

# Rare cystic lesion of pancreas : A case report

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## ABSTRACT

Hydatid disease also known as Hydatidosis or echinococcosis, the cause of which is the larval stage of *Echinococcus granulosus*. Pancreatic hydatidosis is very rare, with an incidence ranging from 0.14 to 2%. In this report we present a case of 51 years old female patient admitted in our hospital with a cystic lesion in the body of pancreas. Pre-operative computed tomography findings were suggestive of mucinous cystadenoma for which radical antegrade modular pancreatosplenectomy procedure was done.

**Keywords :** Case report, mucinous cystic neoplasm, pancreatic hydatidosis.

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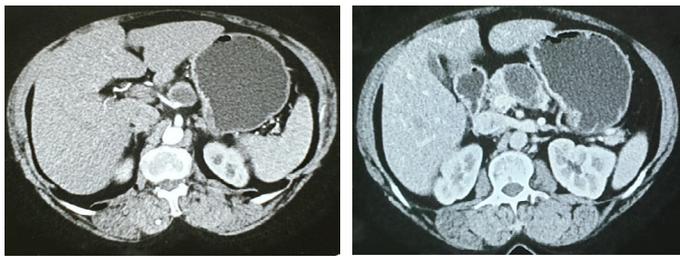
## INTRODUCTION

Hydatid disease is a parasitic disease, the cause of which is the larval stage of *Echinococcus granulosus*. The liver is most commonly affected, followed by the lungs which constitutes approximately 90% of echinococcosis cases.<sup>1</sup> Pancreatic hydatidosis is extremely rare with an incidence ranging from 0.14 to 2%.<sup>3,4</sup> Preoperative diagnosis of hydatid cysts is difficult since the symptoms and clinical findings can be identical to other more common pancreatic cystic lesions. Because of the greater prevalence rate of pancreatic mucinous cystadenomas (2.6%) and the practically exceptional occurrence of pancreatic echinococcosis, it is rarely included in the differential diagnosis. Here we present a case of cystic lesion of pancreas.

## CASE PRESENTATION

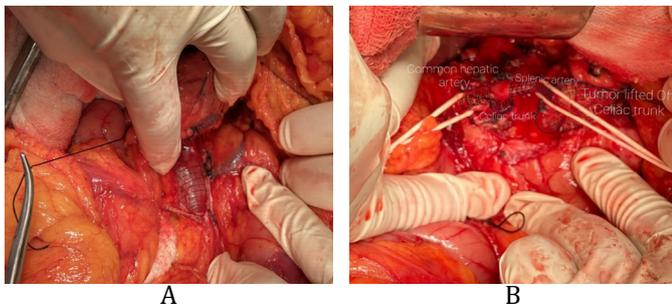
A 51-year-old diabetic female with hypothyroidism and chronic obstructive pulmonary disease (COPD) presented with the complaint of upper abdominal pain for four months which was constant dull aching, often radiating to the back, associated with few episodes of non-bilious vomiting and relieved to some extent with analgesics. Bowel and bladder habits were normal but had a history of significant weight loss in the last six months. Her prior surgical history included a vocal cord polypectomy one month ago.

Abdominal examination revealed mild tenderness in the epigastric region. Laboratory tests including complete hemogram, renal and liver function tests, Serum Amylase, lipase, CA 19-9, and CEA were within normal levels. Computed tomography (CT) scan revealed well-defined peripherally enhancing hypodense lesion measuring 5 x 4 x 3 cm<sup>3</sup> at the body of the pancreas suggestive of Mucinous Cystic Neoplasm (MCN). (Figure 1) The lesion was abutting the celiac trunk, hepatic artery and splenic artery.

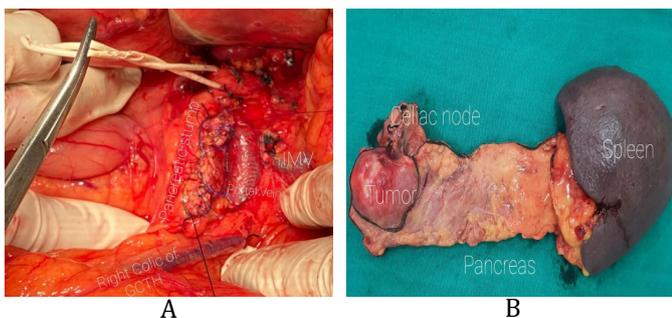


**Figure 1:** Axial section of Contrast enhanced CT abdomen showing well defined peripherally enhancing hypodense lesion in the body of pancreas abutting the hepatic and splenic artery

Intraoperatively, a cystic mass of about 5 cm was found in the body of pancreas. The mass was abutting the celiac trunk, hepatic artery, Superior mesenteric artery (SMA) and splenic artery. So we proceeded with Radical antegrade modular pancreatosplenectomy (RAMPS) procedure. (Figure 2 and 3)

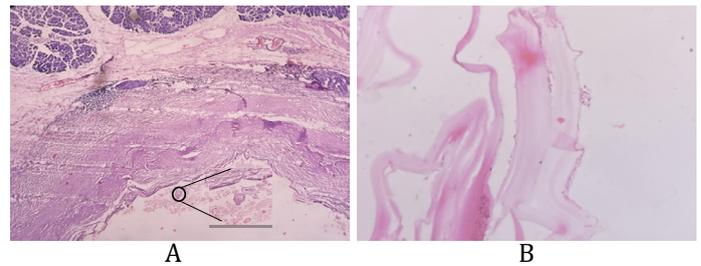


**Figure 2:** A- approaching tunnel of love between pancreas and portal vein , B- Tumor lifted off the celiac trunk



**Figure 3:** A- pancreatic stump after resection of the mass, B- Resected Specimen

The post-operative course was uneventful. The abdominal drain was removed on sixth post-operative day and discharged on ninth post-operative day. On follow-up, the histopathological report revealed a pancreatic hydatid cyst. (Figure 4) The patient was then started on oral albendazole therapy for four months. During two years of follow-up, the patient was in good condition and with no complications or recurrences.



**Figure 4:** A- Histological examination of the pancreatic cystic lesion revealed a dense fibrous cyst wall with scolex (infracted) (Haematoxylin and eosin stain (H&E), 100x). B - Avascular laminated membrane of the hydatid cyst, along with germinal center (400x)

**DISCUSSION**

Pancreatic hydatid cysts (PHC) are most common in the pancreas’s head (50-58%), followed by the body (24-34%), and the pancreatic tail (16-19%).<sup>2</sup> The clinical presentation varies from asymptomatic to non-specific symptoms such as epigastric pain, discomfort, vomiting, and weight loss. Head cysts can cause obstructive jaundice due to compression of the common bile duct.<sup>7,8</sup> Cysts in the body of the pancreas are usually asymptomatic until they develop large enough to cause an abdominal lump or symptoms owing to compression of adjacent structures. Cysts in the pancreatic tail can cause splenomegaly and portal hypertension.

Cholangitis, biliary tree or peritoneal rupture, pancreatic fistula, recurrent pancreatitis, and abscess have all been reported as complications of the disease.<sup>6</sup> The hydatid fluid is antigenic with the potential to produce a deadly allergic reaction in humans.<sup>1</sup>

Ultrasonography (USG), CT scan, magnetic resonance imaging (MRI), and endoscopic USG are some of the imaging modalities used to diagnose hydatidosis. Radiological findings alone cannot provide an accurate diagnosis, especially in pancreatic cystic lesions, where imaging features such as multilocular cysts, internal septations, calcifications, and wall enhancement are seen in both benign (hydatid cysts) and malignant (MCNs, serous cystadenoma, IPMN) lesions.

Serological testing is a standard approach for determining the presence of hydatid cysts. Enzyme-linked immunosorbent assay (ELISA) for echinococcal antigens is positive in 85% of infected individuals with hepatic hydatidosis, but only 54% of PHC cases.<sup>5</sup> ELISA findings may be negative if the cyst has not leaked, or contain no scolices, or if the parasite is no longer viable. Negative serology does not rule out Cystic Echinococcosis. Another diagnostic approach implied is endoscopic or percutaneous ultrasound-guided

Fine needle aspiration cytology (FNAC) which has a 62% accuracy rate in cystic pancreatic masses.<sup>10,11</sup>

The presence of hydatid cysts in uncommon abdominal locations poses a diagnostic difficulty, especially in primary, solitary lesions with no lung or liver involvement. In addition to the above mentioned characteristics, our patient had concerning radiological findings which pointed to pancreatic MCN. We proceeded with standard oncologic resection, involving distal pancreatico-splenectomy and lymph node dissection.

While a variety of treatment modalities have been described, Surgery remains the only definitive diagnostic and therapeutic tool in the management of PHC. The optimal surgical treatment is determined by the cyst's location and size, the presence of symptoms, and the involvement of nearby organs such as the pancreatic and common bile ducts.<sup>12</sup> Furthermore, the surgeon's expertise, patient's age and associated comorbidities play a role in determining the surgical technique.

In terms of post-operative care, the patient was monitored for any possible recurrences with periodic abdominal ultrasound, complete hemogram and liver enzymes at the start of a 28-day cycle during therapy for four months to monitor for albendazole toxicity. Our intention in presenting this case is to highlight the fact that hydatid cyst can masquerade as more common cystic lesions of the pancreas. So, it should always be considered as a differential diagnosis.

## CONCLUSIONS

PHC is a rare disease that is sometimes misdiagnosed with cystic pancreatic neoplasms. Although PHC poses a distinct pre-operative diagnostic difficulty, it should always be included in the differential diagnosis of cystic pancreatic lesions especially in endemic locations. Being aware of this occurrence aids in the prevention of misdiagnosis and treatment.

**PATIENT CONSENT:** Written informed consent was obtained from the patient for publication of this case report and accompanying images.

**CONFLICTS OF INTEREST:** None declared

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**ETHICAL APPROVAL:** An approval from the hospital board committee is taken for the procedure and case report publication.

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