

## Lymphoepithelial Cyst of the Pancreas: A Case Report<sup>1</sup>

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We present a case of lymphoepithelial cyst of the pancreas. The cyst showed moderate echogenicity, mimicking a solid lesion on ultrasonography (US), and had a cystic appearance on computed tomography (CT). This ambivalent finding may be a distinctive feature of lymphoepithelial cysts of the pancreas.

**Index words :** Pancreas, cysts

Pancreas, disease

Pancreas, CT

Pancreas, US

Lymphoepithelial cyst (LEC) is a rare, benign disease. The radiographic differentiation of LECs from other cystic lesions of the pancreas with malignant potential is challenging. We describe the radiographic features of LEC in the hope that the knowledge of the distinctive radiography of this entity may minimize unnecessary surgery.

### Case Report

A 45-year-old man was referred to our hospital for the evaluation of a cystic mass in the head of the pancreas that was incidentally detected in an ultrasonography (US) examination performed at a local clinic. The patient had undergone subtotal gastrectomy 20 years earlier due to a perforated ulcer. He had no abdominal discomfort, tenderness or palpable masses. Laboratory testing revealed an elevated serum carbohydrate antigen

(CA19 - 9) level of 55.5 U/mL (normal level < 37 U/mL).

A contrast-enhanced abdominal computed tomography (CT) scan demonstrated a 5 cm multilobulated, multilocular cystic mass with septations at the superior aspect of the body of the pancreas. The attenuation value of the internal content was approximately 22 Hounsfield units. (Figs. 1A and 1B). Endoscopic retrograde cholangio-pancreatography (ERCP) showed no abnormality or communication between the pancreatic duct and the mass.

Laparotomy revealed a well-defined, grayish, multilobular solid-like mass located at the head of the pancreas. Intraoperative sonography depicted a well-defined lobulated mass with moderate echogenicity mimicking a solid lesion (Fig. 2). The mass was completely enucleated.

On gross examination, the cyst was found to be covered by a thin capsule and to measure 6 cm in diameter. On examination of the cut section, it was found to be multilobulated and multilocular without a solid portion (Fig. 3). The cyst's contents were caseous in appearance and gray-yellow to tan in color. Upon microscopic examination, the cyst was found to be lined by a keratinized stratified squamous epithelial layer with abundant mature lymphocytes present in the cyst wall. These findings were histologically consistent with a lymphoepithelial cyst. The patient's postoperative

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Received July 19, 2005 ; Accepted August 29, 2005

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course was uneventful, and he was discharged.

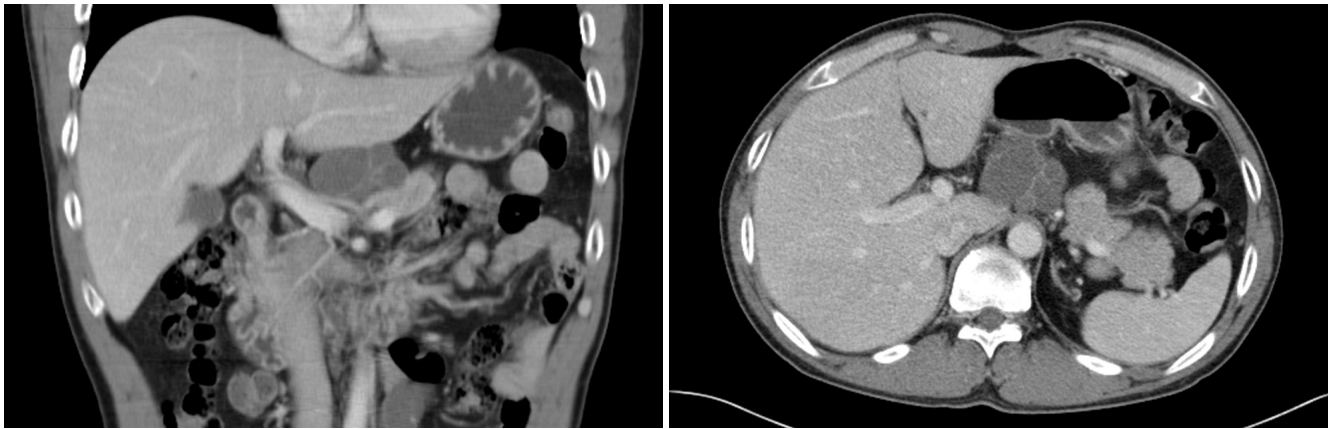
### Discussion

LEC is a rare, benign cystic lesion that has been reported to have a male predominance (M/F = 4/1), with the mean age of the patients being 56 years (age range, 35 - 82years) (1). Pathologically, it is characterized by: a) a lining consisting of stratified keratinized squamous epithelium b) dense, subepithelial lymphoid tissue admixed with germinal centers, and c) internal contents consisting of keratin and cholesterol crystal materials (2). Most patients are asymptomatic or have nonspecific signs, and the lesion is often detected incidentally (3). The lesions are usually located at the pancreatic head or body, but have also been observed in the tail (3). Fine

needle aspiration biopsy is useful and can allow surgery to be avoided for these lesions (4).

On US, LEC may mimic a solid lesion due to the presence of echogenic material in the cyst. However, the presence of posterior acoustic enhancement and lateral shadowing may be useful to correctly determine its cystic nature (5). The contents of the LEC, mostly consisting of keratinous material, correspond to the echogenic structure found on US.

CT typically shows a well-defined unilocular or multilocular cystic (20 - 30 HU) lesion with a thin, enhanced rim protruding from the surface of the pancreas. Occasionally, mural calcifications can be seen (6, 7). The attenuation values of the internal contents sometimes exhibit negative Hounsfield units, implying the presence of lipid contents (6, 8). It has been suggested that a



**Fig. 1. A.** Coronal view of contrast-enhanced CT.

**B.** Axial view, showing a well-defined, multilobulated, multilocular cystic mass with septations at the superior aspect of the pancreatic body.



**Fig. 2.** Intraoperative ultrasonography showing a well-defined lobulated mass with moderate echogenicity, mimicking a solid lesion.



**Fig. 3.** The cut surface of the specimen shows a multilobulated and multilocular cyst filled with caseous-like material that is gray-yellow to tan in color.

combination of a cystic appearance on CT and a nonhomogeneous echogenicity on sonography can provide a clue to the correct diagnosis [6, 8, 9].

On magnetic resonance imaging (MRI), the cystic nature of the lesion can be clearly identified by its hypointensity on the T1-weighted images, and its hyperintensity on the T2-weighted images (7). The cholesterol cleft in the keratin contents of the cyst may appear hyperintense on the T1-weighted images, and hypointense on the T2-weighted images (6, 7). Fat saturation and chemical shift imaging techniques are helpful in identifying the fat component (6).

The discrimination between LECs and other cystic neoplasms of the pancreas is possible, but difficult, when using a single imaging modality. The differential diagnosis includes the presence of a unilocular mucinous cystic neoplasm, pseudocyst, hemorrhagic pseudocyst, serous microcystic adenoma, serous oligocystic adenoma, intraductal papillary mucinous neoplasm (IPMN) and peripancreatic lymphangioma. A unilocular mucinous cystic neoplasm is characterized by enhanced internal septa and a cystic wall with mural papillary projections on CT. A pseudocyst is usually a unilocular cystic lesion with a thin, smooth marginated wall. A hemorrhagic pseudocyst may be seen as echogenic on US, but cystic on CT. However, a history of pancreatitis can be helpful in differentiating pseudocysts from LECs. A serous microcystic adenoma is composed of several small cysts (each generally smaller than 2 cm), an enhanced solid portion on CT, and a gadolinium-enhanced central scar on MRI, and this lesion may appear as a solid echogenic mass due to the interfaces between the tiny cysts. A serous oligocystic adenoma has a countable number of macrocysts (cysts measuring 2 cm or greater). IPMN is characterized by the communication

between the cysts and the dilated pancreatic duct. Peripancreatic lymphangioma is seen as an anechoic or hypoechoic fluid-filled cyst on US.

In conclusion, although LEC is a rare entity of the pancreas, it exhibits moderate echogenicity, mimicking a solid lesion on US, while the CT shows a typical cystic appearance. This finding is similar to those reported in previous reports (6, 8, 9). Radiologists should be aware of this contradictory finding, in order to narrow the differential diagnosis when a cystic lesion of the pancreas is present.

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