which reported pancreatic involvement during a case of TBM.

Biography

Manuel R Velasco Jr is a 2nd year medical resident in internal medicine in the Philippine and has a degree of Bachelor of Science in Nursing as pre-medicine. Worked as a fulltime nurse, a certified infection control nurse, and became a clinical and academic teacher in nursing school prior to becoming a doctor for adult. He is a research enthusiast and was able to win interdepartmental research contest and has publish a case report in Hong Kong.

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