

Primary Pancreatic Hydatid Cyst: An Uncommon Condition

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Abstract

Hydatid disease is common in India and liver is the commonest site of primary hydatid cyst. Various other organs like lung may be involved infrequently. But pancreatic involvement is uncommon and present diagnostic dilemma. Primary pancreatic hydatid cyst is presented with review of literature.

Keywords:Hydatid cyst, Echinococcus, Echinococcosis, pancreatic hydatid, primary pancreatic hydatid.

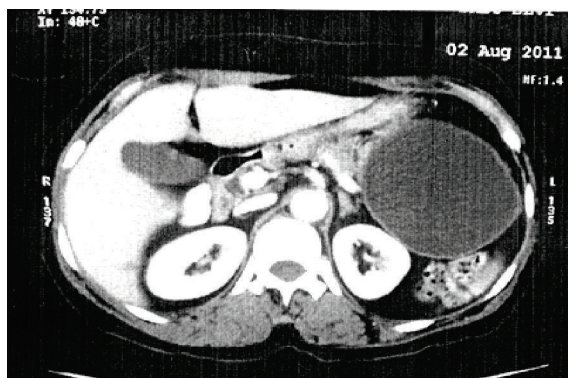
Introduction

Echinococcus is one of the common cosmopolitan zoonotic problems of human being boarding on the Mediterranean as well as Asia, South America and Oceania.[1,2] Man is the intermediate and dead end host. Human infection is caused by the ingestion of eggs through surface contaminated vegetables/fruits. Parasite gain access to the portal circulation through stomach wall and therefore, majority of the embryos are trapped in the liver, which is the commonest site of human hydatid disease. Embryos getting filtered through liver will enter the general circulation and will involve other organs of the body. Lungs are the second commonly involved organs. Other organs are infrequently

involved and primary pancreatic hydatid disease is reported in less than 2 % patients. [3,4,5] Pseudopancreatic cyst, mucinous cyst adenoma or cyst adenocarcinoma gives similar imaging results and hence precise preoperative diagnosis is difficult. However, correct preoperative diagnosis is of great help in planning surgical treatment. Hence, a case of primary pancreatic hydatid disease is reported so as to consider the possibility of this disease in cystic lesion of pancreas.

Case report

A 54-year-old female presented with pain and lump in left hypochondrium and left lumbar region for seven months. Clinical examination revealed a mobile, nontender intrabdominal mass of 10 x 7 cm in left lumbar region extending into left hypochondrium. Routine hematological investigations were within normal limit. Ultrasonography and CT scan of abdomen showed a well-defined thin walled cystic lesion abutting the tail of pancreas; possibility of pancreatic mucinous neoplasm or pseudopancreatic cyst. CA-199



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was within normal limits. Surgical exploration was done and distal pancreatectomy was performed along with cyst. Gross pathological examination revealed 11 x 6 cm cyst with 3mm wall thickness. Internal surface was smooth. Microscopic examination showed cyst lined with chitinous material and free lying scolices of Echinococcus were seen. Surrounding tissue had normal pancreatic and fatty tissue. Postoperative recovery was uneventful. Adjuvant albendazole therapy was given to prevent recurrence.

Discussion

Echinococcus granulosus completes its life cycle involving dogs as primary host and sheep or goat as intermediate host. Human beings are dead-end host and are infected by ingestion of larval stage of the cestodes by consuming surface contaminated vegetables/fruits by the excreta of infected stray dogs, mostly in childhood. Very few patients present in childhood[6] and 3rd decade is common age of clinical manifestations. Embryos gain access to portal circulation through intestinal wall and are trapped in liver and develop into mature cyst in the liver. Embryos getting filtered through liver can reach to any part of the body but lungs are second common site of the disease.

Pancreatic involvement is observed in 0.14 to 2 % of the patients.[3,4,5,7,8] Pancreatic head is involved in 57%; body in 24% and pancreatic tail is least commonly (19%) involved.[9,10] Cyst located in head will lead to extrinsic compression of the common bile duct and will present as obstructive jaundice [7,8] or compression of pancreatic duct leading to recurrent acute pancreatitis[11] but cyst located in tail region are mostly asymptomatic and may present as painless mass because of its size.

Preoperative diagnosis of hydatid disease can be made by indirect haemagglutination test and ELISA test with accuracy ranging from 50 to 94%. Casoni's intradermal test has poor diagnostic accuracy and hence abandoned.

Imaging techniques like USG, CT scan and MRI can only detect cystic nature of lesion and its anatomical location within pancreas but sensitivity and specificity of these techniques are limited due to overlapping finding in other conditions like mucinous cyst adenocarcinoma, cyst adenocarcinoma, pseudopancreatic cyst or rare cystic benign tumor. Demonstration of debris due to cyst and hydatid sand, presence of thick laminated wall and calcification may suggest pancreatic hydatid in CT scan. MRI is better diagnostic modality in comparison to CT scan due to its higher soft tissue contrast and multiplanar capabilities.

Anaphylactic reaction and peritoneal dissemination are serious hazards of aspiration cytology.[12] However, intraperitoneal aspiration of the contents with adequate precaution followed by microscopic examination along with electrolyte values of hydatid fluid shall confirm the diagnosis[13] for proper treatment planning.

Surgical treatment is ideal mode of treatment of pancreatic hydatid cyst but the choice of procedure depends on the location of the cyst but as far as possible, policy of complete excision should be followed. Hemorrhage and pancreatic fistula formation due to adherence of cyst wall to pancreatic parenchyma are potential complications. Central pancreatectomy for cyst located at neck and body region[14,15] is ideal procedure, which preserves functional pancreatic parenchyma to avoid exo and endocrine pancreatic insufficiency. For cysts located at head region, whipple's resection is required.[16] Simple excision followed by drainage of cavity can be simple and effective[17] provided there is no communication between pancreatic duct and cyst as evidenced by preoperative MRCP. Distal pancreatectomy is effective procedure and curative for cysts located at tail of pancreas.

Postoperative administration of Albendazole for a period of six months for prevention of recurrence is recommended. However, radical surgery is most effective method of preventing recurrence.

Conclusion

Primary pancreatic hydatid disease involving tail of pancreas is uncommon condition and presentation is due to its size as painless abdominal mass. Imaging and immunological diagnostic modalities may help in diagnosing it as cystic pancreatic mass but pre-excision confirmation can be achieved by intraoperative aspiration of the fluid and its electrolyte and microscopic examination. Distal pancreatectomy for cyst in pancreatic tail is ideal treatment including prevention of postoperative recurrence.

References

1. Brown RA, Miller AJ, Steiner Z *et al*. Hydatid cyst of the pancreas. A case report in child. *Eu J Paediatr Surg*. 1995; 5: 121-3. (PMID 7612583)
2. Safioleas M, Misiakos E, Manti C, Katsikas D, Skalkeas G. Diagnostic evaluation and surgical management of hydatid disease of the liver. *World J Surg*. 1994; 18: 859-65.
3. Shah OJ, Robbani I, Zargar SA, Yatto GN *et al*. Hydatid cyst of the pancreas. An experience with six cases. *J Pancreas*. 2010; 11: 575-81.
4. Hamamci E O, Besim H, Korkamaz A. Unusual location of hydatid disease and surgical approach. *ANZ J Surg*. 2004; 74: 356-60.
5. Omen 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 literature. *JOP J Pancreas*. 2005; 6: 354-8.
6. Bloomfield JA. Hydatid disease in children and adolescents. *Australas Radiology*. 1980; 24: 277-83.
7. Azuara MV, Dorado JJ, Garcia Dias M *et al*. Obstructive jaundice associated with a hydatid cyst of the pancreas. *Pancreas*. 1997; 14: 309-11.
8. Yatto GN, Khuroo MS, Zargar SA, Bhat FA, Sofia BA. Case report: Percutaneous drainage of the pancreatic head hydatid cyst with obstructive jaundice. *J Gastroenterol Hepatol*. 1999; 14: 931-4.
9. Gayral F, Bourree P, Jourdanne PH, Millat B, Labayle D. Hydatid disease of pancreas. One case. *Nouv Presse Med*. 1981; 10: 3787-8.
10. Caroli J, Daumet P, Demeulenaere L. Hydatid cyst of double localization ; pancreas and pleuropulmonary. Diagnostic difficulties. *Med Chir Dig*. 1977; 6: 555-7.
11. Sebbaag H, Partensky C, Roche J, Ponchon T, Martin A. Recurrent acute pancreatitis from the rupture of a solitary pancreatic hydatid cyst in the Wirsung's canal. *Gastroenterol Clin Biol*. 1999; 23: 793-4.
12. Ugras S, Sakarya ME, Arsian H, Bozkur M, Akdeniz H. The diagnosis by fine needle aspiration biopsy of hydatid cyst of the pancreas. *Acta Chir Belg*. 1997; 97: 244-6.
13. Livraghi T, Basoni A, Giordano F, Lai N, Vettori C. Diagnosis of hydatid cyst by percutaneous aspiration. Value of electrolyte determination. *J Clin Ultrasound*. 1985; 13: 333-7.
14. Shah OJ, Robbani I, Nazir P, Khan AB. Central pancreatectomy, a new technique for resection of selected pancreatic tumours. *Hepatobiliary Pancreat Dis Int*. 2009; 8: 93-6.
15. Adham M, Glunipper A, Hervieu V, Courbiere M, Partensky C. Central pancreatectomy. Single centre experience of 50 cases. *Arch Surg*. 2008; 143: 175-80.
16. Khiari A, Mazil R, Ouali M, Kharrat M, Kechanu MS, Beyrouiti MT. Hydatid cyst of the pancreas. A propos of 7 cases. *Ann Gastroenterol Hepatol (Paris)*. 1994; 30: 87-91.
17. Jai SR, El Hattabi K, Bensardi F, Chehab F, Khaiz D, Bouzidi A. Primary hydatid cyst of the pancreas causing obstructive jaundice. *Saudi J Gastroenterology*. 2007; 13: 191-3.

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