Gastric compression due to a cystic liver metastasis of vulvar carcinoma diagnosed by endoscopic ultrasound-guided fine-needle aspiration

A 63-year-old woman who was complaining of epigastric pain and abdominal fullness underwent an upper gastrointestinal endoscopy, which revealed a bulge in the lesser curvature and anterior wall of the gastric body (Fig. 1). A computed tomography (CT) scan and a sectorial endoscopic ultrasound (EUS) using an Olympus GF-UCT140-AL5 (Olympus America Inc., New York, USA) coupled to an ultrasound unit (Aloka Prosound alfa-5 SX) detected a 5-cm cyst in the caudate lobe of the liver (Fig. 2). A definitive diagnosis was obtained by endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA). Only a single needle pass was performed with a 19-gauge needle (EchoTip Ultra Echo-19; Cook Medical, Winston-Salem, North Carolina, USA), and the content of the cyst (90mL) was completely aspirated. A cystic liver metastasis of vulvar carcinoma was confirmed by immunohistochemistry that was consistent with this diagnosis (Fig. 3). The patient subsequently underwent surgery, with complete resection of the lesion.

Vulvar carcinoma is a rare genital malignancy, accounting for less than 1% of all malignancies in women, and up to 5% of malignancies of the genital tract [1]. Most of these cancers are squamous cell carcinomas, and surgery is the only chance of cure. Absence of lymph nodes metastases and distant metastases, which are more common in larger and deeper tumors, are prognostic factors for disease-free survival [1]. The disease usually metastasizes to pelvic lymph nodes, with hematogenic metastases to distant organs occurring in less than 10% of patients with advanced disease. Liver metastasis secondary to vulvar carcinoma is infrequent, with only a few cases having been reported in the literature [2]. Cystic liver metastases are very uncommon. In addition, to the best of our knowledge, this is the first reported case of an EUS-FNA diagnosis of a vulvar cancer that had metastasized to the liver. In this case, a very late cystic liver metastasis occurred after resection of an early vulvar squamous cell carcinoma (pTisN0M0) 13 years previously. EUS imaging alone is not predictive of neoplastic lesions, and these cases can be misdiagnosed as simple cysts. However, EUS is the best option for clarifying the differential diagnosis between extraluminal compression and subepithelial tumor [3], which was the initial finding in this case. EUS-FNA with histological confirmation of liver cysts in women with a previous history of genital tract malignancy is a valuable method for the diagnosis of a cystic liver neoplasm [4].

**Competing interests:** None
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Fig. 3 Histopathologic appearance (original magnification ×200) of the material obtained by endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) demonstrating: a poorly differentiated squamous cell carcinoma composed of markedly pleomorphic cells with eccentric nuclei and prominent nucleoli on hematoxylin and eosin (H&E) staining; and positive immunohistochemical staining with: b cytokeratin M (clones AE1/AE3); c p63 (clone 7 Jul); and d p16 (clone 6H12), confirming the diagnosis of a liver metastasis of vulvar carcinoma.

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