ELSEVIER Case Report

Reactive Hypertrophy of an Accessory Spleen Mimicking Tumour Recurrence of Metastatic Renal Cell Carcinoma

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De novo occurrence of an accessory spleen after splenectomy is worth noting for two reasons. First, it is known that splenectomy can cause reactive hypertrophy of initially inactive and macroscopically invisible splenic tissue. Second, it can mimic tumour recurrence in situations in which splenectomy has been performed for oncological reasons. This might cause difficulties in differential diagnosis and the clinical decision for reoperation. We report the case of a patient with suspected recurrence of renal cell carcinoma after total pancreatectomy and splenectomy for metastatic renal cell carcinoma, which finally revealed an accessory spleen as the morphological correlate of the newly diagnosed mass in the left retroperitoneum. [*Asian J Surg* 2011;34(1):50–52]

Key Words: accessory spleen, hypertrophy, renal cell carcinoma, tumor recurrence

Introduction

The pancreas is a common site of metastases from renal cell carcinoma (RCC) of the left kidney, which are often located in the tail of the gland and can be treated by pancreatic resection with curative intent.[1] Usually, distal pancreatectomy for oncological indications includes splenectomy.[2] During follow-up examination of the patients computed tomography (CT) or magnetic resonance imaging scan is performed to detect tumour recurrence or liver metastases.[3] Sometimes, it is not possible to differentiate recurrence or metastases from other processes by these radiological methods. Here, we report the case of a patient with suspected recurrence of RCC after total pancreatectomy and splenectomy, which led to a reoperation with tumour extirpation, and finally revealed an accessory spleen as the correlate of the newly diagnosed mass in the left retroperitoneum.

Case report

A 69-year-old patient with a history of left-sided RCC and tumour nephrectomy 11 years before underwent total pancreatectomy and splenectomy because of multiple pancreatic metastases of the RCC. Twenty months after resection, CT revealed a new tumour-suspicious soft tissue mass (diameter, 2 cm × 3 cm) that was located in the left upper retroperitoneal space (Figure 1). Staging by chest CT, bone scintigraphy and positron emission tomography revealed no further tumour manifestation. The patient underwent exploratory laparotomy under the suspicion of tumour recurrence. Abdominal exploration showed no hepatic or peritoneal metastases. The tumour was removed *in toto* oncologically by wide excision that included the surrounding soft tissue, without preparation along the tumour itself. During the postoperative course, the patient recovered quickly and was discharged

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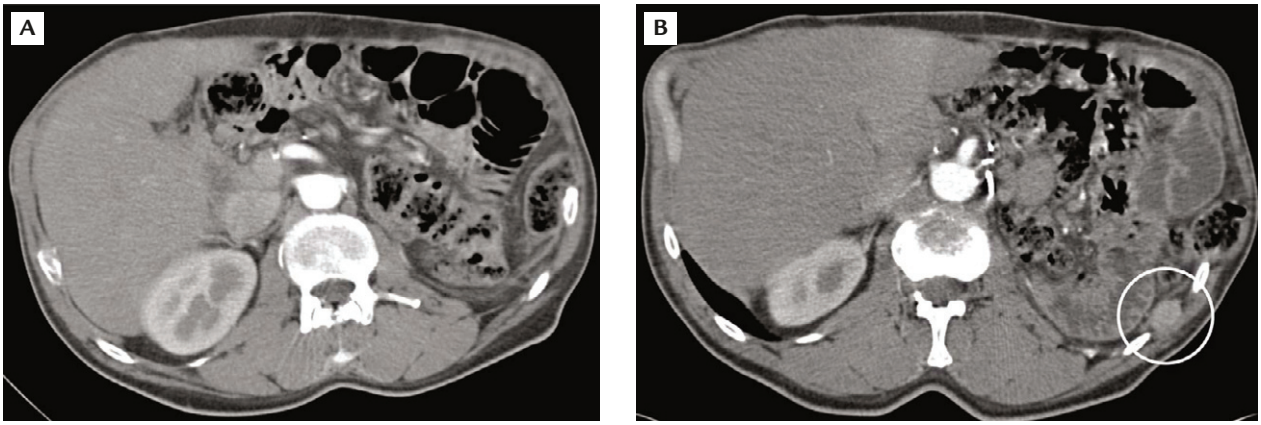

Figure 1. Computed tomography scan showing the initial regular follow-up at 12 months (left) and 20 months (right) with the newly diagnosed solid tumor-suspicious mass in the left retroperitoneum (white circle).

7 days after the operation. Histological examination of the specimen revealed splenic tissue without any tumourous aspect of the RCC. It was therefore interpreted as an accessory spleen that became reactively hypertrophic as a consequence of the splenectomy that had been performed 20 months before. At 48-month follow-up, the patient showed no signs of tumour recurrence.

Discussion

The pancreas is a frequent site for RCC metastases, especially of the left kidney. These metastases can be treated with a curative approach by distal or total pancreatectomy, with good long-term results.[1] Usually, total splenectomy is performed together with distal pancreatectomy for oncological indications.[2] Although the spleen does not have an immunological function in elderly patients, reactive hypertrophy of an initially unrecognized accessory spleen has been described in haematological patients with thrombotic or immune thrombocytopenic purpura after splenectomy. In these patients, occurrence of an accessory spleen can cause relapse of the disease,[4,5] which requires removal of the accessory organ. The existence of an accessory spleen is a relatively common congenital finding that is seen in 10–30% of patients at autopsy.[6] Accessory spleens are mainly located within the hilar region of the spleen, along the splenic artery, inside the pancreas or the omentum, and are usually asymptomatic unless underlying haematological diseases with reactive hypersplenism are present. Enlargement, and therefore visibility of accessory spleens after splenectomy, which imitate neoplastic lesions, as observed in our patient, can occur in the region of the removed spleen, the liver or the adrenal gland.[6] This is understood as reactive hypertrophy of congenitally dislocated tissue, but its mechanisms remain unclear.

In the present case, no evidence of an accessory spleen was visible at the time of pancreatic resection for the RCC metastases, nor in follow-up imaging. Therefore, the newly diagnosed mass in the left retroperitoneal space was primarily suspected as tumour recurrence. This diagnosis was found by CT imaging (Figure 1). Contrast-enhanced CT has a sensitivity of 39–100% to detect solid intra-abdominal and retroperitoneal lesions or liver metastases.[7] With regard to the present case, it needs to be considered that RCC metastases and accessory spleens show early arterial phase enhancement of contrast medium, which makes differentiation between both entities difficult.[8,9] Magnetic resonance imaging as an equivalent imaging tool can also be recommended for tumour follow-up examination, but it is not available everywhere and is more expensive than standard CT.[3] To improve diagnostic accuracy, radionuclide imaging has been introduced into the clinical routine.[7,9] In case of suspected accessory splenic tissue, Technetium-99m heat-damaged red blood cell scintigraphy with single positron emission computed tomography/CT is the gold standard.[10] This tool should be considered in the diagnostic work-up whenever the possibility of an accessory spleen is taken into account. In the case presented here, no additional investigations were performed, because the diagnosis of tumour recurrence seemed reasonable due to localization and phase-specific contrast enhancement.

In conclusion, our case demonstrates the difficulties that can arise from newly occurring solid masses during tumour follow-up examinations. No diagnostic tool can definitely differentiate tumour recurrence or metastases

from other processes, for example, an accessory spleen. Radionuclide imaging can clarify lesions that are undefined by conventional cross-sectional imaging. In the case of a newly occurring intra-abdominal mass after splenectomy, an accessory spleen should be considered when evaluating reoperation.

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