

# Hydatid cyst of the pancreas: A case report in the West of Iran

Mazaher Ramezani,  
Hadi Yarahmadi,  
Masoud Sadeghi<sup>1</sup>

Molecular Pathology Research  
Center, Emam Reza University  
Hospital, Kermanshah University of  
Medical Sciences, <sup>1</sup>Cancer Research  
Center, Kermanshah University of  
Medical Sciences, Kermanshah, Iran

## Abstract

*Echinococcus granulosus* is caused hydatid cyst disease that is a common parasitic disease in endemic region. In this study, we report our experience with a case of hydatid cyst involving the pancreas in the West of Iran. A 65-year-old woman admitted to our hospital with abdominal discomfort presenting for 4 months. Computed tomography scan revealed mass measuring 5 cm × 4 cm with increased wall thickness in the head of the pancreas. A cystic adenocarcinoma was included in the differential diagnosis. Tumor markers (carbohydrate antigen 19-9, carcinoembryonic antigen, and alpha-fetoprotein) had normal range. On abdominal exploration, whipple surgery was done. Histopathologic findings revealed a well-defined creamy-whitish mass measuring 6 cm × 4 cm × 3 cm attached to small intestine. The microscopic examination revealed a typical hydatid cyst which contained some scolices. After this case, we believe hydatid disease must be considered in the differential diagnosis of pancreatic cysts, especially in countries where echinococcosis is endemic. In this condition, use of specific antigenic tests can be helpful for preoperative diagnosis and appropriate management of the disease.

**Key words:** Case report, hydatid cyst, pancreas, Western Iran

## INTRODUCTION

*Echinococcus granulosus*, also called the hydatid worm, is caused hydatid cyst disease that is a common parasitic disease in the endemic region. The eggs of the worm being excreted in the feces of infected dogs.<sup>[1,2]</sup> Intermediate hosts are usually cows, sheeps, and pigs, whereas human beings are accidental intermediate hosts. After ingestion, eggs hatch in the jejunum. Larvae enter the portal system through intestinal mucosa.<sup>[3]</sup> It may found in any organ of the body, but liver is the more common location. Hydatidosis of other organ such as the brain, kidney,

bone, heart, and pancreas is rare.<sup>[4]</sup> Even in the endemic countries, involvement of pancreas it has been reported in only 0.1–2% of patient with hydatid disease.<sup>[1,3,5]</sup> The diagnosis before surgery is difficult because the presenting symptoms and radiological finding may be similar to other common cystic lesions of the pancreas and thus must be confirmed by histopathology. In this study, we report our experience with a case of hydatid cyst involving the pancreas in the West of Iran.

## CASE REPORT

A 65-year-old woman admitted to our hospital with abdominal discomfort presenting for 4 months. Abdominal sonography suggested a septated cyst measuring (52 mm) adjacent to the right lobe of liver

### Address for correspondence:

Dr. Masoud Sadeghi, Cancer Research Center, Kermanshah  
University of Medical Sciences, Kermanshah, Iran.  
E-mail: sadeghi\_mbrc@yahoo.com

### Access this article online

#### Quick Response Code:



#### Website:

www.sudanmedicalmonitor.org

#### DOI:

10.4103/1858-5000.178509

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

**For reprints contact:** reprints@medknow.com

**How to cite this article:** Ramezani M, Yarahmadi H, Sadeghi M. Hydatid cyst of the pancreas: A case report in the West of Iran. Sudan Med Monit 2016;11:23-5.



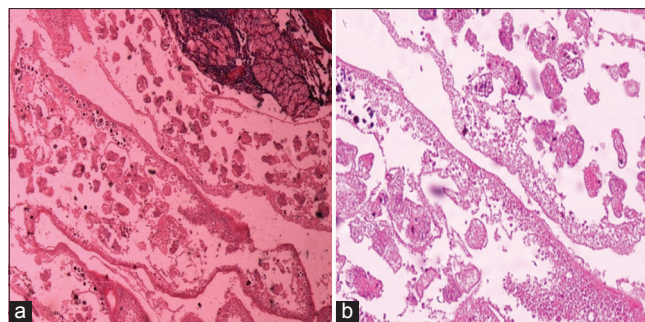
**Figure 1:** Gross appearance of hydatid cyst of pancreas

and posteromedial location of gallbladder. Computed tomography (CT) scan revealed mass measuring 5 cm × 4 cm with an increased wall thickness in the head of the pancreas. A cystic adenocarcinoma was included in the differential diagnosis. On laboratory investigation, level of amylase and lipase increased and slowly decreased after operation. Tumor markers (carbohydrate antigen 19-9, carcinoembryonic antigen, and alpha-fetoprotein) had normal range. On abdominal exploration, whipple surgery was done. Histopathologic findings revealed a well-defined creamy-whitish mass measuring 6 cm × 4 cm × 3 cm attached to small intestine. On opening the sample, a multiloculated cyst was seen which contained clear fluid and wall thickness was 5 mm [Figure 1]. The microscopic examination revealed a typical hydatid cyst which contained some scolices [Figure 2a and b].

## DISCUSSION

Liver and lung are involved by human hydatidosis in 85–95% of cases and other organs involvement is about 5–15% of the cases.<sup>[6]</sup> Primary hydatid cysts of the pancreas are rare, it must be considered in the differential diagnosis of pancreatic tumor with cystic components particularly in endemic regions for disease. Clinical presentation of hydatid disease of the pancreas is the result of pressure by the cyst on adjacent structures. Signs and symptoms depend on the size and anatomical location of the cyst. The location of the hydatid cyst in the pancreas is variable.<sup>[5,7]</sup>

Hydatid cyst of head, it is usually discovered during a complication, it may cause obstructive Jaundice, acute pancreatitis, and recurrent acute or chronic pancreatitis. Cyst located in body and tail can be asymptomatic or can present as only an abdominal mass. Portal hypertension is also a manifestation of pancreatic hydatid cyst.<sup>[6]</sup> The head of the pancreas is the most frequent location involved by hydatid disease.<sup>[8]</sup>



**Figure 2:** Scolices of echinococcus, Hematoxylin and Eosin staining (a) ×10 magnification (b) ×40 magnification

Primary pancreatic hydatid cysts are difficult to diagnose preoperatively. The presence of cystic lesions of pancreas is easily identified by ultrasound, CT scan, and magnetic resonance imaging, but not specific. Serological tests are positive. Tests are positive in up to 80% of abdominal hydatid cysts.<sup>[6,8]</sup> The enzyme-linked immunosorbent assay test for echinococcal antigens is positive in over 85% of infected patients.<sup>[3]</sup> As the results of preoperative imaging studies did not bring hydatid disease into consideration that we did not perform these tests preoperatively.<sup>[9]</sup> It has been recommended to obtain a fine needle aspiration biopsy for definite diagnosis and for appropriate treatment planning.<sup>[10]</sup>

## CONCLUSIONS

After this case, we believe hydatid disease must be considered in the differential diagnosis of pancreatic cysts, especially in countries where echinococcosis is endemic. In this condition, use of specific antigenic tests can be helpful for preoperative diagnosis and appropriate management of the disease.

## Financial support and sponsorship

Nil.

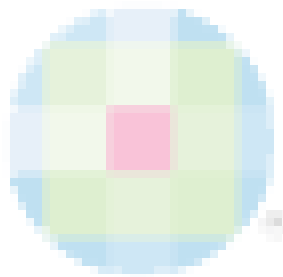
## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

- Unal B, Elpek GO, Yildirim S, Gelen T, Erdogan O, Ozkaynak C. *Echinococcus multilocularis* infestation in the head of the pancreas. J Clin Exp Pathol 2014;4:167.
- Bansal VK, Misra MC, Krishna A, Kumar S, Garg P, Khan RN, *et al.* Pancreatic hydatid cyst masquerading as cystic neoplasm of pancreas. Trop Gastroenterol 2010;31:335-7.
- Khoshmohabat H, Moqadam JA, Sohrabi SZ, Kalantar Motamedi MH, Azizi T. Hydatid cyst of the pancreas mimicking neoplasm. J Coll Physicians Surg Pak 2014;24 Suppl 2:S84-5.
- Baghbanian M, Salmanroghani H, Karegar S, Binesh F, Baghbanian A. Pancreatic tail hydatid cyst as a rare cause for severe acute pancreatitis: A case report. Govareh 2013;18:57-61.

5. Moosavi SR, Kermany HK. Epigastric mass due to a hydatid cyst of the pancreas. A case report and review of the literature. JOP 2007;8:232-4.
6. Trigui A, Rejab H, Guirat A, Mizouni A, Ben Amar M, Mzali R, *et al.* Hydatid cyst of the pancreas. About 12 cases. Ann Ital Chir 2013;84:165-70.
7. Masoodi MI, Nabi G, Kumar R, Lone MA, Khan BA, Naseer Al Sayari K. Hydatid cyst of the pancreas: A case report and brief review. Turk J Gastroenterol 2011;22:430-2.
8. Ousadden A, Elboughaddouti H, Ibnmajdoub KH, Mazaz K, Aittaleb K. Primary hydatid cyst of the pancreas with a hepatic pedicle compression. Cases J 2009;2:201.
9. Ozmen MM, Moran M, Karakahya M, Coskun F. Recurrent acute pancreatitis due to a hydatid cyst of the pancreatic head: A case report and review of the literature. JOP 2005;6:354-8.
10. Ugras S, Sakarya ME, Arslan H, Bozkurt M, Akdeniz H. The diagnosis by fine needle aspiration biopsy of hydatid cyst of the pancreas. Acta Chir Belg 1997;97:244-6.



### Author Help: Reference checking facility

The manuscript system ([www.journalonweb.com](http://www.journalonweb.com)) allows the authors to check and verify the accuracy and style of references. The tool checks the references with PubMed as per a predefined style. Authors are encouraged to use this facility, before submitting articles to the journal.

- The style as well as bibliographic elements should be 100% accurate, to help get the references verified from the system. Even a single spelling error or addition of issue number/month of publication will lead to an error when verifying the reference.
- Example of a correct style  
Sheahan P, O'leary G, Lee G, Fitzgibbon J. Cystic cervical metastases: Incidence and diagnosis using fine needle aspiration biopsy. Otolaryngol Head Neck Surg 2002;127:294-8.
- Only the references from journals indexed in PubMed will be checked.
- Enter each reference in new line, without a serial number.
- Add up to a maximum of 15 references at a time.
- If the reference is correct for its bibliographic elements and punctuations, it will be shown as CORRECT and a link to the correct article in PubMed will be given.
- If any of the bibliographic elements are missing, incorrect or extra (such as issue number), it will be shown as INCORRECT and link to possible articles in PubMed will be given.