

HYDATID CYST OF PANCREAS – A CASE REPORT AND REVIEW OF THE LITERATURE

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ABSTRACT Primary hydatid cyst of pancreas is rare. We reported a case of 49-year-old female who presented with abdominal pain. The diagnosis can be difficult, confusing with other cystic lesions of the pancreas. Imaging studies demonstrated a well-defined complex SOL of 55*52*64 mm of size with curvilinear calcification of wall in peripancreatic extent along the tail of pancreas. Diagnosis of hydatid cyst of the pancreas can be confirmed only by surgical exploration and histopathology. The aim of this study was to describe clinical, radiological and therapeutic aspects of hydatid cysts of the pancreas. Surgery remains the gold standard treatment. We performed an exploratory laparotomy and removed the mass from the tail of pancreas which is again rare and only accounts for(16%–19%) of all the pancreatic cysts of Pancreas as distribution to head (50%–58%) and body is (24%–34%). Histopathological biopsy revealed Hydatid cyst. The postoperative period was uneventful. Additionally, a review of the literature regarding pancreatic hydatid cyst is presented. and the therapeutic modalities of this rare disease is discussed.

KEYWORDS Hydatid, Pancreas, Echinococcus

Introduction

Hydatid disease is a zoonosis caused by the larval stage of *Echinococcus granulosus* which is endemic to regions where stockbreeding and agriculture are a common occupation [1]. These include the Mediterranean region, Africa, South America, Australia, Middle East and India [2]. For *Echinococcus granulosus*, dogs are the definitive host whereas sheep and goats are the intermediate host. Man is an accidental dead end host who is infected after consuming vegetables contaminated with dog feces containing Echinococcal eggs [3]. Hydatid cysts can be found in almost any organ of the body but the most common sites are liver (50%–77%), lung (15%–47%), spleen (0.5%–8%), and kidney (2%–4%) [1]. Pancreatic hydatid cysts (PHC) are rare

entities with incidence ranging from 0.14% to 2% [4].

Diagnosing hydatid cyst of pancreas preoperatively is difficult due to its rarity. Computed tomography (CT) scan is helpful in identifying presence of multiloculation, curvilinear calcification or presence of daughter cysts. However final diagnosis can only be done by surgical exploration and histopathologic examination. Surgery remains the gold standard treatment for patients with echinococcosis despite significant economic costs, advances in medical treatment, and interventional radiology [5,6,7]. We present a case of large pancreatic hydatid cyst managed successfully with surgery.

Case study

A 49-year-old female presented to us with chief complaint of pain in left upper quadrant of abdomen for 2 months. Pain was dull, gradual in onset, continuous, non-radiating, no aggravating or relieving factor. History of decreased appetite was present. Patient was also experiencing nausea after meals. No history of vomiting, no history of bowel or urinary complaint. General physical examination was within normal limits. Abdominal examination revealed a palpable lump of approx.5 x 5 cm in the left hypochondrium which was non-tender. No hepatomegaly. On examining a patient in knee –chest position, lump did not fall

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forward indicating that the lump was in retroperitoneal location on USG. Mass projecting in the peri splenic area. Splenic vessels were prominent on USG. (Figure 1).

In routine investigations, Hb=11 gm/dl , TLC = 4640 / cmm³, monocytes= 8.4 %. LFTs were within normal limits. Serum amylase and lipase came out to be within normal limits. Chest x ray was normal. Viral markers were non-reactive. CT abdomen revealed a well-defined complex cystic mass lesion / SOL measuring 101.9*40.6*64 mm of size with curvilinear calcification of wall in peripancreatic extent along the tail of pancreas. On post contrast study the lesion doesn't shows enhancement (almost no enhancement). Exuberant calcification seen in the wall of lesion. No intralesional calcification seen. The main radiological differential diagnosis was between cystadenoma pancreas or hydatid cyst of pancreas or Pseudo pancreatic cyst or cystic neoplasm.

We decided to explore the patient through mid-line laparotomy incision. Before it, preoperatively, patient was given pneumococcal, H. Influenzae and meningococcal vaccine in view of possibility of splenectomy. Under general anesthesia, exploration laparotomy was performed. Exploration revealed a mass (approx. 5-6cm) adherent to surrounding structures after opening the lesser sac. Mass separated from the body of pancreas as it was arising from tail of pancreas. Peritoneal cavity was protected with betadine (a scolicidal) soaked mops. To minimize intraoperative spillage from cyst, we did not aspirated the cyst as it was well circumscribed mass. Proper dissection and hemostasis were secured. Abdomen closed and drain was left in resultant cavity.

The cyst was opened in tray and the diagnosis of hydatid cyst was confirmed by the presence of laminated membrane and daughter cysts. (Figure 5,6,7,8&9) Cyst wall with contents was sent for histopathological examination. Post-operative histopathological analysis confirmed hydatid cyst. ELISA for Echinococcal antigens done post-operatively was positive. Post-operative drain output was minimal. The drain was removed on Post-operative day 3.

Post-operatively course was uneventful and patient discharged on 4th post-op day. Albendazole 10mg/kg/day started from postoperative day 1 and continued for 21 days then gap of 14 days. 3cycles recommended to prevent recurrence. Patient is on regular follow up and has been asymptomatic for last 1 month since operation. Repeat USG abdomen is normal. (Figure 10)

Discussion

Hydatid cyst occurs commonly in liver and lung but pancreatic hydatid cyst has been rarely reported. Pancreatic hydatid cysts (PHC) are rare entities with incidence ranging from 0.14% to 2% [4]. PHCs are usually solitary (90%-91%) and distributed unevenly throughout the head (50%-58%), body (24%-34%) and tail (16%-19%).[8]

Clinical presentation varies with size of the cyst and anatomic location. Cyst in head of pancreas can cause obstructive jaundice,[9] acute pancreatitis, recurrent acute pancreatitis [10] or chronic pancreatitis.[11] Cyst located in body can be symptomless or can present with abdominal lump [12] as in our case. Lesions on tail can also present with portal hypertension.[13]

The diagnosis of pancreatic cystic lesion can be performed by ultrasonography, CT scan, MRI and endoscopic ultrasound but the difficulty is to link these lesions to the possibility of hydatid disease as a diagnosis. The radiological imaging features that are useful for distinguishing hydatid cyst from other cystic lesions



Figure 1: USG.



Figure 2,3,4: CT-scan.



Figure 5,6,7,8,9: Operative.

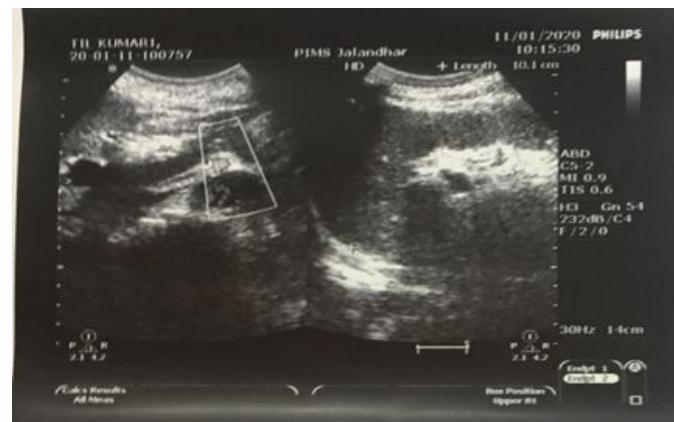


Figure 10: Repeat Normal USG after 1 month.

are the presence of curvilinear calcification in the wall of the cyst (12%), the presence of daughter cysts, or the presence of debris known as hydatid sand, septations, or membrane detachment. [14,15,16,17] Important serological investigations are hydatid immune electrophoresis, enzyme linked immunosorbent assay, (ELISA) latex agglutination and indirect hemagglutination (IHA) test.[18]

Even with these fairly specific characteristics, hydatid cysts with unusual localizations (such as the pancreas) may present true diagnostic challenges. In fact, it is often difficult to differentiate these from pancreatic pseudocysts or cystic neoplasms.

The treatment of hydatid cysts is principally surgical. However, pre- and post-operative 1-month course of albendazole and 2 weeks of praziquantel can help in sterilizing the cyst, decrease the chance of anaphylaxis, and reduce the recurrence rate post-operatively.[19] Sterilization of cyst with scolicidal agents like betadine is used to prevent intraoperative parasitic dissemination. [20,21]

According to some authors, surgical exploration of the abdomen is the only way to reach a definitive diagnosis.[22] Depending on the site, various methods of surgical treatment have been used. Cysts present in the head without any communication can be treated with peri cystectomy, partial peri cystectomy with external drainage or omentopexy, marsupialization or pancreateoduodenectomy procedures [23]. In cysts with communication to the pancreatic duct, cysto-enteric anastomosis is the favored procedure [23]. Cysts located in the tail and body/neck of pancreas are appropriate for distal pancreatectomy and central pancreatectomy respectively [23], [24]. Laparoscopic evacuation of the cyst with omentoplasty has also been described using a 10 mm trocar [25]. Percutaneous treatment of pancreatic hydatid cyst using catheter technique has also been reported in few properly selected cases [26].

Even if surgery remains the main therapeutic method of hydatid disease, new interventional techniques are also being used. Ultrasound guided percutaneous aspiration, injection and re-aspiration puncture (PAIR) of the cyst can be used for treatment of hydatid cyst especially when surgery is contraindicated. Multiple trials confirmed that PAIR is appropriate for the treatment of liver, abdominal cavity and renal hydatid cysts. The technique is performed using ultrasound or CT guidance to facilitate aspiration of the cyst fluid. PAIR should not be used in the lung, spine, and brain [27]. Concerning hydatid cyst of the pancreas, this technique is advised against because of the risk of complications [28].

Conclusion

We can conclude that pancreatic hydatid disease, even if it is very rare, should be considered in the differential diagnosis of cystic lesions of the pancreas. Surgical treatment is to be considered whenever it is possible. The conservative treatment (partial or total peri cystectomy) is the procedure of choice and resection should be reserved for selective cases

Conflict of interest

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