Endoscopic ultrasound-guided fine needle biopsy of pancreatic metastasis from Merkel cell carcinoma

Merkel cell carcinoma (MCC) is a rare and aggressive cutaneous neuroendocrine carcinoma. The incidence rate is approximately 0.3–0.6/100 000 per year [1,2]. At initial presentation most patients with MCC (70%–80%) have localized disease, and only a few (1%–4%) have distant metastases [3]. Moreover, MCC rarely metastasizes to the pancreas, therefore this represents a challenge for the differential diagnosis of pancreatic masses [4].

A 73-year-old man reported epigastric pain and vomiting. The patient's history included a diagnosis of an MCC, which had been removed from his left elbow 7 months before the onset of his upper gastrointestinal symptoms. His laboratory findings were unremarkable. An abdominal computed tomography (CT) scan showed a lesion infiltrating the common bile duct in the pancreatic head, without vascular involvement, which was consid-

Video 1

Endoscopic ultrasound of the pancreatic head showed a 3-cm hypoechoic, non-homogeneous lesion that appeared to be infiltrating the portal confluence. The common bile duct upstream of the mass appeared dilated.

Video 2

Three needle passes, using a "fanning" technique followed by slow withdrawal of the stylet, were performed with a 22-gauge ProCore needle.

ered to be a possibly resectable adenocarcinoma (► **Fig. 1**).

The patient underwent an endoscopic ultrasound (EUS), which confirmed a 3-cm hypoechoic, heterogeneous, irregular mass with evidence of invasion of the portal confluence (► **Fig. 2**; ► **Video 1**). Three needle passes were performed with a 22-gauge ProCore needle (Cook Medical, Winston-Salem, North Carolina, USA) using a "fanning" technique followed by slow withdrawal of the stylet (► **Video 2**). Cytohistological evaluation of the samples revealed small blue, round-to-oval cells with stippled chromatin (► **Fig. 3a**). The cells were positive for CK20, synaptophysin, and chromogranin, and had a Ki-67 index of >60%, suggestive of pancreatic metastasis from MMC (► **Fig. 3b**).

Fig. 3 Cytohistological analysis of an endoscopic ultrasound (EUS)-guided fine needle biopsy specimen from the pancreatic lesion showed: **a** uniform, small blue cells with round-to-oval, hyperchromatic nuclei and scant cytoplasm when stained with hematoxylin and eosin (H&E); **b** strong positivity for CK20 on immunohistochemistry, with characteristic paranuclear, dot-like accentuation, consistent with a diagnosis of Merkel cell carcinoma.

In this specific case, the EUS features of the pancreatic metastasis from MMC mimicked a classic adenocarcinoma. Moreover, this neoplasm showed few specific cytologic features as the same small blue, round-to-oval cells can also be seen in lymphoma or small cell carcinoma [5]. Given that CK20 is a pathognomonic marker of MCC [4,5], obtaining an adequate tissue sample for immunohistochemical evaluation with the use of an

EUS-guided histology needle was key for making the differential diagnosis. To the best of our knowledge, there are no other reports in the international literature of a pancreatic metastasis from MCC being diagnosed by EUS-FNB.

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