

NATURAL HISTORY OF RENAL CELL CARCINOMA

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With ultrasound or computerized tomography (CT) renal cell carcinoma can be detected at an early stage. Therefore, symptoms such as gross hematuria, flank pain and inflammation are rarely present at diagnosis. We report on a patient with renal cell carcinoma who refused treatment for 10 years and document the slow growth of the tumor during that time.

CASE REPORT

A 65-year-old man was referred to us in March 2000 with a kidney tumor, which had been diagnosed elsewhere 10 years earlier. In 1985 he had undergone extracorporeal shock wave lithotripsy on the left kidney for a renal stone. Abdominal ultrasound followup was performed every 2 to 3 years.

In February and October 1989 ultrasound revealed a 3 cm. cystic mass in the lower pole of the left kidney, formerly detected as a simple cyst that presented as a hyperechoic thick wall. The patient refused CT or further investigations. In February 1991 a 3.8 cm. solid lesion with an internal cystic component in the lower pole of the left kidney was demonstrated on ultrasound (fig. 1, A). Surgery was recommended to remove the mass but the patient persistently refused. In March 1993 the tumor was 4.4 cm. on ultrasound (fig. 1, B). The patient again declined surgery. In June 1998 the tumor was 5.5 cm. on ultrasound

In March 2000 the patient was admitted to the hospital with gross hematuria, left flank pain and left flank swelling, and underwent surgery to remove the tumor. The tumor was 6 cm. on ultrasound and 8 cm. on CT. We performed radical nephrectomy with an extraperitoneal approach. On pathological examination the 9 × 7 × 6 cm. tumor was pT3a (Fuhrman 4) clear cell carcinoma. At 6-month followup the patient was well and had no local or systemic recurrence on ultrasound.

DISCUSSION

With the development of new imaging techniques, such as ultrasound and CT, we can detect renal cell carcinoma early. Therefore, symptoms such as gross hematuria, flank pain and swelling are rarely present at the time of diagnosis. Furthermore, many tumors of the kidney are detected as incidental findings for extrarenal symptoms.

Patients who are elderly, and have co-morbid conditions, a solitary or damaged contralateral kidney or bilateral tumors are not candidates for surgery for renal cell carcinoma. Therefore, they can only be treated with renal embolization, radiotherapy or chemotherapy. In the literature tumor progression under adjuvant and neoadjuvant therapy for a few years or in untreated elderly patients has been reported.¹

Our patient was a young, otherwise healthy man without any reason to refuse radical nephrectomy. Nevertheless, he declined any treatment. The growth time of the tumor was 2.4 mm. during 9 years (fig. 2). It is likely that the complex

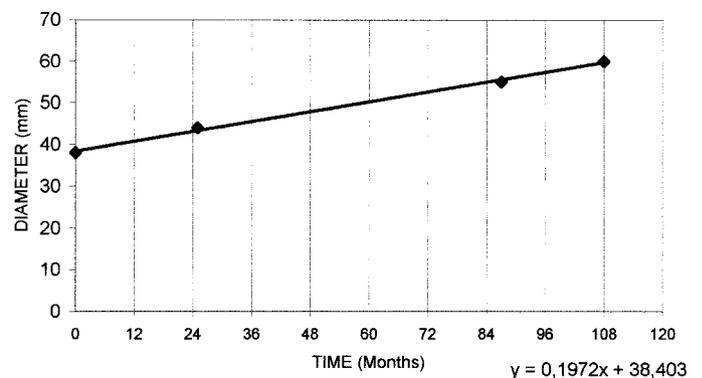


FIG. 2. Tumor growth from diagnosis (February 1991) to surgery (March 2000).

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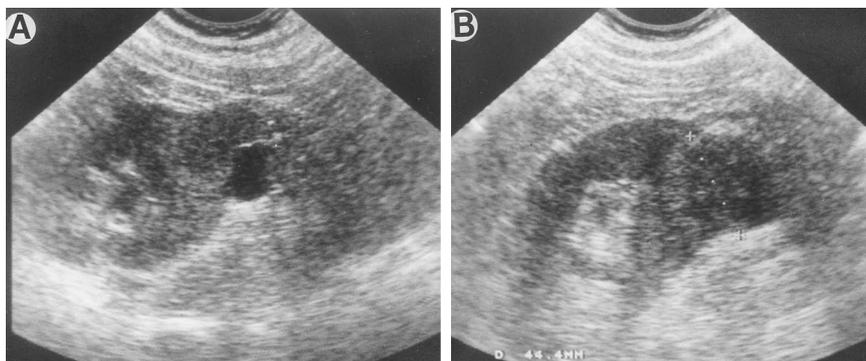


FIG. 1. Ultrasound. A, 3.8 cm. solid lesion with internal cystic component in lower pole of left kidney in February 1991. B, 4.4 cm. tumor in March 1993.

cyst (Bosniak² class 3) shown on ultrasound in 1989 was a cystic neoplasm, which originated from the wall of a simple cyst, as described in the literature.³ The slow progression of this carcinoma allowed the patient to live for 10 years without any systemic or renal symptoms. Our case demonstrates that a diagnosis of renal cell carcinoma based on gross hematuria, flank pain or swelling implies a long asymptomatic history of slow, progressive tumor growth.

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