CASE REPORT

Giant mucinous cystic neoplasm of pancreas in an elderly female: A rare case report

Nihir Gupta[1], Anju Nagar[1]*

[1]Department of General Surgery, Government Medical College, Kota-324010 (Rajasthan) India

Abstract

Cystic tumors of the pancreas are rare and may be confused with hydatid cysts, especially in endemic areas. Mucinous Cystic Neoplasm (MCN) of pancreas are relatively rare with >95% occurrence in the body and tail of pancreas. Majority occur in young and middle-aged female containing ovarian type subepithelial stroma. These tumors are either premalignant (MCN with low grade dysplasia) or (MCN with high grade dysplasia) or invasive carcinoma. Differential diagnosis includes pancreatic pseudocyst and pancreatic hydatid cyst. Investigations include ultrasonography, magnetic resonance imaging, contrast enhanced computed tomography supplemented by endoscopic ultrasonography with cyst fluid aspiration.

Keywords: Mucinous Cystic Neoplasms, Ultrasonography, Contrast Enhanced Computed Tomography, Magnetic Resonance Imaging

Introduction

Mucinous cystadenoma of the pancreas is almost always credited to postmenopausal females and represents between 10-45% of all cystic lesions of the pancreas, which is often diagnostically challenging with pertinent clinical implications [1]. They have clinical and pathological similarity to mucinous cystic neoplastic tumors of ovary and biliary cystadenoma of liver. They can be considered less aggressive carcinomas with favourable prognosis. All Mucinous Cystic Neoplasms (MCNs) are to be considered as mucinous cystadenoma of low- grade malignant potential [2]. In most cases, Ultrasonography (USG) and Computed Tomography (CT) are mainstay for radiological evaluation. Surgical resection with negative margin is curative for all non-invasive MCNs. Complications related to surgical management of mucinous cystadenoma include pancreatitis, biliary obstruction, portal vein thrombosis, gastrointestinal obstruction, abscess, and fistula formation [3]. We report a case of MCN of the pancreas in a 74-year-old female.

Case Report

A 74-year-old female presented with progressive distension of the lower abdomen causing mild discomfort for 1 month. There was no history of previous abdominal imaging, similar episode of sudden abdominal pain, abdominal trauma or abdominal surgery. On examination, her vitals were stable. On per abdomen examination, abdomen was soft with a vague cystic mass palpable over the umbilical region extending to left and right lumbar and suprapubic region with well-defined borders, independently mobile, firm in consistency and dull on percussion.

Clinical provisional diagnosis was made as mass per abdomen to rule out hydatid cyst and ovarian cyst. Blood investigations were within normal limits except for neutrophilic leucocytosis. USG

abdomen revealed large abdominal cyst with internal loculated septations in the central abdomen from pelvis to epigastric region measuring 16×6×10 cm, likely hydatid cyst. To further characterise the cyst, a contrast enhanced CT Abdomen was ordered which revealed lobulated cystic mass 9×14×12 cm arising from pelvis possibly from left adnexa along with multiple similar fluid density lesions along omentum, left paracolic gutter, lesser curvature of stomach and posterior hepatic surface (Figure 1).

Under general anaesthesia, patient was taken for exploratory laparotomy. Large loculated cystic mass was observed, extending from adnexa inferiorly to splenic hilum and stomach superiorly (Figure 2a). Multiple adhesions were present. Cystic mass was dissected all around and detached from pad of tissues from tail of pancreas (Figure 2b). Cystic masses with mucoid material were excised and sent for histopathology (Figure 2c). Post-operative period was uneventful.

Histopathological examination revealed a multi-loculated cyst. The lining was of tall columnar mucinous type. The cyst wall was dense fibro-collagenous. At places, it resembled the swirled ovarian type stroma. Single pancreatic lobule including islet cells was seen. Impression of MCN with focal low-grade dysplasia of pancreas was made based on the above findings (Figure 3).

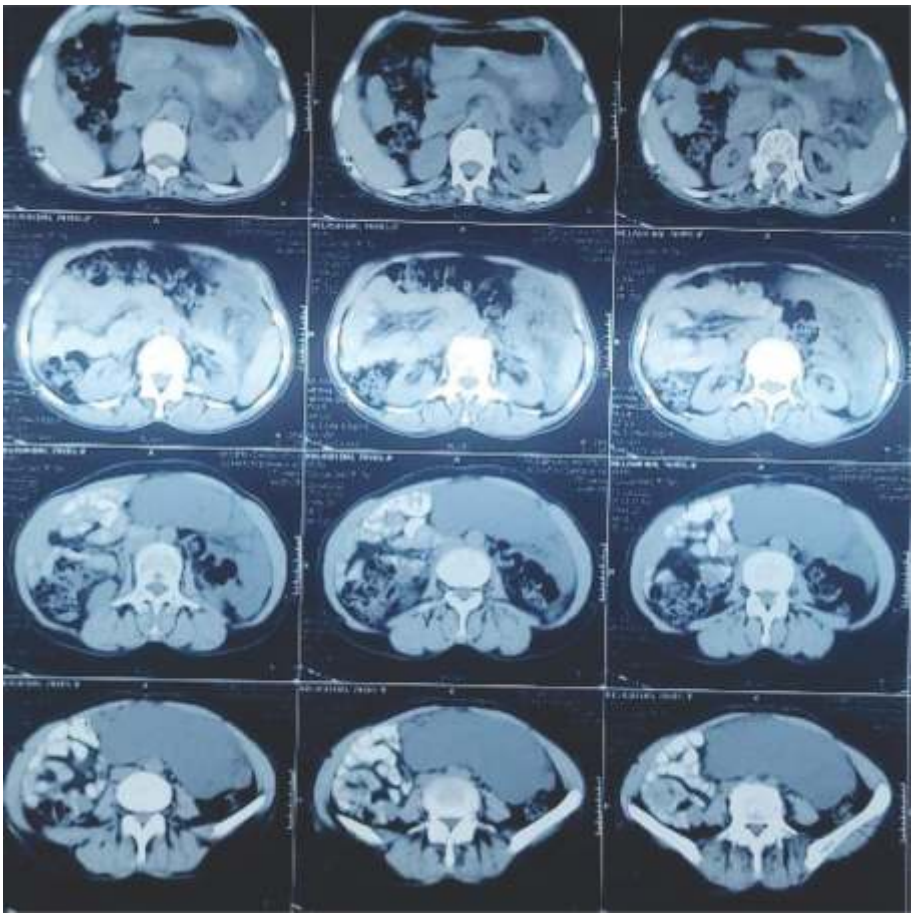

Figure 1: CT abdomen showing well defined well circumscribed intraperitoneal cystic lesion.

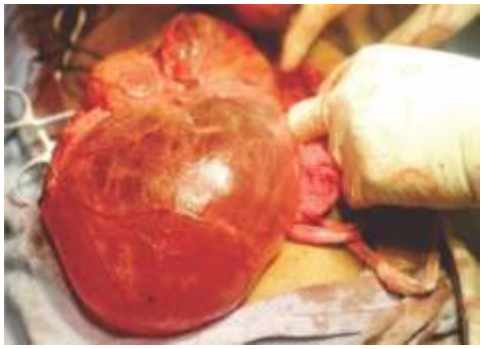

Figure 2a: Extension of large loculated cystic mass

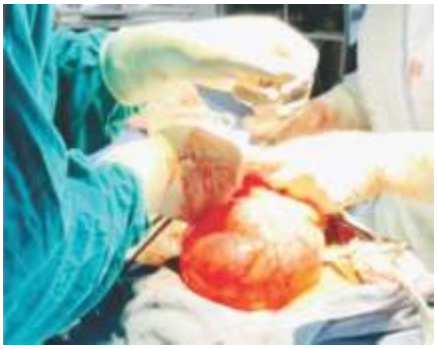

Figure 2b: Cystic mass dissected all around and detached

Figure 2c: Macroscopic view of resected specimen

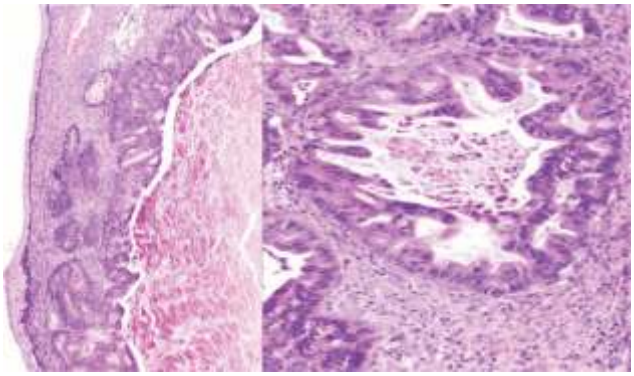

Figure 3: H/E image

Discussion

Cystic tumours of the pancreas may be serous or mucinous. Serous cystadenomas are usually found in older women, and are large aggregations of multiple small cysts, almost like bubble wrap. They are benign. Mucinous tumours, on the other hand have the potential for malignant transformation. They include MCNs and Intraductal Papillary Mucinous Neoplasms (IPMNs). MCNs are seen in perimenopausal women, show up as multilocular thick-walled cysts in the pancreatic body or tail, and, histologically, contain an ovarian-type stroma. IPMNs are more common in the pancreatic head and in older men, but an IPMN arising from a branch duct can be difficult to distinguish from an MCN. IPMNs arising within the main duct are often multifocal and have a greater tendency to prove malignant.

Complications include mass effect on the adjacent viscera, malignant transformation to mucinous cystadenocarcinoma, and rupture of the lesion with resultant peritonitis [4]. Thick mucus seen extruding from the ampulla in Endoscopic Retrograde Cholangio Pancreatography (ERCP) is diagnostic of a main duct IPMN. Mucinous tumours can be confused with pseudocysts.

Lack of history of trauma, chronic pancreatitis or a recent history of acute pancreatitis should raise a possibility of cystic neoplasm of pancreas [4].

Commonly asymptomatic, they sometimes reach large size prior to diagnosis. Patients with such giant tumours usually present with cardio respiratory compromise with supine hypotension syndrome due to compression of inferior vena cava [5]. Tedious use of abdominal USG, CT and Magnetic Resonance Imaging (MRI) has led to an increase in detection of pancreatic cystic lesions and its differential diagnosis and treatment planning accordingly. The precision of each of these diagnostic procedures is subject to error in technique of examination and analysis. In our case it was an on table diagnosis. Biopsy of cyst wall with histology was diagnostic. The cysts are removed in toto as the leakage of cyst fluid in to the peritoneal cavity can give rise to pulmonary edema. Post-operative pulmonary complications are also common due to sudden relaxation of the abdominal and diaphragmatic musculature [5]. Low transverse incisions are also reported in literature to reduce the risk of ventral hernia and for restoration of abdominal muscle function [5].

The prognosis of mucinous cystadenoma of the pancreas is excellent with symptoms waning following surgical removal of the tumor. Follow-up at regular intervals is suggested to prevent recurrence of MCN of the pancreas.

Conclusion

Cystic neoplasms are rare but should be considered in cystic lesions around the pancreas. Absence of history of trauma or inflammation of the pancreas may suggest a cystic tumor necessitating a detailed preoperative evaluation. USG plays an important role in providing a differential diagnosis for cystic neoplasms of the pancreas. Prognosis is favourable and should be operated immediately. Surgery remains the only treatment option that offers definitive cure for patients with MCN of pancreas. Histopathological examination remains the gold standard for early diagnosis as seen in our case. Malignancy was also confirmed through histopathology report.

References

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Author for Correspondence:

Dr. Nihir Gupta, 2/585, Malviya Nagar, Jaipur-302017, Rajasthan

Email: nihir181095@gmail.com Cell: 8562802565

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