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Tubercular pancreatic abscess: diagnostic dilemma and management

Introduction

Cystic lesions of the pancreas are most commonly pseudocysts, pancreatic abscesses or cystic neoplasms.[1] Isolated pancreatic tuberculosis is uncommon.[2] Tubercular pancreatic abscess is a rare entity and, therefore, not usually considered in the differential diagnosis of a cystic pancreatic lesion. We report a rare case of isolated tubercular pancreatic abscess diagnosed on the basis of a biopsy of the abscess wall.

Case report

A 50-year-old woman presented with low-grade intermittent fever and upper abdominal discomfort for the past 2 months. She also complained of recurrent episodes of non-bilious vomiting, anorexia and weight loss of 20 kg. She did not give any history of upper abdominal pain during this time. She was malnourished, had mild pallor and generalized oedema. There was no peripheral lymphadenopathy. Examination of the chest did not reveal any abnormality. She had an ill-defined lump in the right hypochondrium and epigastrium. Investigations showed a low haemoglobin level (8 g/dL; reference range: 12–15 g/dL), normal total leukocyte count (6700 cells/mm^3; reference range: 4000–11000 cells/mm^3) and raised erythrocyte sedimentation rate (55 mm in 1st hour; reference range: 0–20 mm in 1st hour). She had a normal serum bilirubin level (0.8 mg/dL; reference range: 0.8–1 mg/dL), raised alkaline phosphatase level (547 IU/L; reference range: 80–240 IU/L) and a low serum albumin level (2.1 g/dL; reference range: 4–5.5 g/dL). Hydatid serology was negative. Chest X-ray was normal. Ultrasound abdomen showed a 13 cm × 7.6 cm heterogeneous collection with thick septae in the region of the head of the pancreas. Contrast-enhanced computed tomography (CECT) scan showed a large, septated cystic lesion replacing the head and uncinate process of the pancreas extending to the porta hepatis (**Figure 1**). The rest of the pancreas and liver were normal (**Figure 2**). The small bowel was normal and the mesenteric and retroperitoneal lymph nodes were not enlarged. There was no dilatation of the biliary or pancreatic ducts. With a working diagnosis of an infected cystic lesion of unknown aetiology, intravenous broad-spectrum antibiotics were started following which her symptoms improved but did not resolve. Ultrasound-guided diagnostic aspiration of the cystic lesion yielded purulent fluid. Stain for acid-fast bacilli (AFB) was negative. The amylase levels in the fluid were higher than the upper limit of the normal serum amylase levels (250 U/L; reference range: 0–95 U/L). Culture of the fluid was sterile for bacteria. Fluid cytology was non-contributory. Cyst fluid carbohydrate antigen (CA) 19–9 (25 U/mL; reference range: 0–37 U/mL) was not raised.

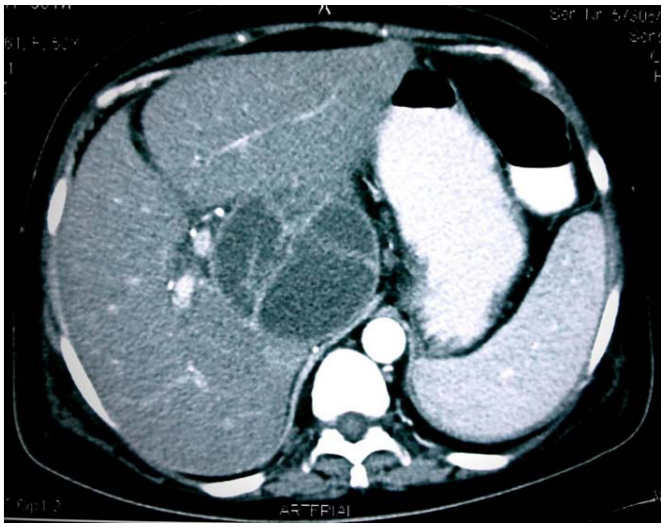

Figure 1: CT scan showing a cystic mass at the porta hepatis giving appearance of a cystic neoplasm.

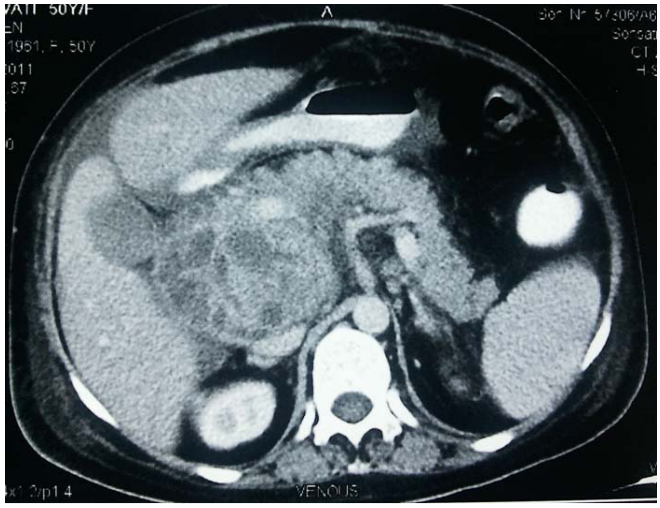

Figure 2: CT scan showing heterogeneous enhancement in the same mass lesion in the region of the head and uncinate process of the pancreas with an area of necrosis. Rest of the pancreas is normal.

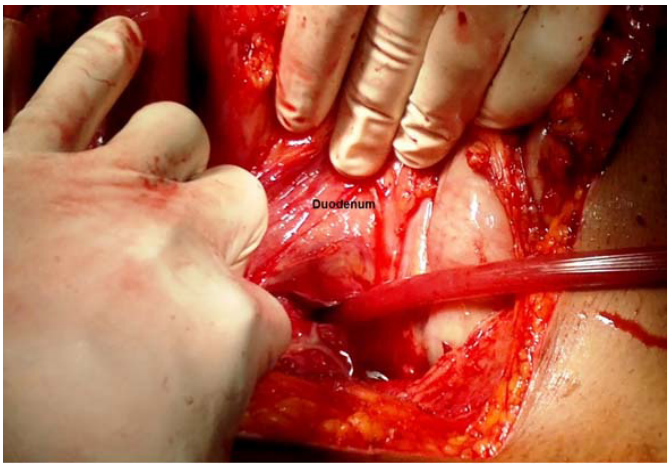

Figure 3: Operative photograph taken after drainage of pus (suction catheter tip in abscess cavity). The duodenum has been kocherized and abscess drained posteriorly.

In view of persistent symptoms and a doubt in diagnosis, the patient was planned for surgery. At laparotomy, there was 500 mL of straw-coloured fluid in the peritoneal cavity. There were no enlarged mesenteric lymph nodes or small bowel abnormality. There were dense adhesions in the right subhepatic space. Dissection in the subhepatic space revealed a tense cystic lesion in the region of the head of the pancreas. The head of the pancreas could not be identified separately. Needle aspiration of the lesion revealed pus. The abscess cavity was opened and the pus was drained (**Figure 3**). There were no hydatid membranes or daughter cysts. After thorough lavage, drains were placed in the abscess cavity and a biopsy of the abscess cavity was taken. Pus culture and stain for AFB were again negative. The patient's symptoms improved after surgery. The amylase levels (950 U/L; reference range for serum amylase: 0–95 U/L) in the drain fluid were more than three times the upper limit of the normal serum amylase levels on

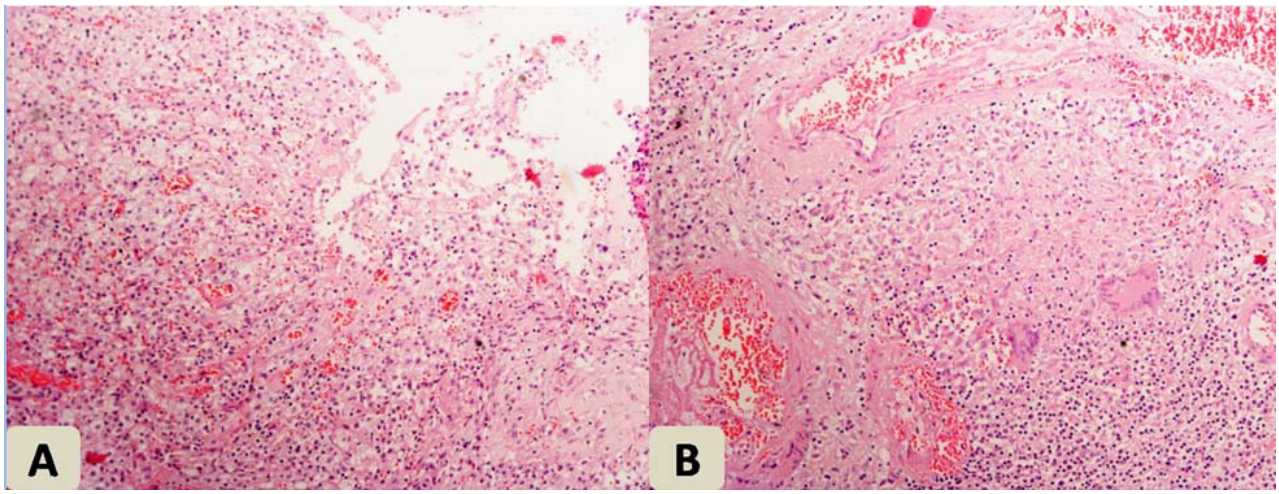

Figure 4: (A) Photomicrographs showing a cyst wall lined by sheets of foamy histiocytes and lymphocytes (H&E X100). (B) Focally there is a necrotizing epithelioid cell granuloma with Langhans giant cells and surrounding lymphocytes (H&E X100).

postoperative day 3 suggesting a pancreatic fistula. Drainage gradually reduced over a week and the drain was removed. Biopsy of the cyst wall revealed necrotizing epithelioid cell granulomas with Langhans giant cells suggestive of tuberculosis (**Figure 4**). Stain for AFB was again negative. A diagnosis of tubercular pancreatic abscess was made and the patient was started on antitubercular therapy (ATT). After 4 months of follow-up, the patient made a good recovery and was asymptomatic. ATT is ongoing and a 9-month course is planned.

Discussion

Pancreatic tuberculosis is infrequent even in areas endemic for tuberculosis. Isolated pancreatic involvement is even more uncommon.[3,4] It usually occurs in young patients who present with insidious onset of abdominal pain, often associated with fever, anorexia and weight loss with or without jaundice. These symptoms are difficult to differentiate from symptoms due to tumours in the head of the pancreas, which occur more commonly. CT scan findings include mass in the head of the pancreas with peripancreatic lymph nodes, which makes differentiation from pancreatic cancer difficult on imaging.[5] Diffuse or segmental, irregular enlargement of the head of the pancreas has also been reported.[6] There are only isolated case reports of tubercular pancreatic abscess,[7–9] where the diagnosis could be made on the basis of a positive AFB stain in the aspirated fluid. However, it is known that AFB may not be seen on staining of aspirated material or even on culture or cytology/histopathology if the bacterial load is low, as was in our case. Moreover, cytological examination of the aspirate in pancreatic tuberculosis is often dominated by acute or chronic inflammatory exudates.

Acknowledgement

Dr Vivek Mangla acknowledges the Council of Scientific and Industrial Research, New Delhi, India for their support.

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Malignant paraganglioma of the bile duct

Introduction

Paragangliomas are rare extra-adrenal neoplasms of the neural crest origin.[1,2] The most common extra-adrenal location of these tumours is the retroperitoneum; other locations include the orbit, nose, carotid body, larynx, mediastinum, lungs, oesophagus, stomach, mesentery and urinary bladder.[1,2] Paragangliomas in the head, neck and mediastinum are usually associated with the parasympathetic system, and are chromaffin-negative and non-functional. Extra-adrenal, retroperitoneal paragangliomas are usually associated with the