Rupture of a suspected pancreatic lymphoepithelial cyst causing chemical peritonitis after endoscopic ultrasound guided-fine needle aspiration

Endoscopic ultrasound (EUS)-guided fine needle aspiration (FNA) is considered a safe technique not only for solid lesions but also for cystic lesions of the pancreas [1].

A 69-year-old man with elevated serum carbohydrate antigen (CA) 19–9 levels (205 U/mL) was referred for investigation of a lesion in his pancreas. Computed tomography (CT) revealed an 8-cm, well-demarcated, low-density lesion that was compatible with a cystic lesion (Fig. 1). T2-weighted magnetic resonance imaging (MRI), however, showed heterogeneous intensities within the lesion, although the intensity is lower than that of a renal cyst (Fig. 2).

EUS demonstrated a pancreatic parenchyma-like echo appearance with no echolucent area (Fig. 3). Abnormal uptake of 18F-fluorodeoxyglucose (FDG) was also identified (Fig. 4), and a neoplasm derived from the pancreatic parenchyma was suspected.

EUS-FNA was performed through the duodenal bulb using a 22-gauge needle (EchoTip; Cook Medical, Winston Salem, North Carolina, USA), and the tissue obtained revealed abundant keratinized substances (Fig. 5). The patient developed moderate fever 2 days after the EUS-FNA, and 2 weeks later, he felt diffuse abdominal pain. A further CT scan demonstrated a large amount of fluid in his abdominal cavity, and a drain was inserted (Fig. 6). The drained fluid was thick and yellowish-white, with extremely high levels of white blood cells (129 750 per µL), amylase (86 550 U/mL), and CA19-9 (4410 U/mL). These findings strongly suggested rupture of a pancreatic lymphoepithelial cyst [2]. Despite administration of painkillers and antibiotics, he continued to have abdominal pain for 2 weeks, at which time the drainage stopped. Following recovery from this event, his pancreatic lesion remained unchanged in size, at 2 cm, over the next 2 years.

Lymphoepithelial cyst is a rare pancreatic disease [2] that is sometimes seen as a heterogeneous solid mass on EUS [3]. As in the current case, diagnosis by imaging is difficult; however, the pathological and biochemical findings of the cyst aspirate are highly diagnostic [2, 3]. Complications after EUS-FNA of pancreatic cystic lesions are infrequent (2%–5%) [1], but do include serious problems such as hemothorax pancreaticus, pancreatic ascites [4], tumor seeding [5], and, as in this case, chemical peritonitis.

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