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## SURGICAL IMAGES

# Pancreatic mucinous cystadenoma doubly complicated by acute pancreatitis and retroperitoneal rupture



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### KEYWORDS

Acute pancreatitis;  
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Pancreas;  
Splenopancreatectomy

**Summary** Mucinous cystadenomas are the most frequent cystic benign tumors of the pancreas. They are characterized by a malignant potential. Acute pancreatitis is their most common complication. This manuscript reports a unique complication of mucinous cystadenomas of the pancreas: retroperitoneal rupture associated to acute pancreatitis. After resuscitation, the patient underwent surgery. A cystic mass of the pancreas tail with retroperitoneal rupture was found. Splenopancreatectomy was performed. Outcomes were straightforward. After 3 years of follow-up, no signs of recurrence are highlighted.

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## Introduction

Cystic tumors of the pancreas occur with less frequency than solid lesions, and are often detected incidentally, as many of these lesions are small and asymptomatic. They may, however, be associated with pancreatitis or have malignant potential.

This manuscript reports a unique complication of mucinous cystadenomas of the pancreas: retroperitoneal rupture associated to acute pancreatitis.

## Case report

It was a 30-years-old patient, with no medical history, presenting with acute epigastric pain with impaction and tenderness at examination. There was no palpable mass. Laboratory tests were normal, except lipase at 2700 UI/L. Abdominal CT scan (Fig. 1) showed a bi-loculated cystic mass in the pancreas tail, measuring 111 mm × 73 mm, with a thin wall and a fluid content (Fig. 1). MRI found a cystic mass developed at the expense of the body of the pancreas. T2- and T1-weighted imaging showed hyper- and hypo-signal respectively with regular wall enhanced after gadolinium injection. The anterior component had lobulated contours and contained an enhanced septum. A communication between the posterior cystic wall and the retroperitoneum was observed.

The diagnosis of pancreatic mucinous cystadenoma doubly complicated by acute pancreatitis and retroperitoneal rupture was then retained and surgical resection indicated.

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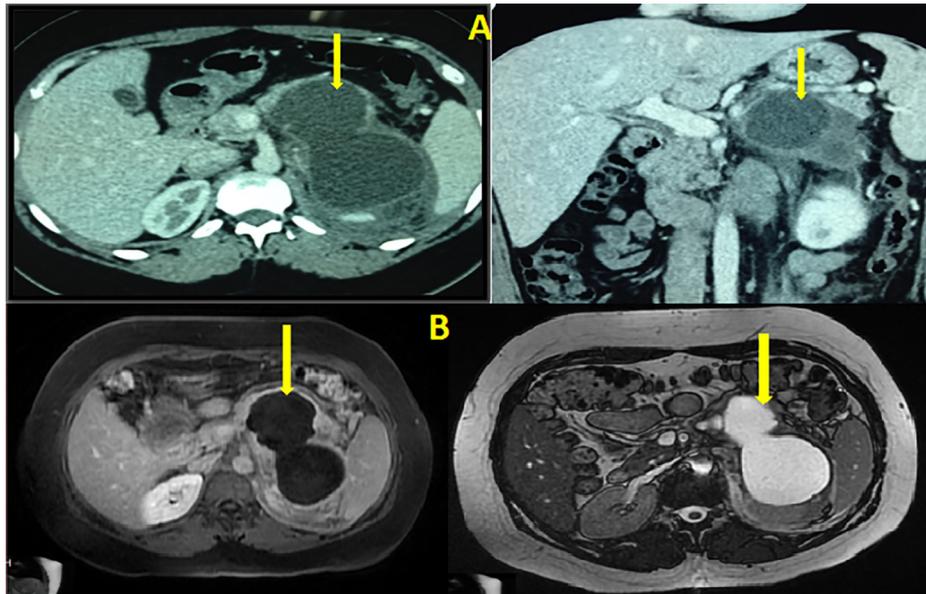


Figure 1. A. CT scan. B. MRI.

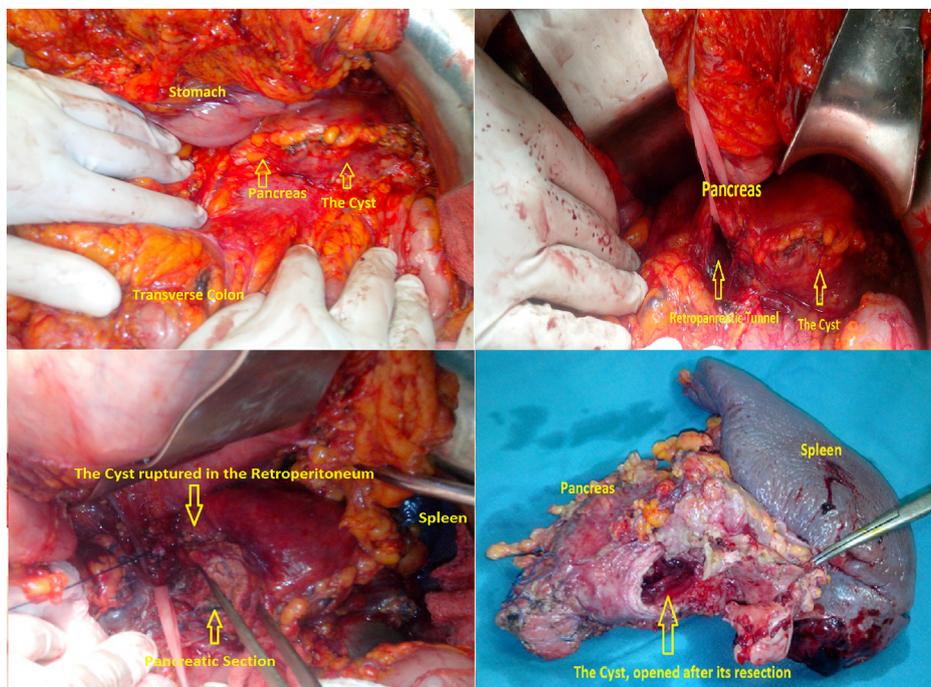


Figure 2. Splenopancreatic dissection and resection of the cystic mass.

A bi-subcostal laparotomy was performed. There was a cystic mass of the tail of the pancreas, with a 15 cm long diameter and a posterior development towards the retroperitoneum (Fig. 2). A splenopancreatectomy was executed with en-bloc resection of the whole specimen.

The pathological examination of the surgical specimen concluded to a pancreatic mucinous cystadenoma with low-grade dysplasia (Fig. 3).

After 3 years of follow-up, no signs of recurrence are highlighted.

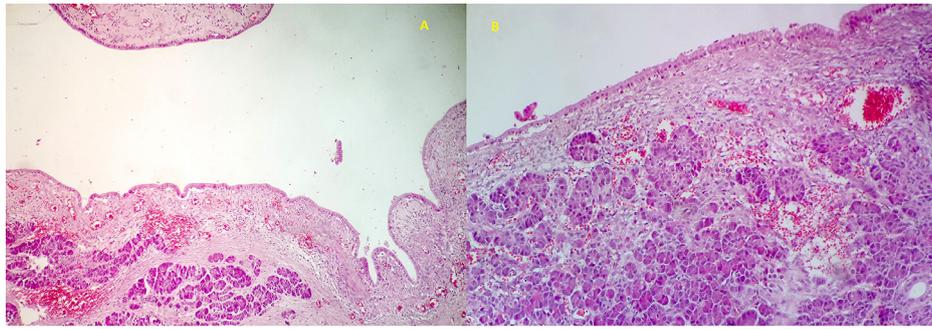
## Discussion

Mucinous cystic neoplasms (MCNs) of the pancreas are low-grade tumors and represent approximately 10% of pancreatic cysts and 1% of pancreatic neoplasms [1].

They are benign neoplasms but can evolve into malignant ones with a risk of transformation into a cystadenocarcinoma in up to 27% of the cases [2,3].

Given the relatively young age of most patients, the risk of progression to invasive MCN, and their common location in the pancreatic body and tail, surgical resection is recommended for all surgically fit patients, since the natural history of MCN is still unknown [3].

Symptoms and signs are not specific. They are dominated by abdominal pain and epigastric gravity. However, it is asymptomatic in up to 75% of cases [4]. Acute pancreatitis can be seen. Some cases of rupture in the peritoneum have been reported, mainly in pregnant women [5,6]. To the best of our knowledge, this is the first case in which a mucinous cystadenoma of the pancreas is revealed by a retroperitoneal rupture.



**Figure 3.** Mucinous cystadenoma of the pancreas with a low-grade dysplasia.

As carcinomatous transformation is possible, surgical resection of these tumors is recommended [3]. With regards to the preoperative imaging results, we performed a right to left splenopancreatectomy with en-bloc resection of the whole cystic lesion without intraoperative rupture by laparotomy.

## Conclusion

Mucinous cystadenomas of the pancreas are part of cystic tumors of the pancreas. Although they are often asymptomatic, they can be complicated by acute pancreatitis or peritoneal rupture. To our knowledge, this is the first case of retroperitoneal rupture.

## Disclosure of interest

The authors declare that they have no competing interest.

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