

# Late Pancreatic Metastasis from Renal Cell Carcinoma

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Received April 9 1996; accepted August 22 1996

**Summary.** Metastasis from renal cell carcinoma may develop in many organs, although the pancreas is reportedly one of the least common metastatic sites. We encountered a patient with this rare metastasis who underwent distal pancreatectomy and splenectomy. Careful, long-term follow-up of patients with renal cell carcinoma is essential in the detection of such lesions.

**Key words**—pancreatic tumor, metastasis, renal cell carcinoma.

## INTRODUCTION

Pancreatic metastasis from renal cell carcinoma is rare.<sup>1)</sup> Recent improvements in diagnostic techniques have resulted in an increased number of reported cases.<sup>2-5)</sup> However, few of these cases have involved asymptomatic patients with resectable lesions.<sup>2)</sup> We recently encountered an asymptomatic patient who had undergone right radical nephrectomy 15 years previously, and now required distal pancreatectomy and splenectomy for pancreatic metastasis of renal cell carcinoma diagnosed on follow-up abdominal ultrasonography.

## CASE REPORT

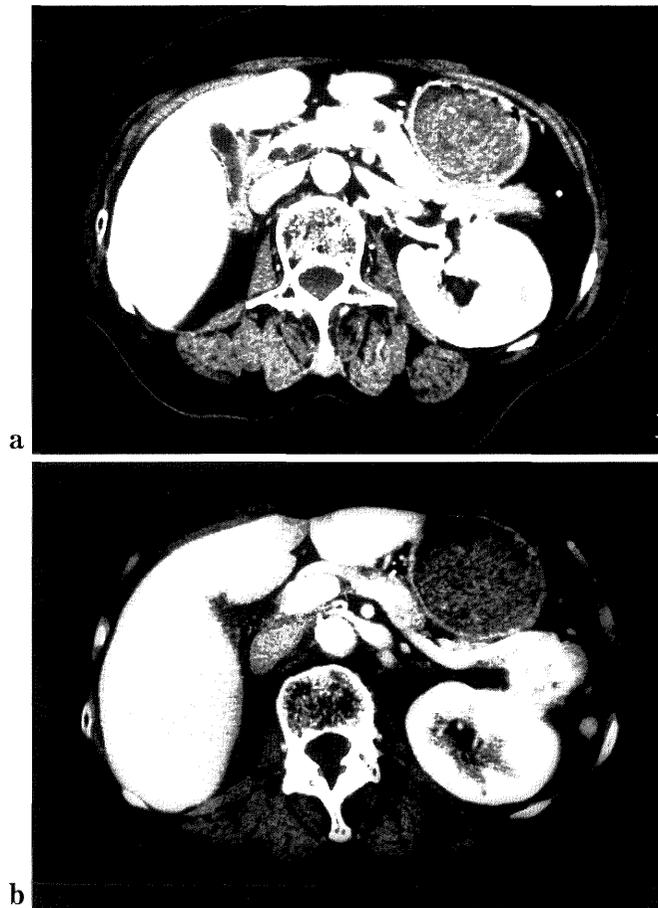
A 56-year-old woman was admitted for treatment of a right renal cell carcinoma in June 1979. A right radical nephrectomy was performed in July 1979 for a 2.5-cm clear cell carcinoma without nodal or venous extension. The patient did not receive adjunctive therapy, although periodic follow-up was attempted. In June 1994, although the patient was free of symp-

toms, examinations revealed 2.0-cm and 3.9-cm hypoechoic lesions in the pancreatic body and tail, respectively. On computed tomography (CT), the tumor located in the pancreas head appeared hypodense compared with the surrounding pancreatic parenchyma, and that in the tail was homogeneously enhanced by a contrast medium (Fig. 1a, b). Angiography revealed hypervascularity and pooling of the contrast medium in the body and tail of the pancreas. However, there was no evidence of a tumor in the left kidney, or of other metastatic lesions (e.g., lung, bone, lymph nodes, skin, liver, etc.). The serum concentrations of tumor markers (carcinoembryonic antigen, carbohydrate antigen 19-9) and pancreatic hormones (glucagon, gastrin, and insulin) were within normal limits. Therefore, either metastatic tumors or non-functional endocrine tumors of the pancreas were suspected, and the patient underwent distal pancreatectomy and splenectomy in September 1994. The tumor resected from the pancreatic body measured 2.0 × 1.3 cm, and that from the tail was 3.2 × 2.0 cm. Histological examination of the specimens (Fig. 2) revealed the same findings as in the right renal cell carcinoma resected in 1979. Specimens were stained with the periodic acid Schiff reaction (PAS), but not with Grimelius, PAS with diastase digestion (d-PAS) or chromogranin. The patient is presently doing well 22 months postoperatively and visits our hospital regularly for follow-up care.

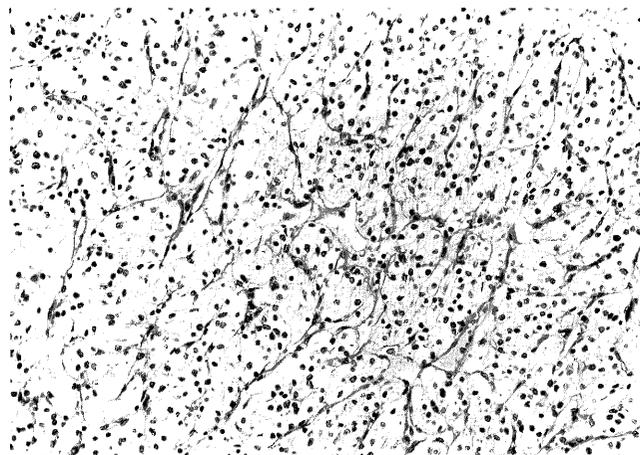
## DISCUSSION

As a result of the findings with special stains, these pancreatic tumors were diagnosed not as non-functional endocrine tumors but as metastases from renal cell carcinoma, which is known to metastasize to many organs. Common metastatic sites include the lung, bone, lymph nodes, skin and liver.<sup>1)</sup> The pan-

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**Fig. 1. a.** Computed tomography (CT) showing a hypodense mass at the body of the pancreas. **b.** the pancreas tail tumor is homogeneously enhanced by a contrast medium.



**Fig. 2.** Histological findings on resected pancreatic tumor show renal cell carcinoma, common type, clear cell subtype. (H & E,  $\times 70$ ).

creas is reportedly one of the least common metastatic sites.<sup>2-5)</sup> In the literature, the interval between the diagnosis of a kidney tumor and that of pancreatic metastasis ranged up to 21 years.<sup>5)</sup> The reason for the late presentation of pancreatic metastases has not been clarified. From the viewpoint of the "seed and soil" hypothesis, the pancreas may be a less favorable environment than other organs for the expression of tumorigenicity of renal cell carcinoma cells. Therefore, careful long-term follow-up of patients with renal cell carcinoma is essential for detecting such lesions.

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