Multicentricity in Renal Cell Carcinoma

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Objective: To find the incidence of multicentric renal cell carcinoma and its possible relationship to the other clinical and pathologic findings.

Methods: A total of 40 patients with renal cell carcinoma underwent radical nephrectomy between March 1994 and January 1996 at Hacettepe University, School of Medicine, Department of Urology. All of the materials were examined grossly and histologically by the same pathologist.

Results: Among 40 kidneys 4 had satellite carcinoma (10%), 3 of them had been shown by preoperative imaging techniques, 1 was found histopathologically.

Conclusion: If preoperative imaging techniques do not show additional lesion in the kidney besides the small early stage primary in incidentally discovered patients, the incidence of satellite renal cell carcinoma is low enough to justify nephron sparing surgery.

Introduction

Although radical nephrectomy is the standard procedure for patients with renal cell carcinoma, nephron-sparing surgery is indicated when preservation of functioning renal parenchyma is important. The exact role of nephron-sparing surgery for renal cell carcinoma is still evolving, and its use in patients with unilateral renal cell carcinoma with a normal contralateral kidney is controversial. This issue has become more important since the wide-spread use of ultrasonography and computerized tomography (CT) which has increased the number of incidentally detected renal cell carcinoma. The majority of these incidental cancers are small and of low pathological stage, furthermore ages of these patients were lower than in the symptomatic group and had longer life expectancy [1, 2, 3]. Local recurrences after nephron-sparing surgery for renal cell carcinoma have been the main concern and may be attributed to either new neoplastic growth or undetected multicentric renal cell carcinoma at the time of surgery. We studied 40 consecutive radical nephrectomy material in an effort to find the incidence of multicentric renal cell carcinoma and its possible relationship to the other clinical and pathological findings.
Materials and methods

Between March 1994 and January 1996 ten females and thirty males, a total of 40 patients with renal cell carcinoma, underwent radical nephrectomy at Hacettepe University, School of Medicine, Department of Urology. Mean age of patients was 57 years (30–84). In 6 (15%) patients the tumours were detected incidentally. The remaining 34 patients' tumours were diagnosed according to the symptoms such as flank or back pain, abdominal pain, haematuria or weight loss. There were no bilateral or familial cases or cases with acquired renal cystic disease. The kidneys were examined for satellite nodules and malignant focuses other than those radiologically diagnosed. Ultrasonography and CT were done preoperatively in all cases. After removing the primary tumour the cortical surface of the kidney was carefully examined for any lesion or irregularities and then the kidney was step-sectioned at 3 mm intervals. All abnormalities were removed, stained with haematoxylin and eosin and examined histologically by the study pathologist (Cl).

Results

Mean tumour diameter was 7.7 cm (range 2.5–15 cm). Among 40 kidneys, 4 had satellite carcinomas (10%). Two of them were located subcapsularly and 2 were intraparenchymal lesions (Figs 1 and 2). Of these 3 had an additional nodule along with the main renal lesion on preoperative CT. In another