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Primary Hydatid Cyst of Pancreas - A Rare Case Report

Running title: Hydatid cyst of pancreas

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ABSTRACT

Cystic echinococcosis (CE) (Hydatid cyst) a zoonotic infection caused by larval stage of Echinococcus granulosus is a major public health problem and often a neglected one. Primary pancreatic involvement is seen in less than 1% of the patients with hydatidosis in endemic countries. We report a case of hydatid cyst of the tail and body of pancreas causing where the preoperative diagnosis was confirmed by direct microscopic examination of hooklets in the cystic fluid. Pancreatic hydatidosis should always be considered in the differential diagnosis of pancreatic cystic lesions in endemic countries.

Keywords: Hydatid cyst, Pancreatic hydatidosis.

INTRODUCTION

Cystic echinococcosis(CE) (Hydatid cyst) a zoonotic infection caused by larval stage of Echinococcus granulosus is a major public health problem and often a neglected one (da Silva AM,2010) , The annual incidence of CE ranges from 1-200/100,000 inhabitants in endemic areas. Mortality in untreated or inadequately treated patients can be as high as 90% within 10-15 years of diagnosis (Pawlowski Z et al ,2001). Though the cyst is most often seen in liver(60-70%) and lungs(5-20%) it can develop in almost every organ or tissue. Diagnosing hydatid cyst at unusual locations pre-operatively is very difficult. Only the presumptive diagnosis can be done by Ultrasonography (USG), computed tomography (CT) scan and magnetic resonance imaging (MRI). Herein, we report a case of hydatid cyst of the tail and body of pancreas causing where the preoperative diagnosis was confirmed by direct microscopic examination of hooklets in the cystic fluid.

CASE REPORT

A 30yr old woman was admitted to ward with complaints of abdominal pain in left hypochondrium since 1 month which was episodic, dull aching, continuous, non radiating and non referred .No abdominal distension ,fever, joint pain, vomiting, or history of worm expulsion , drug intake or tuberculosis was observed. Patient had multiple episodes of abdominal pain since last 4 years. She was treated with analgesics, antacids and antibiotics off and on by private practioners with only temporary relief. No icterus, steatorrhea or signs of obstructive jaundice were seen. Other systems were normal on examination. Her past medical history was unremarkable.

Lab. analysis were as follows: white blood cell count 6300/mm^3 ,hemoglobin 12.7gm/dl , platlets 1.63 lakh/mm^3 ,serum amylase 41U/l(25-125), alanine aminotransfease (ALT)10U/l(0-40), aspartate transaminase(AST) 19U/l(0-40), alkaline phosphatase ALP 10U/l, Total bilirubin 0.7mg/dl(0.1-2), direct bilirubin 0.1(0.1-0.8), albumin 4.7g/dl. Serological tests for HbsAg, anti HBc IgM, antiHCV, and anti HIV were negative. Hydatid serology (ELISA) was negative.

X-rays of chest and abdomen were normal. Ultrasound abdomen showed multiloculated cystic lesion in the region of pancreatic tail and body .Rest of the pancreas and other abdominal organs appeared normal . Magnetic Resonance Imaging(MRI) showed well defined round to oval 7.5x6x5.5 cm lesion with thick regular wall containing multiple varying sized cysts in pancreatic tail and adjacent body. Liver and gall bladder were normal.

Magnetic Resonance cholangiopancretography (MRCP) revealed thick regular walled multicystic lesion in pancreatic tail and body. Marginal splenomegaly was seen and common bile duct(CBD) was normal and not dilated.

An ultrasound guided aspiration of the cyst was done to drain fluid and the fluid was sent for amylase levels detection, for the microbiological examination and to detect malignant cells and levels of tumour markers carcinoembryogenic antigen(CEA) ,carbohydrate antigen (CA)19-9.

Microbiological examination showed hooklets of Echinococcus sp.in direct smear of cystic fluid (Fig1).

Fig.1: Hooklets of Echinococcus sp. in direct smear of cystic fluid.

Cystic fluid amylase levels were very high(8200 U/L) and was negative for malignant cells and tumour markers. A diagnosis of hydatid cyst of pancreas was made on the basis of direct microscopy.

Patient was put on albendazole 400mg bd 10 days preoperatively. Open cystopericystectomy was done 12 days after admission and diagnosis was confirmed on exploration. The post-operative period was uneventful. The patient´s immediate recovery was remarkable and was discharged on 5th post-op day. Albendazole was prescribed for 1 month.

DISCUSSION

Primary pancreatic involvement is seen in less than 1% of the patients with hydatidosis in endemic countries (Serhal S et al,1987; Jai SR et al,2007; Haddad MC.2003) . Pancreatic infestation is mainly by hematological route or by peripancreatic lymphatic invasion but very rarely by retroperitoneal spread, even local spread via the pancreatic or bile ducts has been suggested (Borisa AD et al,2009) . Our patient is a housewife and has no pet so she might have acquired infection by ingestion of food contaminated by excreta of stray dogs.

The clinical presentation varies depending on the site of involvement. A patient having cyst in the head of pancreas usually presents with obstructive jaundice or pancreatitis whereas those involving body and tail are either asymptomatic or presents with abdominal pain, vomiting, abdominal mass or dyspeptic symptoms (Shah OJ et al,2007). Our patient also presented with non specific symptoms such as abdominal pain and other dyspeptic symptoms like vomiting. Since

the diagnosis was never suspected the patient continued to receive antacids, analgesics and antibiotics for symptomatic relief for almost 4 years.

Diagnosing CE of pancreas preoperatively is very difficult due to lack of clinical suspicion. Also because the radiological findings are often non specific and negative serology does not rule out hydatid disease (Beggs I, 1985) . Although, Fine needle aspiration of the cystic lesion has been recommended as a method of differentiating hydatid cysts of pancreas from other cystic lesion, it carries a potential risk of needle tract or peritoneal dissemination of the viable parasite or neoplastic cells. Accidents of this kind have been reported with coarse needle but not after fine needle percutaneous puncture. (Beggs I,1985). False negative results are seen with acepalocysts and absence of cyst contents in the aspirate.

Pancreatic CE is often confused with pseudo cyst and other cystic lesions of the pancreas and tumors. Hydatid cyst can cause considerable morbidity and mortality in untreated patients due to associated complications such as secondary infection or cyst rupture producing anaphylactic shock reaction (Cağlayan K et al, 2010). The treatment is primarily surgical but pre and post operative chemotherapy decreases the chances of its dissemination, its recurrence and other allergic reactions. Hence it is important to diagnose pancreatic CE preoperatively.

Thus pancreatic hydatidosis should always be considered in the differential diagnosis of pancreatic cystic lesions in endemic countries. Ultrasound guided fine needle aspiration may be used as adjunct to radiological and serological method for early diagnosis and treatment.

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