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Interesting images

Unusual isolated pelvic metastasis from a clear cell hepatocellular carcinoma demonstrated on ^{18}F-FDG PET/CT after liver transplantation

Metástasis pélvica inusual de carcinoma hepatocelular de células claras visto en ^{18}F-FDG PET/CT después de trasplante hepático

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Liver transplantation is a curative modality for hepatocellular carcinoma (HCC), especially in patients with cirrhosis, because it can cure HCC and the primary liver disease at the same time. A 49-year-old male patient with a history of splenectomy for hypersplenism due to cirrhosis 11 years ago was diagnosed with clear cell HCC, for which he underwent liver transplantation about 3.5 years previously. He was admitted to our hospital this time for elevated alpha fetoprotein (64.7 ng/ml, normal: 0–20). Physical examination was normal. The patient was negative for all the other tumor markers (carcinoembryonic antigen [2.56 ng/ml], carbohydrate antigen 19–9 [9.50 U/ml], carbohydrate antigen 72-4 [1.48 U/ml] and neuron-specific enolase [14.35 ng/ml]). The chest-abdomen computer tomography (CT) scan was unremarkable. Accordingly, an ^{18}F-FDG PET/CT scan was performed to seek the potential metastases and showed an intense ^{18}F-FDG activity in the pelvis superior to the bladder (Fig. 1a, arrow) and also an accessory spleen (Fig. 1a, dovetail arrow) in the maximum intensity projection PET image. CT and the corresponding fused images revealed a round-shaped FDG-avid mass located near the rectum (Fig. 1b and c) and posterosuperior to the bladder (Fig. 1d). No other abnormal distribution of ^{18}F-FDG was displayed. The mass was resected and histologic examination confirmed the diagnosis of metastasis from clear cell HCC.

Clear cell HCC is an uncommon subgroup of HCC, with a frequency varying between 2.2% and 6.7% among HCCs,[1] which has different clinicopathologic features and better prognosis from non-clear cell HCC, lungs and abdominal lymph nodes being the most common sites whenever metastases occurred.

In our case, an aspiration biopsy was performed for the liver tumor before transplantation. We consider that tumor biopsy or iatrogenic shedding of tumor cells in transplant surgery contributes to the pelvic metastasis. Accordingly, implantation metastasis may be the most likely metastasis pathway. Implantation metastasis from HCC is rare and frequently occurs in the chest wall and peritoneum, and fine needle aspiration biopsy is the most common reason.[2] A wide excision or radiological therapy of the implantation site may have a satisfactory treatment outcome. In our patient, he underwent a radical resection for the mass and the post-operative 15 months follow-up was uneventful. PET/CT using ^{18}F-FDG is not suitable for primary detection of HCC, however, ^{18}F-FDG is used in the detection of extrahepatic metastases and recurrence of HCC with good performance.[3]

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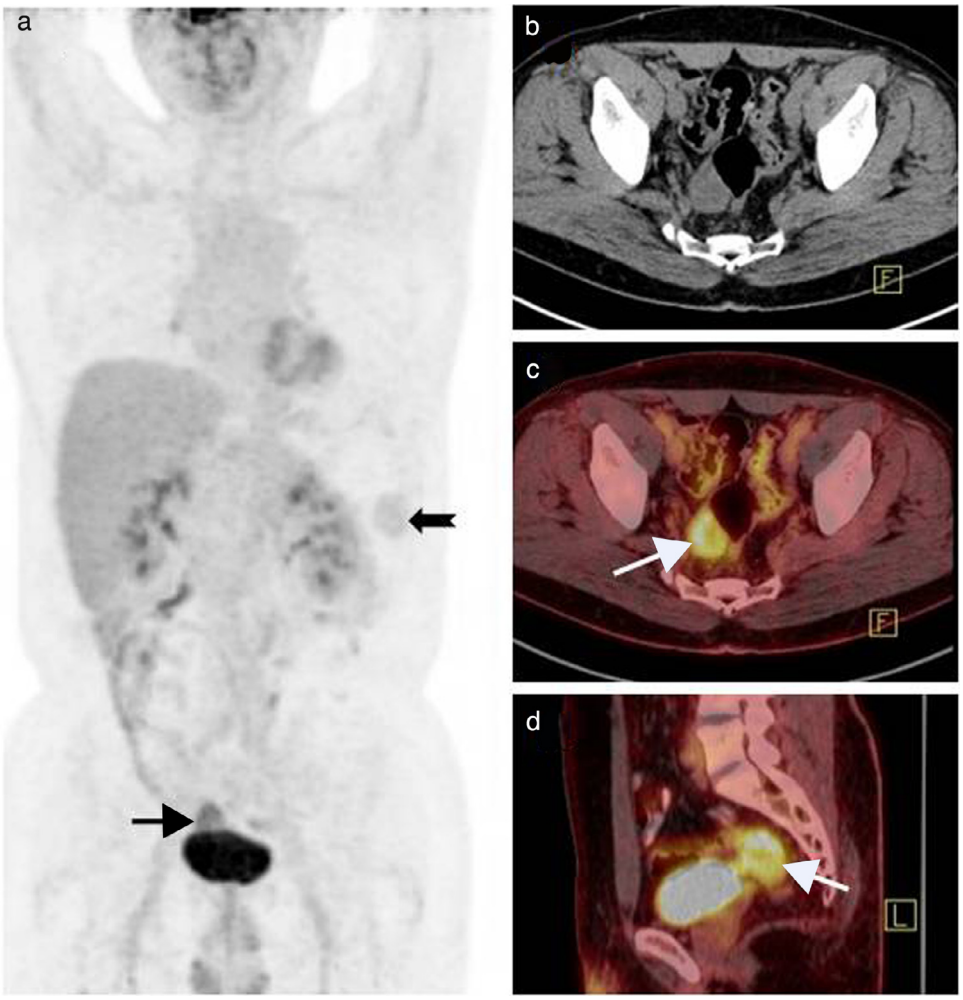

Fig. 1. PET/CT scan demonstrated a round-shaped FDG-avid mass in the pelvis, which was posterosuperior to the bladder (a–d, arrows) and also an accessory spleen (a, dovetail arrow).

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Conflicts of interest

The authors declare no conflicts of interest.

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