The value of endoscopic ultrasound-fine needle aspiration in the suspicion of pancreatic hydatid cyst in endemic areas with negative serology (with video)

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Hydatid cyst or cystic echinococcosis is a parasitic disease common in pastoral communities, affecting the liver and lungs. Pancreatic hydatidosis is rare even in endemic areas, but differential diagnosis from pseudocysts and cystic neoplasias can be difficult, especially when serology is negative for the disease.[1-4] Herein, we report a patient with a pancreatic cystic lesion suggestive of a hydatid cyst, in whom endoscopic ultrasound-fine needle aspiration (EUS-FNA) confirmed an atypical mucinous cystadenoma.

A 50-year-old white female was referred for the evaluation of epigastric pain, vomit, and diarrhea. Computed tomography suggested a pancreatic pseudocyst, but magnetic resonance imaging revealed a pancreatic cystic lesion suggestive of a hydatid cyst. Enzyme-linked immune absorbent assay for echinococcosis was negative. Clinical laboratory examinations were unremarkable. Sectorial Endoscopic Ultrasound (Olympus GF-UCT140-AL5, Olympus America Inc., New York, USA, coupled to an ultrasound unit Aloka Prosound alfa-5 SX) detected a pancreatic cystic lesion in the body, with well-defined borders, triple membrane, peripheric daughter cysts, and hyperechogenic mobile strands suggestive of hydatid sand, measuring 6 cm × 6 cm [Figure 1]. Main pancreatic duct was not dilated. EUS-FNA was performed through a transgastric approach using a 19-gauge needle (EchoTip Ultra Echo-19, Cook Medical, Winston-Salem, USA) for only a single puncture. There was no on-site cytopathologist. The cyst was completely emptied to reduce the risk of spillage after the procedure. A 100 mL of a serous yellow liquid was aspirated. After aspiration, the remaining cyst revealed many small daughter cysts and a partial detaching of its internal membrane. Amylase and CEA levels in the liquid were 922 U/mL and 10,830 ng/mL, respectively. Cytopathology revealed an acellular sediment with scarce inflammatory cells and no protoscolices or hooklets. Surgery resected the lesion successfully, confirming an atypical mucinous cystadenoma mimicking a pancreatic hydatid cyst,
and the patient is going very well to date, without recurrence [Video 1]. These findings confirmed the importance of the EUS-FNA for the differential diagnosis of pancreatic cysts in patients from endemic areas for hydatidosis but with negative serology.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patients has given her consent for her images and other clinical information to be reported in the journal. The patient understand that her names and initial will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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Figure 1. On the left, on coronal magnetic resonance image, a 6 cm × 6 cm well-defined cystic lesion with peripheral daughter cysts within the mother cyst. On the right, on endoscopic ultrasound examination, the cystic lesion presents an irregular contour due to partial separation of its membranes. On the bottom, between both images, the macroscopic appearance of the resected specimen.