CHANGING TREATMENT FOR LOCALIZED RENAL CELL CARCINOMA

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The incidence of renal cell carcinoma is rising. Moreover, with the widespread use of abdominal imaging more stage one (less than 7 cm) small, localized lesions are being identified. Thus, the classical approach for radical nephrectomy is being challenged.

It is now established that partial nephrectomy is the treatment of choice for superficial renal lesions less than 4 cm in size (Uzzo R, J Urol 166 : 6, 2001). Partial nephrectomy is more precise with the use of preoperative spiral CT scans, intra-operative ultrasound and immediate pathologic evaluation. Evolution of laparoscopic techniques including the hand-assist, the Argon beam, the ultrasonic scalpel, fibrin glue and robotics now require that all cases be considered for laparoscopic partial nephrectomy.

The next evolution in treatment is the development of techniques to destroy small renal tumors without partial nephrectomy. Thus, both cryoablation and radio frequency ablation are under study (see Investigative Urology Section, J Urol 166 : 1, 2001). These techniques have been used clinically either as the sole treatment or during both laparoscopic and open partial nephrectomy. Margins appear adequate and short-term follow-up does not show increased incidence of recurrence.

The next evolutionary step is radio frequency or cryoablation under magnetic resonance guidance. This technique has been reported and early results are favorable. Thus, in the future any operative intervention may be avoided if the lesions are less than 3 cm. Finally, high frequency focused ultrasound may be modified to allow the treatment of renal lesions.

An additional dimension to the management of patients with small lesions is simply watchful waiting. Unfortunately, some tumors enlarge and others do not. At the present time we cannot differentiate between the two groups. Recent reclassifications of the types of renal cell carcinoma have shown that chromophbic tumors have a good prognosis similar to oncotomas. Thus, in the future, with either monoclonal imaging or possibly biopsy and molecular analysis, we will be able to predict which masses will behave in an indolent fashion and therefore not require therapy.

Taken altogether, major advances are occurring in the management of patients with renal tumors, markedly reducing morbidity to our patients.