

Hydatid cyst of the pancreas causing portal hypertension

Paula SZANTO, MD, PhD^a; Ioana GOIAN, MD^a; Nadim AL HAJJAR, MD, PhD^b;
Radu BADEA, MD, PhD^a; Andrada SEICEAN, MD, PhD^a;
Dorina MANCIULA, MD, PhD^c; Al. SERBAN MD^d

^a3rd Medical Clinic, Cluj Napoca, Romania

^b3rd Surgical Clinic, „Iuliu Hatieganu” University of Medicine and Pharmacy,
Cluj Napoca, Romania

^cCounty Clinical Hospital, Baia-Mare, Romania

^dDepartment of Pathology, „Octavian Fodor” Emergency Clinical Hospital,
Cluj Napoca, Romania

ABSTRACT

Pancreatic localization of hydatid cyst is uncommon. We report a case of a 49-year-old woman who presented with abdominal discomfort, nausea and vomiting. The diagnosis of pancreatic cyst with splenomegaly and portal hypertension was supported on ultrasound, CT-scan and endoscopic ultrasound. Surgical treatment confirmed the hydatid cyst, and included distal pancreatectomy and splenectomy. The recovery was uneventful and the patient remained symptoms free.

Key words: hydatid cyst, pancreas, splenomegaly, portal hypertension, surgery

INTRODUCTION

The liver and lungs are the organs most frequently involved in human echinococcosis (1). Pancreatic localization of hydatid disease is atypical and extremely rare; it accounts for less than 1% of cases as compared to other sites of hydatid disease (2). The precise diagnosis may be difficult because the clinical signs are variable according to the anatomic location of the cyst and may be similar to other more commonly encountered cystic lesions of the pan-

creas (3). Abdominal pain, discomfort and vomiting, obstructive jaundice, weight loss or recurrent acute pancreatitis may to be the main clinical symptoms (4,5). The diagnosis may be facilitated by ultrasonography, computed tomography scan and endoscopic ultrasonography. The definitive diagnosis of hydatid cyst of the pancreas can be made at surgery.

We present the case of a patient with a hydatid cyst located in the tail of the pancreas, causing splenomegaly and portal hypertension, successfully treated with a distal spleno-pancreatectomy. □

Address for correspondence:

Paula Szanto, MD, PhD, 3rd Medical Clinic, 19-21 Croitorilor Street, Cluj Napoca, Zip Code 400162, Romania
email address: paula_szanto@yahoo.com

CASE REPORT

A 49-year-old woman was admitted to our hospital with epigastric pain, postprandial bloating and occasional vomiting. On physical examination, the only positive signs were epigastric tenderness and mild splenomegaly.

Laboratory tests showed a sedimentation rate of 80, an increased cholesterol level (322 mg/dL) and a hypertriglyceridemia (626 mg/dL). All other results of routine lab (including serum and urinary amylases, creatinine, serum bilirubin, alkaline phosphatase and liver enzymes) were within normal values. Ultrasonography and CT scan revealed a cyst with a thickened wall on the tail of the pancreas (FIGURE 1) and congestive splenomegaly with splenic vein dilatation. The endoscopic ultrasound (EUS) confirmed the pancreatic cyst and the portal hypertension (FIGURE 2).

Laparotomy was performed and a calcified hydatid cyst of the tail of the pancreas was found. Surgical treatment included complete excision of the cyst, with distal pancreatectomy and splenectomy. In the postoperative course the patient developed a severe anemia (hemoglobin 6.6 g/dL vs. 14 g/dL initial). The patient was re-operated and an internal drainage of a hemoperitoneum was performed. The patient recovered uneventfully.

Histological examination confirmed the diagnosis of hydatid cyst of the distal pancreas (FIGURE 3).

Because of complete excision, any postoperative antihelminthic medical treatment wasn't considered. The patient was followed up at 6-months intervals. No evidence of cyst recurrence or dissemination was found, and the patient was free of symptoms. □

DISCUSSION

Cystic lesions of the pancreas range from pseudocysts and pancreatic necrosis to benign and malignant neoplasms. Pancreatic cysts, even when found incidentally, require diagnostic evaluation regardless of size because they may represent malignant or premalignant tumours.

Hydatid disease produced by *Echinococcus granulosus* remains an important sanitary problem in many regions of the world (Mediterranean countries, South America, Middle-Eastern countries and Oceania) despite the introduction of the sanitary preventive measures, and the widespread use of chemotherapeutic agents (1). First, the liver, and then the lung are the organs most commonly involved by parasitic growth. The pancreas is an uncommon site of a hydatid cyst, even in countries where echinococcal disease is endemic. The most common differential diagnosis between a hydatid cyst and pancreatic cystic tumors is the presence of a serous cyst adenoma. Though very rare, pancreatic hydatidosis should be considered in the differential diagnosis of cystic lesions of the pancreas in the appropriate epidemiological setting. The incidence of pancreatic localisation is estimated in the literature to be between 0.14 to 2 % as compared to the other sites of hydatid disease (1,6,7). The location of the cyst in the pancreas has different distributions: the majority in the head (57%), in the corpus 24%, and 19% in the tail (4,8,9,10).

The clinical presentation is variable depending on the site and extension of the pancreatic cyst. Epigastric pain, discomfort and vomiting are the main clinical symptoms. Obstructive jaundice may be caused by the extrinsic compression of the common bile duct. Cysts located in the body or tail rarely caused any symptoms and may be detected only by the presence as a mass and its subsequent effects. However, hydatid pancreatic cyst may be revealed by a

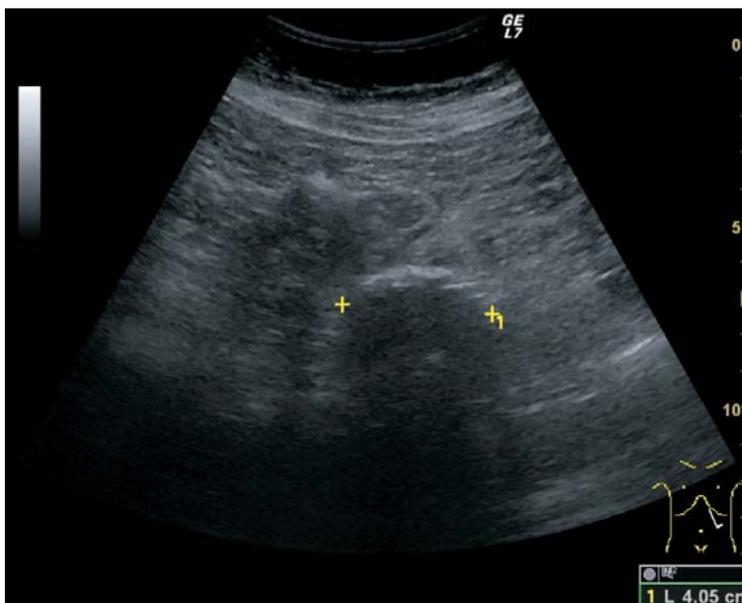


FIGURE 1. Ultrasonographic image: a cystic structure in the tail of the pancreas

complication such as a rupture into the biliary tree or into the peritoneal cavity, abscess formation or the compression of splenic vein causing portal hypertension (4, 9). A correct diagnosis of the hydatid disease in the pancreas is important in distinguishing it from other cystic processes, especially from cystic neoplasms of pancreatic origin (11). Serological techniques such as indirect immunofluorescence assay or enzyme-linked immunosorbent assay (ELISA) confirm the diagnosis in 85% of infected patients. Ultrasonography, computed tomography or endoscopic ultrasound (EUS) will typically demonstrate a cyst with a wall of varying thickness and curvilinear or ring calcification. A definitive diagnosis of hydatid disease of the pancreas can be made only at surgery (4,5,9).

Surgery remains the treatment of choice in hydatid disease. Surgical excision of the entire cystic lesion represents the optimal treatment, offering hope for a complete cure. In the cases in which the cyst is located in the tail, distal pancreatectomy is preferred. □

CONCLUSION

Hydatid cyst of the pancreas is extremely rare even in endemic countries. We report a case of hydatid cyst in the tail of the pancreas revealed by abdominal pain. The diagnosis was made on ultrasound, CT-scan and endoscopic ultrasound. Because of secondary portal hypertension, surgical treatment included distal pancreatectomy and splenectomy. Hydatid disease should be included in the differential diagnosis of cystic lesions of the pancreas. □



FIGURE 2. Endoscopic ultrasound (EUS) revealing the pancreatic cyst and calcification of the cystic wall

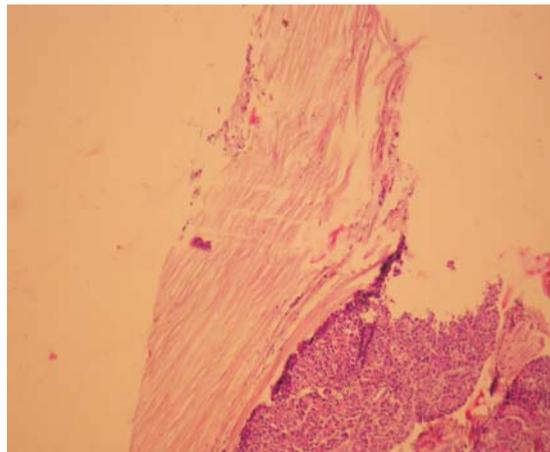


FIGURE 3. Histologic examination revealed the hydatid cyst and areas of calcification in the wall

REFERENCES

1. WHO Informational Working Group on Echinococcosis – Guidelines for treatment of cystic and alveolar echinococcosis in humans. *Bull World Health Organ* 1996; 74:231-242
2. Khiari A, Mzali R, Ouali M et al – Kyste hydatique du pancreas. A propos de sept observations. *Ann Gastroenterol Hépatol* 1994; 3:87-91
3. Krige JE, Mirza K, Bornman PC et al – Primary hydatid cysts of the pancreas. *S Afr J Surg* 2005; 43:37-40
4. Safioleas MC, Moulakakis KG, Manti C et al – Clinical considerations of primary hydatid disease of the pancreas. *Pancreatology* 2005; 5:457-461
5. Moosavi SR, Kermany HK – Epigastric mass due to a hydatid cyst of the pancreas. A case report and review of the literature. *J Pancreas* 2007; 8(2):232-234
6. Ito A, Okamoto M, Ishiguro T et al – Short report: An imported case of cystic echinococcosis in Japan diagnosed by imaging and serology with confirmation of Echinococcus granulosus-specific DNA sequences. *Am J Trop Med Hyg* 1998; 58:790-792
7. Haddad MC – Hydatid cyst of the pancreas as a cause of pancreatic lesions. *AJR Am J Roentgenol* 2003; 181:885-886
8. Gayral F, Bourree P, Jourdanne PH et al – Kyste hydatique du pancréas: Une observation. *Presse Med* 1998; 10:3787-3788
9. Jai SR, El Hattabi K, Bensardi F – Primary hydatid cyst of the pancreas causing obstructive jaundice. *Saudi J Gastroenterol* 2007; 13(4):191-193
10. Khiari A, Mzali R, Ouali M et al – Kyste hydatique du pancreas. A propos de sept observations. *Ann Gastroenterol Hépatol* 1994; 30:87-91
11. Echenique-Elizondo M, Amondarain Arratibel JA – Hydatid disease of the pancreas. *JOP J Pancreas* 2004; 5(1):51-52