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Late Local and Pulmonary Recurrence of Renal Cell Carcinoma

Key Words

Renal cell carcinoma

Lung metastases

Local recurrence, late

Abstract

Locally recurrent renal cell carcinoma and multiple pulmonary metastases were successfully resected in a patient 20 years after nephrectomy.

Introduction

The history of renal cell carcinoma is more unpredictable than that of most other malignancies [1]. Patients once treated for renal cell carcinoma should never be considered cured [1–4]. Life-long follow-up has even been suggested [3]. Late tumor recurrence is reported to occur in about 11% of the 10-year survivors [2]. In single cases, late recurrences were observed even decades after nephrectomy [2, 5, 6]. The longest reported interval between nephrectomy and local recurrence is 45 years [6]. Herein we report a case with successful surgical treatment of multiple lung metastases (9 and 20 years after nephrectomy) and resection of locally recurrent tumor (20 years after nephrectomy).

Case Report

A 48-year-old patient had a left radical nephrectomy with adjuvant local radiotherapy for a well-differentiated renal cell carcinoma, 6 cm in diameter, in 1976. After a 9-year interval free of disease 4 metastases in the left lung were diagnosed and completely removed. After a further 10-year period local recurrence and one left-sided lung metastasis were found on the occasion of a follow-up computed

tomography (CT). One year later these lesions were unchanged, furthermore one spherical lesion in the right lung was disclosed. After a negatively evaluated bone scan in late June 1996, left thoracotomy with resection of 4 pulmonary metastases was performed elsewhere. The retroperitoneal mass was explored and excision biopsy was performed through another interspace approach under the same anesthesia. Pathohistological examination of the specimen revealed renal cell carcinoma of clear cell type. The patient was admitted to our institution in early August 1996. Ultrasound showed an echo-inhomogeneous mass of 5 × 7 cm occupying the left renal fossa. CT scans of the thorax and abdomen yielded the suspicion of infiltration of the stomach and spleen by the tumor. Besides 2 right-sided lung metastases were suspected (fig. 1). Gastroduodenoscopy excluded involvement of the neighboring organs. Magnetic resonance imaging demonstrated a thin layer of fat between the tumor and the stomach and spleen (fig. 2). In mid August 1996 transperitoneal exploration and resection of the locally recurrent neoplasm including adrenalectomy and splenectomy were performed. Pathohistological examination revealed a moderately differentiated renal cell carcinoma of clear cell type with focal infiltration of the adrenal gland (fig. 3). Surgical margins were negatively evaluated. Recovery was uneventful. The planned surgical removal of the two spherical lesions in the right lung was refused by the patient. Nevertheless, after a 18-month follow-up there was no evidence of pulmonary tumor progression or local recurrence and the patient, now aged 70 years, is in excellent physical status.

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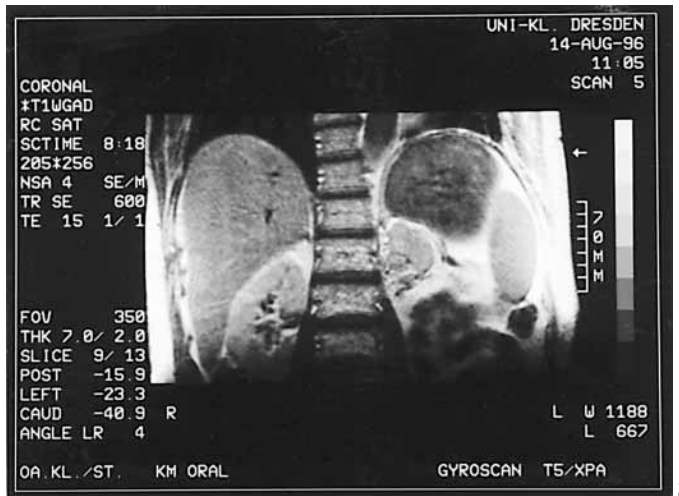
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2a

Fig. 1. Two small suspicious spherical lesions in the right lung demonstrated by axial CT scan.

Fig. 2. The inhomogeneous mass occupying the left renal fossa (a, axial CT scan) was separated from neighbor organs by a thin layer of fat (b, coronal T1-weighted MRI).



2b

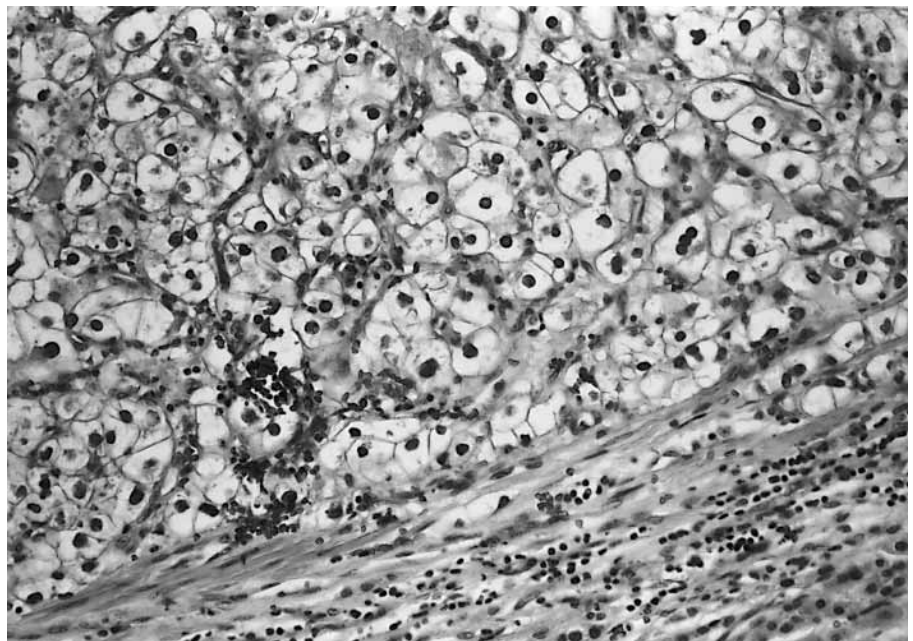


Fig. 3. Locally recurrent renal cell carcinoma invading the adrenal gland. Original magnification $\times 500$.

Discussion

Renal fossa relapses of not primarily metastasized renal cell carcinoma will occur in about 1% of the cases [7]. Unrecognized intraoperative tumor cell spillage is thought to be an etiologic possibility [3, 4]. Microscopic lymphangous spread or involvement of the primarily spared adrenal gland are also imaginable [8, 9].

The present case is further remarkable regarding the long recurrence-free survival after the first resection of multiple lung metastases. Though late metastases are prognostically less unfavorable than early dissemination,

their occurrence is often combined with rapid progression of disease [1, 2, 10]. Considering the lack of efficient therapeutic alternatives and the unpredictable individual development of disease, aggressive surgical treatment of late recurrences of renal cell carcinoma should be attempted [8, 11]. Patients once treated for late recurrent renal cell carcinoma should certainly undergo close and possibly life-long follow-up. However, considering the large number of patients treated for localized renal cell carcinoma and the absence of curative therapy in most cases of relapsing tumor, general long-term surveillance will hardly be practicable.

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