

Clinical Images

Macrocytic serous cystadenoma of the pancreas

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Cystic pancreatic lesions are common, and about 90% of these lesions are pseudocysts or retention cysts. True cysts of the pancreas are rare. The majority of pancreatic serous cystadenomas are microcystic. Macrocytic serous cystadenoma is an unusual and essentially benign pancreatic tumor. The radiologic features of this subtype may resemble a pseudocyst or a mucinous cystadenoma. Thus, it is often difficult to make a correct diagnosis [1,2]. Herein, we report on a macrocytic serous cystadenoma of the pancreas in a 46-year-old female patient, with a preoperative diagnosis of pancreatic pseudocyst by radiologic imaging.

A 46-year-old woman with no history of pancreatitis or abdominal trauma presented with nearly three months of mild left abdominal pain radiating through to the back and increase of the abdominal circumference. She denied fever, nausea, vomiting or weight loss, and had normal bowel function. Physical examination revealed a palpable and painless abdominal mass on the left side of the abdomen, with minimal deep tenderness. Tumor size was calculated from radiologic images. Computed Tomography (CT) showed a giant cystic mass with a few internal septations (Fig. 1A). Magnetic resonance imaging (MRI) of abdomen demonstrated a multiloculated lesion measuring 20 cm in diameter and moderate dilatation of the extra-hepatic bile duct (Fig. 1B). On T1 and T2 weighted imaging the mass was hypointense and hyperintense, respectively. Serum levels of tumor markers were within normal limits and surgical treatment was indicated in order to alleviate the abdominal pain.

A laparotomy through bilateral subcostal incision was planned and a large mass measuring 20 × 15 × 15 cm growing from the pancreas tail was found. The tumor was enucleated with preservation of the pancreas tail.

Pathologic examination of the tumor revealed macrocysts lined by clear cells without mucinous cytoplasm or atypias in the epithelium (Fig. 2), confirming the diagnosis of a serous cystadenoma of the pancreas.

Serous cystadenoma of the pancreas is an uncommon type of pancreatic cystic tumors, which is almost always benign [1,2]. It is composed of cysts formed by epithelial cells that produce serous fluid and show evidence of ductal differentiation. The vast majority of serous cystadenoma has a microcystic appearance and presents as a well-circumscribed mass with an internal sponge-like

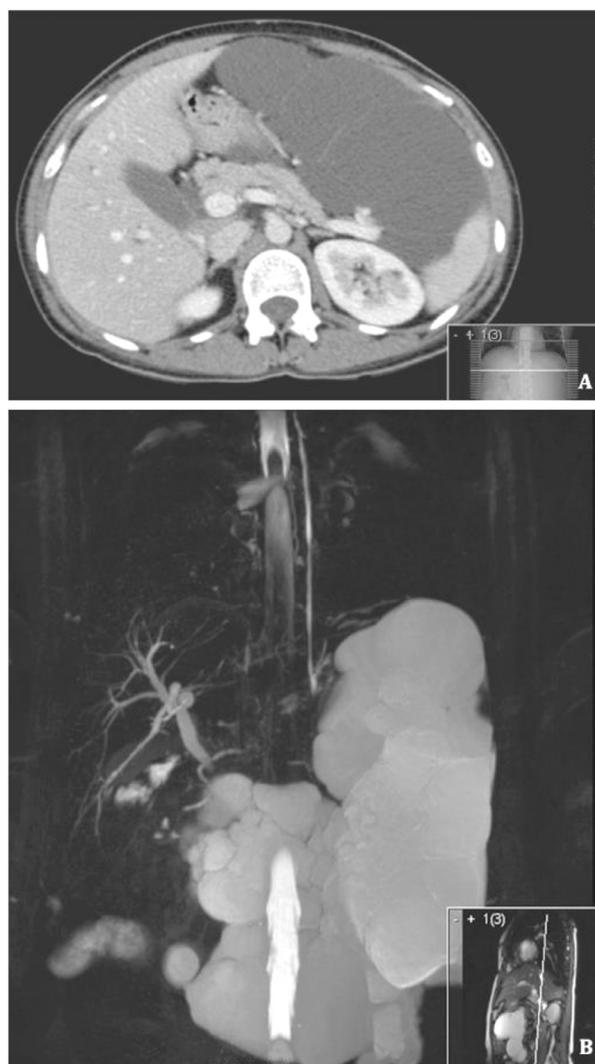


Fig. 1. A: Contrast-enhanced computed tomographic scan of abdomen in a 46-year-old woman showing a large multiloculated cystic mass occupying the left abdomen. The mass had many internal locules and subtle enhancing septa; **B:** Abdominal magnetic resonance imaging demonstrated an externally lobulated cystic lesion measuring 20 cm in diameter filled with a clear watery fluid, with no solid part identified. Moderate dilatation of the extra-hepatic bile duct was also noted.

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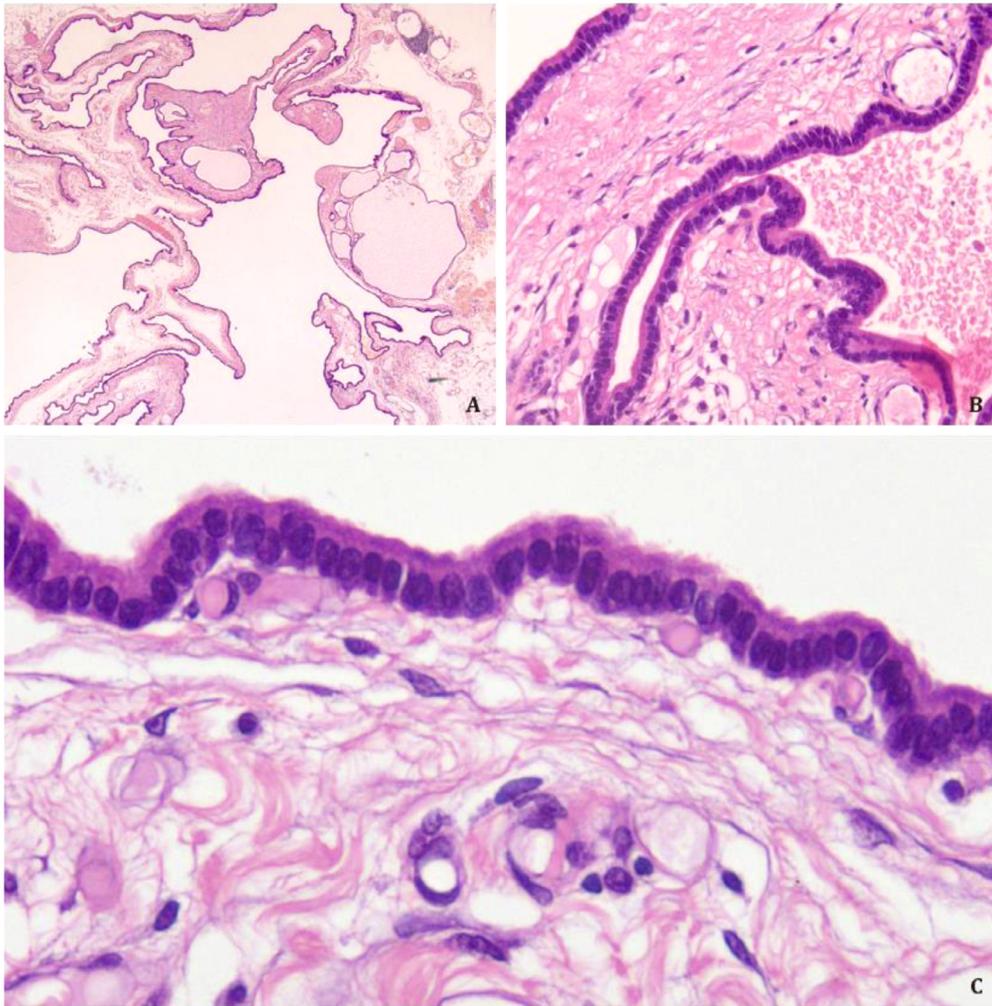


Fig. 2. **A:** Cyst wall has simple epithelial lining without papillary projections and thin fibrous wall, which are well demarcated from normal-appearing parenchyma (H&E, original magnification $\times 40$); **B:** Simple cuboidal epithelium with clear cytoplasm were characteristic of macrocystic serous cystadenoma (H&E, original magnification $\times 200$); **C:** The cystic wall lining was composed of cuboidal epithelial containing cytoplasmic glycogen. The nuclei were rounded to oval in shape, uniform, and centrally located (H&E, original magnification $\times 400$).

architecture due to the presence of innumerable microcysts (<2 cm) [1,3]. Less frequently serous cystadenoma appears as a macrocystic mass, characterized by a small number of cysts >2 cm which are often indistinguishable from other macrocystic lesions of the pancreas (specially pseudocysts and mucinous cystic neoplasm) [2,4]. This macrocystic variant represents only 6%–10% of serous cystadenoma and was first described by Lewandrowski et al. [4]. As other pancreatic cystic tumors, macrocystic serous cystadenoma is generally asymptomatic and is usually discovered incidentally during imaging studies (CT scan and/or MRI) performed for signs and symptoms not related to the pancreas [5]. On the other hand, biochemical analysis of cystic fluid and determination of tumor markers can be useful to identify malignant or potentially malignant mucinous adenoma. Pancreatic serous cystadenomas that include a mucinous-cystadenoma component has been described but are extremely rare [6]. The definitive diagnosis of this tumor is based on pathologic examination after surgical removal of the lesion [2].

The diagnosis of a serous cystadenoma should be made with caution unless the lesion has all of the typical findings. CT or MRI scan surveillance should be routinely performed. The preferred treatment for this extremely rare entity is observation without surgical removal unless the patient has clinical symptoms or the diagnosis remains unclear. The procedures should be as limited as possible if no evidence of malignancy is noted preoperatively [4,7].

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Competing interest

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