

CASE STUDY IN GASTROENTEROLOGY & HEPATOLOGY

Serous Microcystic Adenoma of the Pancreas

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Cystic pancreatic neoplasms represent approximately 15% of all pancreatic tumors.¹ Serous microcystic adenomas account for up to 25% of cystic pancreatic neoplasms and 1% of all exocrine neoplasms of the pancreas.² The etiology and pathophysiology of serous microcystic adenomas are unclear.^{3,4} Benign serous microcystic adenomas are glycogen-rich cystadenomas, whereas malignant serous microcystic adenomas are considered serous cystadenocarcinomas based upon their invasive microscopic appearance.

Serous microcystic adenomas are most common in middle-aged women and are frequently diagnosed incidentally on abdominal imaging or upon surgical exploration. Less frequent presentations include obstructive jaundice, recurrent pancreatitis, upper gastrointestinal hemorrhage, duodenal ulcers, and as part of Evans syndrome or von Hippel-Lindau syndrome.⁵⁻⁸

Case Report

A 74-year-old, type 2 diabetic woman presented to the emergency department with an exacerbation of abdominal pain that had been present for 4 years. The pain was located to the midepigastria area and was associated with early satiety and distension. The patient reported that her symptoms had recently exacerbated and had become associated with gastroesophageal reflux. On physical examination, the patient was obese and distended and had a palpable left upper quadrant mass. The mass was

not fixed, and there was no skin discoloration associated with it. The patient's complete blood count, liver function panel, amylase level, lipase level, and tumor markers were within normal limits. A computed tomography scan of the abdomen revealed a cystic mass measuring 7.2 cm × 6.5 cm × 6.5 cm in the body and tail of the pancreas with a 9-mm thick wall and a honeycomb appearance (Figure 1).

Upon surgical exploration, a cystic mass was encountered in the body and tail of the pancreas with dense adhesions to the splenic hilum. A distal pancreatectomy with splenectomy was performed. Macroscopically, the tumor was cystic with clear serous fluid, measured 10 cm × 7 cm × 5 cm, had a gray surface, and completely replaced the



Figure 1. A computed tomography scan of the abdomen with intravenous and oral water-soluble contrast in sagittal view. There is a cystic tumor in the body and tail of the pancreas that adheres to the splenic hilum without compressing its structures.

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Figure 2. A medial cut of a pathology specimen showing ovoid gray-whitish tissue measuring 10 cm × 7 cm × 5 cm with a multicystic interior and serous fluid.

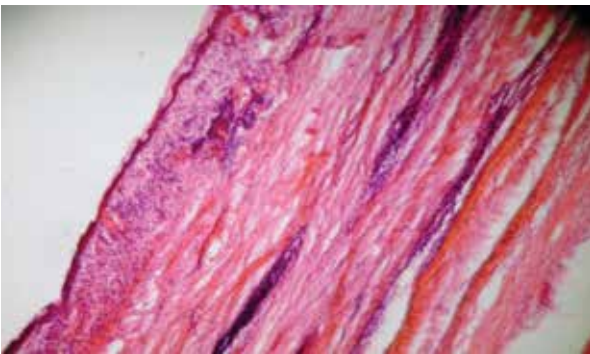


Figure 3. A microphotograph of the inner wall of the specimen (hematoxylin and eosin stain, 10× magnification). Shown is a simple cylindrical epithelium with no signs of malignancy or invasion.

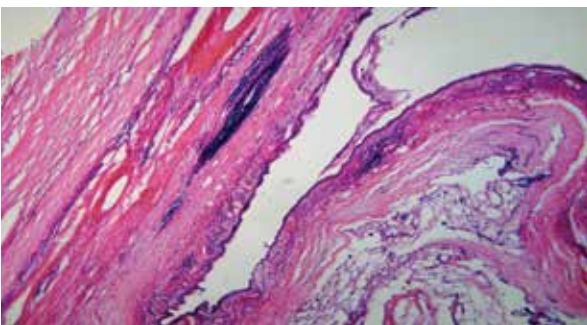


Figure 4. A microphotograph of the inner wall of the pancreatic cyst showing abundant fibroblasts and inflammatory infiltrate with vascular congestion (hematoxylin and eosin stain, 10× magnification).

body and tail of the pancreas (Figure 2). Microscopically, the inner wall of the cyst had a benign appearance with a simple cylindrical epithelium (Figure 3), areas of fibrosis, mild inflammatory reaction, and vascular congestion

(Figure 4). The final diagnosis was a serous microcystic adenoma of the pancreas.

Discussion

Pancreatic serous microcystic adenomas usually have a solid appearance and an average diameter of 6 cm.⁹ These tumors may remain asymptomatic for long periods of time and are frequently found incidentally.^{10,11} The typical honeycomb appearance of these tumors is due to the multiple septums that extend from the cyst wall. Asymptomatic patients with tumors smaller than 4 cm can be followed with yearly abdominal computed tomography scans. There is still controversy on the surgical criteria for the management of this neoplasm, and some authors advocate early resection in tumors larger than 4 cm or those which are symptomatic.¹² Because of the very low malignant potential of these tumors, surgical resection, as exemplified in our patient, is only carried down to tumor-free margins.

As an alternative to surgical resection, endoscopic ultrasound ablation by ethanol injection has been used successfully in patients with small tumors to treat these lesions via a minimally invasive approach. Short-term cyst resolution has been reported in 33% to 79% of cases.¹³⁻¹⁵ DeWitt and colleagues have reported imaging-proven resolution of endoscopically ablated serous neoplasms of the pancreas for a maximum follow-up of 1 year with a complication rate of 4% to 10%.¹⁶

Summary

Serous microcystic adenomas of the pancreas are a rare entity, accounting for a very small percentage of exocrine pancreatic tumors. Nevertheless, they should be kept in the differential diagnosis. These tumors present in a nonspecific fashion, and a high index of suspicion must be kept in order to diagnose them. A computed tomography scan of the abdomen with 1-mm thick cuts following arterial, venous, and portal phase protocol typically shows a multiseptated cyst with a honeycomb appearance. Serous microcystic adenomas are surgically curable and have very limited carcinogenic risk. Due to the low malignant potential, these lesions are frequently amenable to limited local resection with distal pancreatectomy with or without splenic preservation.

The authors have no relevant conflicts of interest to disclose.

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