CASE REPORT

Peripancreatic Tuberculous Lymphadenitis in an Immunocompetent Patient

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SUMMARY

Tuberculosis, an ancient disease continues to be a health care burden in Malaysia in the 21st century. Extrapulmonary tuberculosis is a less common presentation of tuberculosis and in particular peripancreatic tuberculous lymphadenitis is rarely seen. We report a case of a young immunocompetent boy presenting with a two month history of non productive chronic cough associated with loss of appetite and loss of weight. Investigations including CT Scan and Endoscopic ultrasound revealed multiple mediastinal lymphadenopathy and peripancreatic lymphadenopathy with central caseation necrosis. Histology of cervical lymph node was suggestive of tuberculosis and mycobacterium PCR was positive. The patient was subsequently treated with antituberculous therapy and had marked clinical improvement of his symptoms. This case outlines a rare presentation of a common disease and the application of newer investigative tools in making the diagnosis.

KEY WORDS:

Tuberculosis, peripancreatic lymphadenitis, pancreas, Endoscopic ultrasound

INTRODUCTION

Tuberculosis, an ancient disease continues to be a health care burden in Malaysia in the 21st century. Tuberculosis is the leading cause of death by a single infective agent despite effective modern chemotherapy in Malaysia [1]. Although there was a decline in the incidence of tuberculosis in the 1980's to the 1990's, resurgence of tuberculosis since then has been attributed in part to HIV/AIDS infection [1]. Extrapulmonary tuberculosis is less common accounting for 10 to 30% of all cases and in particular peripancreatic tuberculous lymphadenitis is much less commonly seen [2]. We report here a case of peripancreatic tuberculosis in a young immunocompetent boy.

CASE REPORT

A 15 year old boy with no past medical illness presented to our hospital with a two month history of non productive chronic cough associated with loss of appetite and loss of weight of 3kg. He also admitted to having intermittent fever with night sweats during that period. He had no contact with tuberculosis patients or recent history of travel. There were no symptoms to suggest connective tissue disease and he did not have a history of diabetes mellitus. He also denied abdominal pain or other gastrointestinal symptoms.

Clinical examination revealed a young boy who was not cachetic looking. He had low grade temperature. Multiple cervical lymphadenopathy were palpable the largest measuring 2 x 2 cm, firm in consistency and non tender. There were no axillary or inguinal lymph nodes palpable. Otherwise examination of the heart, lungs and abdomen did not reveal any abnormalities.

Blood result revealed a mildly raised white cell count of 11,300/mm^3, predominantly neutrophilia. His ESR was markedly raised at 105 mm/hr. However, his haemoglobin, platelet counts, liver and renal function tests were within normal limits. Serum lactate dehydrogenase (LDH) and tumour markers were within normal limits. Sputum for acid fast bacilli repeated three times were all negative. Mantoux test was 13mm and blistering. Septic and human immunodeficiency (HIV) work up was negative.

A chest X Ray showed clear lung fields. CT Scan Thorax and abdomen showed a large multiseptated predominantly cystic lesion seen at the region of the head, uncinate process and body of pancreas measuring 6 x 6.5 x 7.5 cm. Enlarged lymph nodes (LN) with necrotic centres were noted at anterior mediastinum, left hilar and subcarinal regions. Multiple ill defined nodules were seen in the apico-posterior segment of left upper lobe. In view of the pancreatic mass and multiple intrabdominal LN, the patient was subjected to an endoscopic ultrasound.

Endoscopic ultrasound (EUS) revealed multiple peripancreatic, para aortic and mediastinal LN measuring up to 2cm in diameter. A large heterogeneous LN at the head and neck of pancreas measuring 4 x 4 cm with central necrosis was also noted. There was proximal common bile duct dilatation although the pancreatic parenchyma was essentially normal.

The patient was subsequently subjected to a cervical LN excision biopsy and fine needle aspiration (FNA) of the peripancreatic LN during EUS. The LN histology showed multiple granulomatous lesions with presence of central caseous necrosis surrounded by epithelioid histiocytes and lymphocytes. Mycobacterium Tuberculosis PCR (MTB PCR) assay was positive although Ziehl-Neelson stain for Acid Fast Bacilli was negative. FNAC of LN at EUS showed pus like

This article was accepted: 24 March 2014

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Fig. 1: Endoscopic Ultrasound Image of peripancreatic lymph nodes at the region of pancreatic body.

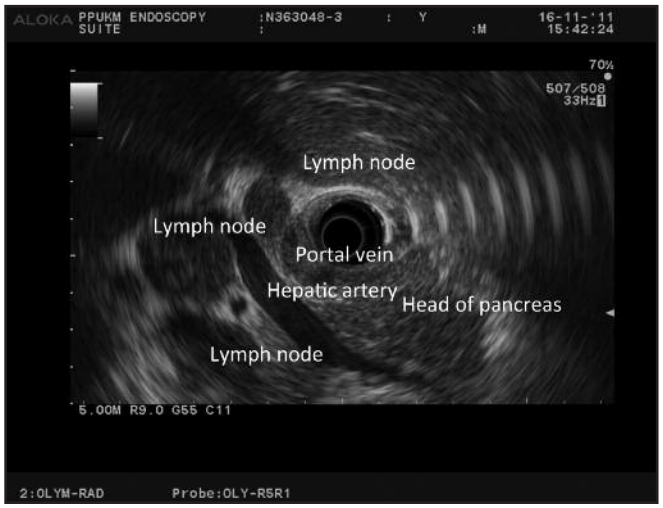

Fig. 2: Endoscopic Ultrasound Image of peripancreatic lymph nodes at the region of pancreatic head.

material which was negative for Ziehl-Neelson stain and MTB PCR.

Therefore, this patient was treated for tuberculous lymphadenitis with peripancreatic, mediastinal and cervical LN involvement and started on standard antituberculous medications. Patient was discharged well and on follow up at 2 months had excellent clinical and radiological improvement.

DISCUSSION

Peripancreatic tuberculous lymphadenitis (PTB) and isolated pancreatic tuberculosis are uncommon clinical entities, particularly in immunocompetent individuals [3]. PTB is uncommon even in areas endemic for TB as it is thought that the pancreas is biologically protected from mycobacterium seeding due to the presence of pancreatic enzymes [3]. There has been only one other case reported in Malaysia of PTB and this involved an older immunocompetent patient who presented with recurrent acute pancreatitis and the empirical diagnosis of PTB was made on biochemical and radiological (CT Scan) parameters [4].

Most cases of PTB present with abdominal pain associated with constitutional symptoms of weight loss and loss of appetite or as part of disseminated tuberculosis as in our case[3]. Other reported clinical presentations include acute or chronic pancreatitis, pancreatic abscess, obstructive jaundice, portal vein thrombosis causing portal hypertension and even intrabdominal bleeding due to haemorrhagic pancreatitis [4].

Patients with pancreatic masses or cystic pancreatic lesions or peripancreatic lymph nodes have many differential diagnoses including inflammatory pseudotumour due to chronic pancreatitis, pancreatic malignancy and lymphoma[2]. In our young patient presenting with multiple enlarged lymph nodes in the neck, mediastinum and abdomen our two main differential diagnoses were TB and lymphoma.

PTB poses a serious diagnostic challenge to the treating physicians partly due to the difficulty in differentiating PTB from pancreatic tumour radiologically and clinically [5]. Enlarged lymph nodes in the peripancreatic area can resemble pancreatic parenchyma on ultrasound or CT Scan due to the similar tissue density and therefore can be mistaken for pancreatic malignancy [3]. EUS is an important tool in assessing many pancreatic lesions with high accuracy and especially useful in performing FNA. Diagnostic accuracy of EUS-FNA is reported to be 76% to 95% for pancreatic cancer and 46% for focal inflammation. EUS is increasingly utilized for the diagnosis of PTB and in a recent paper, Song *et al* reported that 76.2% of patients were accurately diagnosed by EUS-FNA [5]. For diagnosis of TB, MTB PCR is increasingly used with a reported sensitivity of 64% compared with a sensitivity of 20% for AFB staining [5]. In our patient, the diagnosis was made on typical histological changes coupled by positive MTB PCR although AFB staining was negative. As drug susceptibility cannot be determined by PCR assays standard cultures should also be performed. When EUS FNA is not diagnostic of TB, laparoscopy or open laparotomy is still required to make a diagnosis [5].

Once diagnosis has been made, antituberculous medications should be commenced early and symptomatic improvement is usually seen within two weeks as with our patient [3].

In summary, TB of the pancreas and peripancreatic lymph node is rare in immunocompetent patients and can be a diagnostic challenge. The diagnosis of PTB should be particularly suspected in young patients from endemic areas of tuberculosis including Malaysia, presenting with abdominal pain and constitutional symptoms. EUS guided-FNA together with MTB PCR should be the first modality for making a diagnosis when PTB is suspected particularly so since EUS is more available now at major hospitals in Malaysia. Pancreatic EUS guided-FNA allows an accurate and safe diagnosis in majority of cases without the risk, cost and time expenditure of an open biopsy or laparotomy.

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