

Enucleation of the solitary epithelial cyst of pancreatic head in an adult: A case report and review of the literature

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Abstract

Solitary true pancreatic cyst is a rare entity, and only a few cases are reported in the literature. We report a case of a 35-year-old woman who had a cyst in the head of the pancreas and gall stones and presented with complaints of pain in the epigastric region. The patient underwent open cholecystectomy with aspiration of the pancreatic cyst at some other private hospital. After 4 months, she presented to us with no relief in pain. Repeat contrast-enhanced computed tomography of the abdomen showed recurrence of the cyst. The patient underwent enucleation of the cyst at our hospital. During a 2-year follow-up after the enucleation, she remained asymptomatic.

Key words: Pancreas, recurrence, simple, surgery, true cyst

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Introduction

True pancreatic cysts are quite rare entities, and their etiology remains unknown. Now, they are being recognized more frequently because of the widespread use of advanced imaging techniques such as computed-enhanced computed tomography (CECT), magnetic resonance imaging (MRI), endoscopic ultrasonography (EUS) and laparoscopic ultrasonography (USG) even in asymptomatic patients.^[1-3] These cysts are also known as solitary or simple cysts. Pseudocysts account for 80–90% of all pancreatic cystic lesions. Most of the true cysts are reported in infants and children but, because of the lack of symptoms, only fewer than 25 cases are reported in adults in the literature.^[3,4] Therefore, little is known about this rare pathological lesion in adults, leading to a dilemma in their management. The treatment is selected on an individual basis according to the surgeon's experience, after excluding the other potentially malignant lesions. Enucleation is a sound and sufficient

surgical treatment for these patients. We hereby report a case of symptomatic solitary true cyst of pancreatic head in an adult that was treated by enucleation alone.

Case Report

A 35-year-old female presented to us with recurrent episodes of pain in the abdomen. There were no other complaints like vomiting, fever or weight loss. The patient was being treated at a private hospital for continuous pain in the epigastrium or epigastric region and dyspepsia of 4 months duration. The previous USG and CECT of the abdomen showed gall stones and cystic lesion in the head of the pancreas measuring approximately 3 cm × 2 cm in size. According to the operative details in the discharge card, cholecystectomy along with aspiration of the cyst was done through the

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right paramedian incision in the private hospital. The cyst fluid analysis for amylase and carcino-embryonic-antigen (CEA) was normal. But, the patient was never relieved of symptoms and then reported to us in April 2004.

On local examination, the abdomen was soft and non-tender and no mass was felt. Routine biochemical and hematological tests were normal. Repeat CECT of the abdomen revealed a hypodense structure measuring 4 cm × 3.2 cm × 2.3 cm, located in the head of the pancreas, without any evidence of a solid component [Figure 1]. The cystic mass was unilocular and thin walled. Ultrasound-guided aspiration of the cyst revealed serous fluid, and the cytology showed acellular smear with amorphous debris only. There was a decrease in the size of the cyst along with a decrease in the pain intensity. But, only after a day, pain re-occurred with the same severity. The presumptive diagnosis of benign pancreatic cyst was made.

Re-exploration was done through the same paramedian incision. There were dense adhesions in the gallbladder fossa, around the duodenum and pancreas, because of previous surgery. The duodenum and head of the pancreas were mobilized. A bluish solitary cyst was present in the head of the pancreas, anterior and lateral to the portal vein. With meticulous homeostasis and blunt dissection, the cyst could be enucleated completely. Macroscopically, the cystic lesion was 3.7 cm in diameter, with a smooth surface.

The cyst contained clear serous fluid. The frozen section of the cyst was consistent with a benign cyst, lined by flattened epithelium without any evidence of malignancy. Histopathologically, the cystic lesion was a true pancreatic cyst. The post-operative period was uneventful and the patient was discharged on the 10th post-operative day. Repeat CECT of the abdomen, after 2 years of follow-up, was normal and the patient was asymptomatic.



Figure 1: Contrast-enhanced computed tomography scan of the abdomen revealing a hypodense structure in the head of the pancreas without any evidence of solid component

Discussion

True epithelial cysts of the pancreas in adults are reported to be rare pathological lesions, although now being diagnosed more frequently due to the widespread use of USG, CECT, MRI and EUS, and their etiology still remains unknown.^[1-4] Most of the cysts are diagnosed in infants and children and, therefore, congenital etiology is suggested and their presentation is varied.

Symptoms are due to their size and location, most common being epigastric pain, nausea, vomiting, biliary obstruction and duodenal obstruction. In spite of advanced imaging techniques, it may be difficult to differentiate from their malignant counterpart by imaging techniques alone.^[5] However, ultrasound-guided fine needle aspiration cytology (FNAC) can help in the diagnosis of the exact nature of the lesion, with a reported sensitivity of up to 90% and specificity of up to 70–80%.^[6] Laparoscopic USG is a valuable adjunct in establishing the correct diagnosis, allowing improved identification of the morphology of the cyst and its relationship to the adjacent structures.^[2] Endoscopic ultrasound can even detect a non-bulging lesion of even 1 cm and help in drainage and FNAC.^[3] On USG (either transabdominal or endoscopic), uniformly thin, regular wall unilocular lesion suggest a benign cystic nature and thickened, irregular multilocular cysts suggest a malignant nature or pseudocyst.^[7] Biochemical analysis of fluid and tumor makers of the cystic fluid adds to the diagnosis and are useful in differentiating benign from malignant lesions.

Surgical intervention for the pancreatic lesions is always indicated because of the possibility of the enlargement of cyst and compression effect with continuous symptoms and to exclude cystic malignancy. CT/US/EUS/laparoscopy USG-guided drainage of the cyst, although associated with low mortality, have high chances of recurrence, infection and bleeding.^[8] Minimal invasive surgery for pancreas is gaining interest; however, it is technically difficult. Surgery via laparotomy includes enucleation of cyst, cyst excision or distal pancreatectomy and pancreatic resection depending on the site.^[9,10] In our case, the patient was not offered laparoscopic surgery, anticipating intraoperative technical difficulty because of previous surgery and site of the cyst. The patient was discharged on the 10th post-operative day with relief of the symptoms.

Our case report shows that CECT, USG and FNAC are sensitive for pre-operative identification of the entity and for the differential diagnosis of other cystic pancreatic lesions. Both the decision to operate and the type of operation chosen depend on the nature of the cystic lesion and experience of the surgeon. Having excluded the malignancy, cystic lesion if asymptomatic

should not be denied the chance of cure by continued observation.^[9]

It is difficult to determine whether surgical/endoscopic/laparoscopic, enucleation/drainage/resection is superior because that depends on the selection of patients, the site and number of lesions and associated pancreatitis.

Conclusion

Pancreatic tumors represent a diagnostic challenge for both radiologists and clinicians. Enucleation should be performed particularly if the lesion is less than 4 cm in diameter and is in the head or uncinata process of the pancreas as this avoids a major resection. Aspiration of the cyst can cause spillage of the cells, which should be done under vision. Ultrasonography-guided laparoscopic puncture of the cyst decrease the chances of spillage. Enucleation results are uniformly successful, regardless of the type of surgery (open or laparoscopic).

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