Unusual association of diseases/symptoms

Hydatid cyst in tail of pancreas

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Summary

The authors present a case of hydatid cyst in tail of pancreas in a 35-year-male who presented with 6-month history of dull aching pain in abdomen. Radiologically, a differential diagnosis of cystic pancreatic neoplasm and pseudocyst was made which was confirmed after histopathological examination.

BACKGROUND

Hydatid disease can involve any organ of body but pancreatic involvement is extremely rare with an incidence of 0.1–2% of hydatid disease. It should be included in the differential diagnosis of cystic lesions of the pancreas.^{1 2}

CASE PRESENTATION

A 35-year-male presented with intermittent pain abdomen. Pain was mild in nature, periumbilical in location with no radiation. There was no aggravating or relieving factor. It was associated with nausea and vomiting. Patient was non-alcoholic and non-diabetic. There was no history of travelling outside India. Abdominal examination did not

reveal any abnormality. On investigations absolute eosinophil count was 1200 cells/mm³. Serum bilirubin, liver enzymes, serum amylase, serum lipase, serum albumin, serum globulin, renal function tests and blood sugar levels were within normal limits. Contrast-enhanced CT scan at the level of the upper abdomen shows a solitary cystic mass with homogeneous fluid density in the region of the pancreatic tail (figure 1). A differential diagnosis of cystic pancreatic neoplasms or pseudocyst was made. Fine needle aspiration cytology revealed the presence of hooklets of parasite (figure 2). A tentative diagnosis of hydatid cyst was made. Enzyme-linked immunosorbate assay test for echinococcal antigen was advised which was found to be

Figure 1 Contrast enhanced CT at the level of the upper abdomen shows a solitary cystic mass with homogeneous fluid density in the region of the pancreatic tail.

Figure 2 Smear showing hooklets of parasite.

Figure 3 (A) Section showing chitinous wall and brood capsule (H&E $\times 50$). (B) Section showing chitinous wall and brood capsule (H&E $\times 500$).

positive. Distal pancreatectomy was done and tissue was submitted for histopathological examination. Microscopic examination showed chitinous wall of cyst with brood capsule and surrounding inflammation (figure 3A,B). A final diagnosis of hydatid cyst of tail of pancreas was rendered.

DIFFERENTIAL DIAGNOSIS

- Cystic neoplasm of pancreas
- Pseudocysts
- Vascular tumours
- Cystic metastasis from various sites.

TREATMENT

Surgical removal of cyst was done. After surgery the patient recovered well and no complication is noted till now (10 months since surgery).

OUTCOME AND FOLLOW-UP

Patient was discharged in good conditions and had no complaint 10 months since surgery.

DISCUSSION

Hydatid disease is endemic in many countries,^{3 4} for example Mediterranean countries, South-East Asia, Australia, New Zealand and South America.^{5 6} Four different species of *Echinococcus* are known. Among the four known species of *Echinococcus*, three are of medical importance in humans. These are *Echinococcus granulosus*, causing cystic echinococcosis; *Echinococcus multilocularis*, causing alveolar echinococcosis; and *Echinococcus vogeli*. This disease is caused by larval stage of *E granulosus*. Primary host is usually a dog and the intermediate hosts are sheep, cows or pigs. Man is an accidental host.⁷ Liver and lung are the most common sites to be involved, however, bone, brain, kidney, spleen and orbit can also be involved.⁸ Hydatid cyst of pancreas is extremely rare and the reported incidence varies from 0.1–2% of hydatid disease.^{9–14} Head of pancreas is the most common site followed by body.^{9 10} In our case the cyst was present in tail of pancreas which is extremely a rare location. Route of infestation may be hematogenous or by peripancreatic lymphatic invasion.^{15 16} Clinical manifestation depends upon the part of pancreas involved. Patient present with jaundice when the cyst is present in head, however, patient may be asymptomatic or present as abdominal lump and recurrent abdominal pain when the cyst is present in body or tail of pancreas. Symptomatic presentation is mainly due to compression and other complications like infection and rupture of cyst. Rupture of the cyst may result in anaphylaxis. The diagnosis can be made by enzyme linked immunosorbate assay test for echinococcal antigen¹⁷ which is present in majority of cases as in our case. Preoperative diagnosis of hydatid cyst of pancreas is very difficult but is very important as the treatment modalities of other causes of cystic lesions are entirely different. In our case, the preoperative diagnosis is made on cytology but it is risky to base a diagnosis of *Echinococcus* just on cytology. Radiological examination is not helpful in making the definitive diagnosis as the imaging features overlap considerably.¹⁸ Cytological examination of cyst fluid may reveal hooklets of parasite.

Differential diagnoses include cystic neoplasm of pancreas, for example, cystadenomas and cystadenocarcinomas, pseudocysts, vascular tumors and cystic metastasis from various sites.^{19 20} Surgical removal of the cyst is the treatment of choice.²¹ Interventional drainage techniques

or chemotherapy can be used as a treatment modality in patients who are amenable to surgery.

Learning points

- ▶ Hydatid disease can involve any organ of body
- ▶ It should be kept in differential diagnosis of cystic lesions of pancreas
- ▶ Cytology may sometimes be helpful in making the diagnosis.

Competing interests None.

Patient consent Obtained.

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