

# Isolated Hydatid Cyst of the Pancreas Mimicking a Cystic Pancreatic Neoplasm – A Case Report with 6-Years Follow-up

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## ABSTRACT

Hydatid cyst is a parasitic disease caused by *Echinococcus granulosus*, and it is endemic in some regions of the world, including Romania. Liver and lungs are the main locations for primary hydatid cyst, while the pancreatic location of the disease is exceptional. It is presented the case of a 34-years-old male diagnosed at computed tomography with a large cystic lesion of the pancreatic body and tail considered as a cystic pancreatic neoplasm. The patient underwent a distal spleno-pancreatectomy, and after transection of the operative specimen, it was revealed a pancreatic hydatid cyst. Imaging control at 6 years after surgery revealed no signs of recurrence. Although isolated pancreatic hydatid cyst is exceptional, it should be taken into consideration for differential diagnosis of pancreatic cystic mass, particularly in endemic areas for *Echinococcus granulosus*.

**Key words:** hydatid cyst, pancreas, distal pancreatectomy, outcome

## INTRODUCTION

Hydatid cyst is a parasitic disease caused by *Echinococcus granulosus*, and it is endemic in some regions of the world, including Romania (1). Liver and lungs are the main locations for primary hydatid cysts (68.9% - 80% and 10% - 22.4%, respectively), but the disease may also be located also in other organs (2-4).

Hydatid cysts of pancreas are considered an exceptional pathology: 0.25% - 2.5% of hydatid cysts (2,3). Thus, in a review performed by Akbulut and co-workers in 2014, only 58 patients with pancreatic hydatid cyst were identified, associated or not with liver or other organs disease (5).

Hereby, it is presented the case of a patient with hydatid cyst of distal pancreas. Clinical and imaging appearances are discussed along with therapy approach.

## CASE PRESENTATION

A 34-years-old male without any significant medical history was investigated for right abdominal quadrant pain and weight loss and was diagnosed at abdominal ultrasound examination with a large pancreatic cystic mass.

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Bioumoral findings were within normal limits including the CA 19-9 serum level. Contrast-enhanced computed tomography revealed a solitary cystic lesion with septation in the pancreatic body and tail, measuring 82 mm x 80 mm, with extrapancreatic extension, but without any other organ involvement; the lesion was considered to be a cystic pancreatic neoplasm (*fig. 1*). No other abnormalities were observed in the liver or other organs. After preoperative work-up, the patient was scheduled for surgery in September 2011. Intraoperatively, it was observed a cystic tumor of the pancreatic body and tail without loco-regional invasion, and a distal spleno-pancreatectomy was performed. After removal and transection of the operative specimen, it was revealed the presence of germinative membrane, hydatid fluid and vesiculae (*fig. 2*). The postoperative outcome was uneventful except for thrombocytosis, and the patient was discharge 10 days after surgery with antiplatelet drugs. The patient was re-admitted in our unit in May 2017 for a check-up without clinical complaints and with normal bioumoral findings. Contrast-enhanced computed tomography revealed a fluid collection corresponding to the former distal pancreatic region, without any imaging signs of infection (*fig. 3*). No further treatment was considered necessary.

**DISCUSSION**

Isolated hydatid cysts of the pancreas are an exceptional pathology, even in endemic areas, and are usually located in the pancreatic head, with equal distribution between males and females (5).

Accurate preoperative diagnosis of hydatid cyst of



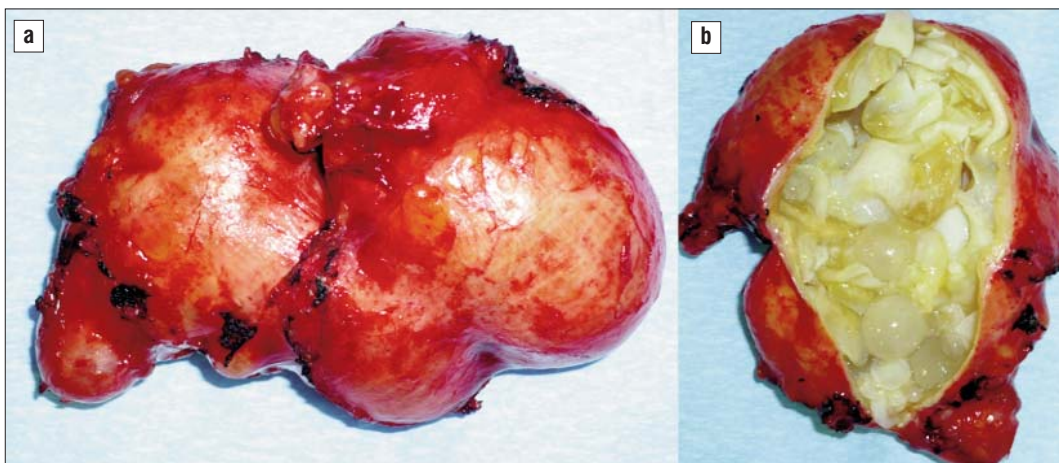
**Figure 1 - Preoperative contrast-enhanced computed tomography (axial plane) showing solitary cystic lesion with septation (white arrow) in the pancreatic body and tail, measuring 82 mm x 80 mm, with extrapancreatic extension, but without any other organ involvement.**

the pancreas is rarely achieved, and usually, the lesion is misinterpreted as pancreatic pseudo-cyst (6) or cystic neoplasm (7), as it was the case in the present patient.

Epigastric pain and mass are the main clinical signs of a pancreatic hydatid cyst (8).

The natural course of a pancreatic hydatid cyst may be complicated with compression of the surrounding structures [including distal bile duct with jaundice (5), Wirsung duct with acute pancreatitis (9) or splenic vein with left portal hypertension (10)], fistulisation into the bile duct or rupture into the peritoneal cavity (11).

Usually, the imaging explorations such computed



**Figure 2 - Operative specimen of distal pancreatectomy (a) intact, and (b) after transection showing germinative membrane, hydatid fluid and vesiculae, highly suggestive for pancreatic hydatid cyst.**



**Figure 3. Contrast-enhanced computed tomography (axial plane) at 6 years after surgery showing a postoperative fluid collection (white arrow) without imaging signs of infection.**

tomography or magnetic resonance suggest the diagnosis of cystic pancreatic neoplasm (*fig. 1*). It appears that most hydatid cysts of the pancreas have an extra-pancreatic development(9), as it was the case in the present patient (*fig. 1*). Furthermore, when the hydatid etiology is suspected hydatid serology should be explored because it is positive in more than half of the patients (5). Nevertheless, for most patients with hydatid cysts of the pancreas, diagnosis is made at the time of surgical exploration or even after the operative specimen was removed and transected, as it was the case in the above-presented patient. The macroscopic appearance of a hydatid cyst is highly suggestive for diagnosis (*fig. 2*).

Treatment of a pancreatic hydatid cyst is mainly surgical (5). The rationale for treatment of hydatid cyst is based on potential complications such as fistulisation, compression of the neighboring organs, infection and anaphylactic shock (12). Surgical technique is tailored to size, location and presence/absence of complications, and may include external drainage (13), kysto-digestive anastomosis (14) or even pancreatectomy (2,7,8). External drainage is not usually recommended for hydatid pancreatic cysts because it was associated with increased rates of postoperative complications (5,11).

Recurrence after surgery of pancreatic hydatid cyst is exceptional (5).

## CONCLUSION

Although isolated pancreatic hydatid cyst is exceptional, it should be taken into consideration for differential diagnosis of pancreatic cystic mass, particularly in endemic areas for *Echinococcus granulosus*.

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