Case Report

Brazilian Journal of Urology
Official Journal of the Brazilian Society of Urology

Vol. 27 (1): 50-51, January - February, 2001

SYNCHRONOUS CONTRALATERAL ADRENAL METASTASES FROM RENAL CELL CARCINOMA

SLAWOMIR DUTKIEWICZ, ROBERT JAREMA, ALOJZY WITESKA

Department of Urology, Central Clinic Hospital Ministry of Internal Affairs, Warsaw, Poland

ABSTRACT

A case of a 59 year-old Caucasian male with rare synchronous contralateral adrenal metastases from primary left renal cell carcinoma is presented. The patient had left nephrectomy and right adrenalectomy. After a follow-up period of 36 months, the outcome is satisfactory.

Key words: kidney neoplasms; renal cell; carcinoma; metastasis; adrenal metastasis; synchronous metastasis
Braz J Urol, 27: 50-51, 2001

INTRODUCTION

Renal cell carcinoma (RCC) is usually single unilateral exophytic and transgresses the renal capsule. The common sites for metastases of RCC are the lungs, liver, bones and lymph nodes. The incidence of ipsilateral metastases from RCC is diagnosed in 4.7-10.0% of patients but solitary contralateral adrenal metastases are very uncommon and may be detected before, simultaneously or after the primary renal tumor. Only a few synchronous and metachronous contralateral adrenal metastases have been reported (1-3).

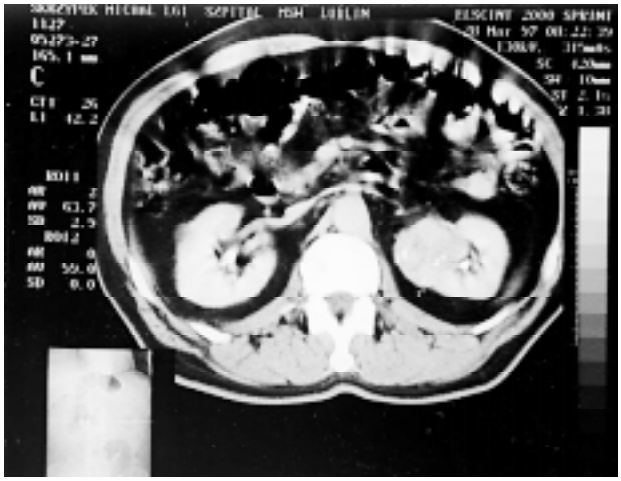

***Figure 1** - Computerized tomography shows a left kidney tumor.*

CASE REPORT

A 59 year-old Caucasian male was admitted from Internal Clinic, where he had been submitted to a diagnostic procedure for high blood pressure. Computerized tomography (CT) showed a nonhomogenous 2 x 2 cm solid mass in the left hilum to upper pole kidney region (Figure-1). The right kidney and left adrenal gland appeared normal. The right adrenal gland was occupied by a tumor 3.0 cm in diameter (Figure-2). Serum concentrations of urea, cortisol, alkaline phosphatase, and creatinine were within normal limits.

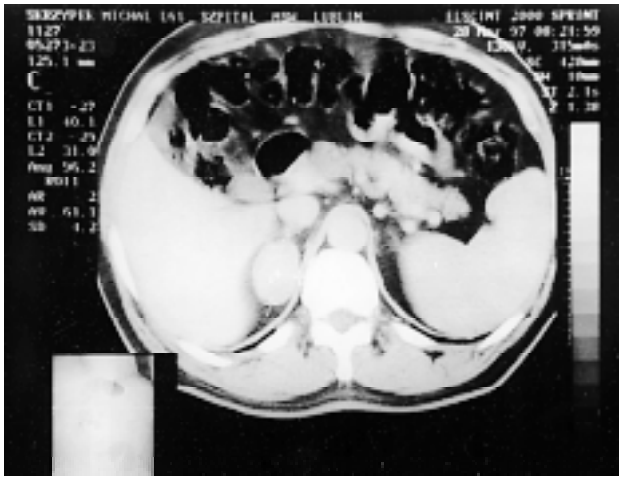

***Figure 2** - Computerized tomography shows right adrenal gland tumor.*

Metastatic work-up including chest CT and bone scan were normal.

A transperitoneal left radical nephrectomy (without left adrenalectomy) was performed together with right adrenalectomy. The excised left kidney weighed 190g and measured 11 x 6.5 x 5 cm. Cut section showed the hilar region and the upper pole was occupied by a tumor 2.0 cm in diameter invading the pelvis. Microscopic examination revealed a clarocellulare adenocarcinoma (G2). The hilar and retroperitoneal nodes were free from metastasis. The right adrenal gland was 80g in weight and 6.5 cm in diameter. On cut section tumorous tissue 3.0 cm in diameter was similar microscopically to that found in the left kidney (clarocellulare adenocarcinoma), G2. Immunostaining for epithelial membrane antigen was positive in both primary and metastatic tumor.

The postoperative course was uneventful, and 36 months after surgery the patient has shown no evidence of disease.

DISCUSSION

A review of the literature reveals that adrenal metastases with primary renal cell tumors in the left kidney predominate in most studies. There is also a higher incidence of upper-pole primary renal tumors then either midrenal or lower-pole renal tumors in patients with adrenal metastases. Adrenal metastases are found with primary renal tumors as small as 1.5 to 3.0 cm. If the patient has a contralateral adrenal metastasis (or bilateral) the pathologic staging should be M1 (1). Patient with RCC and single contralateral adrenal metastasis should be considered as having a solitary metastasis. These patients should undergo radical nephrectomy, ipsilateral adrenal exploration, and contralateral adrenalectomy as long as the remainder of the metastatic screening is negative. The ipsilateral adrenal gland should be removed if there is suspicion of metastasis (1).

In the presented patient preoperative distinction between primary and secondary adrenal tumors was difficult. The adrenal gland may harbor metastases from various other primary tumors (e.g. the breast, thyroid or lungs). In addition, metastatic RCC in the adrenal must be differentiated from adrenal cortical carcinoma. Immunohistochemical staining for epithelial membrane antigen has been reported to be positive in RCC and negative in adrenal tumors.

Removal of solitary metastases from renal cell carcinoma has been reported with therapeutic success and prolonged survival (2,3). The present patient has no evidence of metastatic disease (on chest x-ray, CT, bone scan, and laboratory studies) and demonstrates good healthy 3 years after aggressive surgical treatment.

REFERENCES

1. Sandock DS, Seftel AD, Resnick MJ: Adrenal metastases from renal cell carcinoma: role of ipsilateral adrenalectomy and definition of stage. Urology, 49: 28-31, 1997.
2. Huisman TK, Sands JP: Renal cell carcinoma with solitary metachronous contralateral adrenal metastasis: experience with 2 cases and review of the literature. Urology, 38: 364-368, 1991.
3. Lemmers M, Ward K, Hatch T, Stenzel P: Renal adenocarcinoma with solitary metastasis to the contralateral adrenal gland: report of two cases and review of the literature. J Urol, 141: 1177-1180, 1989.

Received: June 13, 2000
Accepted after revision: November 13, 2000

Correspondence address:
Dr. Slawomir Dutkiewicz
Lachmana 2 app. 56
02-786 Warsaw, Poland
Fax: + + (601) 328 407