

RT (EBRT), one intensity-modulated RT, and one received brachytherapy with an EBRT boost. All patients had prostate cancer on biopsy after RT, with negative computed tomography and bone scan. The mean (range) follow-up was 20.5 (1-77) months.

Results: The mean interval from RT to SRARP was 53.2 months; the mean preoperative prostate-specific antigen (PSA) level was 5.2 ng/mL, the operative duration 183 min and the estimated blood loss 113 mL. One patient had prolonged lymphatic drainage, one had an anastomotic leak, and one had an anastomotic stricture requiring direct vision internal urethrotomy at 3 months. The mean duration of catheterization was 10.4 days and the hospital stay 1.4 days. Three patients had a biochemical recurrence, at 1, 2 and 43 months. In one of two patients with node-positive carcinoma of the prostate the PSA level failed to reach a nadir of zero after surgery. In patients with a minimum follow-up of 2 months, eight of 10 are continent (defined as zero to one pad per day) and two have erections adequate for intercourse with the use of phosphodiesterase-5 inhibitors.

Conclusion: SRARP after RT-resistant disease recurrence is feasible with minimal perioperative morbidity. Early functional outcomes appear to be at least equivalent with historical salvage RP series. Robotic extended pelvic lymph node dissection is safe and can improve the accuracy of surgical staging. A longer follow-up is necessary to better assess the functional and oncological outcomes.

Editorial Comment

The authors described their experience performing robotic-assisted radical prostatectomy (SRARP) after recurrence following primary radiotherapy (RT) for localized prostate cancer. Traditionally, open series have demonstrated the difficulties of the technique and the serious complications that may occur. The mean interval from Radiation therapy (RT) to SRARP was 53.2 months; the mean preoperative prostate-specific antigen (PSA) level was 5.2 ng/mL, the operative duration 183 min and the estimated blood loss 113 mL. Surprisingly, in patients with a minimum follow-up of 2 months, eight of 10 are continent (defined as zero to one pad per day) and two have erections adequate for intercourse with the use of phosphodiesterase-5 inhibitors. Ultimately, the surgical experience will dictate the complication rates and outcomes of patients. There is no doubt that longer and larger series will dissect the use of robotic surgery in the surgical management of RT resistant prostate cancer patients.

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IMAGING

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Segmental enhancement inversion at biphasic multidetector CT: characteristic finding of small renal oncocytoma

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Purpose: To retrospectively determine the usefulness of segmental enhancement inversion during the cortico-medullary phase (CMP) and early excretory phase (EEP) of biphasic multidetector computed tomography (CT) in differentiating small renal oncocytoma from renal cell carcinoma (RCC).

Materials and Methods: This retrospective study was institutional review board approved; informed consent was waived. Between January 2004 and December 2006, 98 patients with pathologically confirmed renal masses smaller than 4 cm (10 renal oncocytomas and 88 RCCs) were included in this study. Segmental enhancement inversion was defined as follows: In a mass with two segments showing different degrees of enhancement during CMP, the relatively highly enhanced segment became less enhanced during EEP, whereas the less-enhanced segment during CMP became highly enhanced during EEP. Two experienced radiologists retrospectively assessed the presence of segmental inversion in all masses and measured attenuation with consensus. The Fisher exact test was used to determine the significance of segmental enhancement inversion in differentiating small renal oncocytoma from RCC.

Results: Eight of 10 renal oncocytomas and only one of 88 RCCs showed segmental inversion during CMP and EEP, which significantly differentiated small renal oncocytomas and RCCs ($P < .0001$). For differentiating oncocytoma from RCC, segmental inversion was found to have a sensitivity of 80% (eight of 10), a specificity of 99% (87 of 88), a positive predictive value of 89% (eight of nine), and a negative predictive value of 98% (87 of 89). The mean values of the attenuation differences shown by two segments during CMP and EEP were 62.75 HU +/- 36.96 (standard deviation) and -36.88 HU +/- 20.02, respectively.

Conclusion: Segmental enhancement inversion during CMP and EEP was found to be a characteristic enhancement pattern of small renal oncocytoma at biphasic multidetector CT and it may help in differentiating small oncocytoma from RCC.

Editorial Comment

The authors described an interesting imaging feature that might be useful as an adjunct finding for adequate characterization of small oncocytomas. Small oncocytomas are usually homogeneously hyperdense solid lesion on unenhanced phase, presenting moderate to high contrast enhancement. These features however are not specific since can also be found in chromophobic renal cell carcinoma and angiomyolipoma without macroscopic fat. The authors showed that the presence of segmental enhancement inversion within a small renal mass has a specificity of 99% and a sensitivity of 80% for adequate characterization of oncocytoma. In their protocol however, all patients were submitted to three-phasic multidetector CT examination: unenhanced, cortico-medullary (30-40") and excretory (120-180"). As we know to optimize detection and characterization, renal masses are best examined during nephrographic phase that occurs 80-100" after intravenous injection of contrast. It is obvious that one could simply add the nephrographic phase to the proposed protocol. However, adding an extra phase must be a matter of concern since we will be increasing 4 to 5 mSv to the total amount of effective dose of irradiation to the patient. Perhaps it would be advisable to obtain additional CMP only in patients in whom unenhanced scans showed the presence of a small homogeneously hyperdense renal mass. Further studies with multiphasic CT are warranted to confirm these findings. In our institution after knowledge of this publication, a dedicated protocol with multiphasic contrast enhanced MRI, was initiated with the purpose to confirm these findings using a method without radiation risk.

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