METASTATIC RENAL CELL OF THE PANCREAS MIMICKING NEUROENDOCRINE TUMOR DIAGNOSED BY ENDOSCOPIC ULTRASOUND-GUIDED NEEDLE BIOPSY

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Keywords: pancreatic mass, endoscopic ultrasound, fine needle biopsy, immunohistochemical analysis

Conflict-of-interest: No conflicts of interest to declare.

Funding Sources: This report received no external funding.

Contributions: All authors have contributed equally to the study. They have read and agreed to the published version of the manuscript.

Ethical approval: The patient was given his informed consent for this publication including any accompanying images.

Consent statement: Informed consent for publication of anonymous details was obtained.

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Abstract

Pancreas is an uncommon site for kidney metastasis and this represents a challenge for the different diagnosis of pancreatic masses. Radiological features of secondary pancreatic malignancies from clear cell renal cell carcinoma mimicked a classic neuroendocrine tumor and EUS-guided histology needle is pivotal in providing a correct diagnosis.

Key Clinical Message

Pancreatic metastases of kidney are rare and they can occur several years after nephrectomy. EUS-guided histology needle and appropriate immunohistochemistry stains are pivotal in showing pathognomonic marker of clear cell renal cell carcinoma.

1 CASE PRESENTATION

An asymptomatic 71-year-old woman with a 21-year-old history of prior clear cell renal cell carcinoma (CCRCC) was referred for other reasons to an upper abdominal ultrasound which showed a pancreatic body cystic-like lesion.

A following magnetic resonance imaging (MRI) with T2-weighted images, showed a small solid lesion in the pancreatic body, slightly heterogeneous and moderately hyperintense suggesting a neuroendocrine tumor (Fig. 1A).

The patient underwent an endoscopic ultrasound (EUS), which confirmed a 15 mm hypoechogenic, homogeneous, round and well circumscribed mass. At color doppler evaluation the lesion was hypervascular (Fig. 1B).

Fine needle biopsy (FNB) was performed with a 22-gauge Acquire needle (Boston Scientific Natick, MA) using conventional negative suction technique (Fig. 1C).

2 QUESTION

What was the diagnosis?

3 ANSWER

Cytohistological evaluation of the samples revealed atypical clear cells monomorphonuclear with bright cytoplasm (Fig. 1D). Immunohistochemical analysis showed that the neoplastic cells were positive for CAM 5.2, Vimentin and PAX-8 suggestive of pancreatic metastasis from CCRCC. This result was confirmed on resected specimens (Fig. 2A) in which encapsulated metastatic nodule in pancreatic tissue (Fig. 2B) and cells with membranous positivity for CAIX were observed (Fig. 2C).

Pancreatic metastases of kidney are rare and they can occur several years after nephrectomy.[1] Radiological features of secondary pancreatic malignancies from CCRCC mimicked a classic neuroendocrine tumor. EUS-guided histology needle and appropriate immunohistochemistry stains are pivotal in providing a correct diagnosis showing pathognomonic marker of CCRCC.[2]

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FIGURE LEGENDS

Figure 1 (A) T2 weighted-MRI shows a small solid lesion in the pancreatic body suggesting a neuroendocrine tumor. (B) EUS image showing a hypoechoic lesion of measured approximately 1.5 cm; at color doppler evaluation the mass was hypervascular. (C) EUS-FNB was performed with a 22-gauge Acquire needle. (D) Cytohistological analysis of a EUS-FNB specimen shows atypical clear cells monomorphonuclear with bright cytoplasm (stained with hematoxylin and eosin - original magnification x200).

Figure 2 (A) Lesion on resected specimen (black arrow). (B) Encapsulated metastatic nodule in pancreatic tissue (original magnification x100). (C) On surgical specimens immunohistochemical analysis shows neoplastic cells with membranous positivity for CAIX (original magnification x400).