Results: Logistic regression demonstrated that body mass index, large prostate size and previous pelvic surgery did not affect margin status. The Kruskal-Wallis test was performed to analyze if body mass index, large prostate size and previous pelvic surgery had an effect on perioperative variables. Only prostate weight correlated with a delay in Foley catheter removal (3 days, p = 0.0005). The Wilcoxon rank sum test showed that patients with a higher body mass index had a slightly prolonged hospital stay (16 hours, p = 0.02). Patients with a prostate of more than 40 gm had slightly increased blood loss (56 cc, p = 0.03), which did not affect the transfusion rate.

Conclusions: Laparoscopic extraperitoneal radical prostatectomy can be performed in complex surgical cases without increased perioperative morbidity. Obese patients and those with a large prostate who prefer surgery as a treatment option for localized prostate cancer may benefit from the advantages that laparoscopic extraperitoneal radical prostatectomy offers.

Editorial Comment
The new era of minimally invasive surgery demonstrates the feasibility of laparoscopic retropubic radical prostatectomy in patients with high body mass index, previous pelvic surgery or large prostate size. In general surgery laparoscopic procedures are highly encouraged for patients that are more complex due to better outcomes compared to open surgery. In urology, we are still taken “baby steps” demonstrating slowly the advances in minimally invasive surgery. The authors should be congratulated for the elegant manuscript demonstrating the feasibility and good outcome of laparoscopic surgery in complex surgical patients.

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IMAGING

Diagnostic Yield of 58 Consecutive Imaging-Guided Biopsies of Solid Renal Masses: Should We Biopsy All That Are Indeterminate?
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Objective: The purpose of our study was to report the diagnostic yield of 58 consecutive imaging-guided biopsies of solid renal masses.
Materials and Methods: We retrospectively reviewed all percutaneous renal biopsies of solid masses performed at our institution over 83 consecutive months from May 1998 to March 2005 through a query of our radiology department procedure database. Fifty-five CT and three sonographic biopsies were performed at our institution during this time. A solid renal mass was documented prior to biopsy by contrast-enhanced CT (n = 48), gadolinium-enhanced MRI (n = 6), or sonography (solid noncystic masses, n = 4). The average maximal mass diameter was 3.1 cm (range, 1.0-11.0 cm). Forty-seven (81%) of the 58 biopsies were performed
immediately before percutaneous ablation. Forty-four (76%) of the biopsies were performed using a coaxial technique with side-cutting automated biopsy needles (16-20 gauge), and 14 (24%) were fine-needle aspirations with a Franseen needle (20 gauge) using a tandem technique. In 19 cases, immunohistochemistry or histochemistry (Hale colloidal iron stain) was used to establish or confirm the diagnosis. Medical records and radiology and pathology reports were reviewed for all patients.

Results: An adequate sample size was obtained in 55 (95%) of 58 renal masses and led to a definitive diagnosis in 52 (90%) of the 58. Renal cell carcinoma accounted for 36 (69%) of 52 diagnostic biopsies. The diagnosis of a benign lesion was made in 14 (27%) of 52 biopsies. Lymphoma (1/58) and metastatic disease (1/58) accounted for the remaining two diagnostic biopsies. Three biopsy samples obtained inadequate sample volumes, and an additional three samples were thought to have adequate sample volume but were not diagnostic. A single false-negative biopsy result was identified after growth was seen on follow-up imaging and subsequent nephrectomy revealed renal cell carcinoma.

Conclusion: Imaging-guided biopsy of a solid enhancing renal mass was diagnostic in 52 (90%) of 58 consecutive biopsies. The diagnosis of a benign lesion was made in 27% of diagnostic biopsies. Because of the advances in biopsy and histology techniques, the role of imaging-guided biopsy should be reconsidered.

Editorial Comment

Nowadays percutaneous renal mass biopsy is indicated more frequently due to several reasons: a) increased incidental detection of malignant and benign renal masses; b) improvement on cytologic and immunohistochemistry techniques and c) the increasing role of percutaneous renal ablation. The overall sensitivity of biopsy for diagnosis for malignancy is high ranging from 80%-92%. Classically renal biopsy is indicated in patients with renal mass and primary extrarenal tumor (to exclude or confirm metastases); to confirm the radiologic findings of an unresectable renal cancer; in patients with pulmonary or cardiac comorbidity and in patients with possible primary manifestation of lymphoma in the kidneys (1). Emerging indications for renal biopsy are: presence of multiple/bilateral solid renal masses without history of cancer; prior to renal mass ablation and in patients with small (< 3 cm) solid, hyperattenuating, homogeneously enhancing renal mass. These small lesions are indistinct and may be oncocitoma, angiomylipoma without macroscopic fat (5% of AMLs) or more rarely a papillary renal cell carcinoma. As we know, modern diagnostic imaging techniques, allows the correct diagnosis of the majority of renal mass. There is no prospective study showing the incidence of incidentally detected benign renal mass among the lesions presumably considered renal cancer. Recent studies, however, done in patients who underwent radical nephrectomy or imaging-guided tumor ablation presumably for renal cell carcinoma detected 12.8% to 37% of benign renal lesions. The authors of this study, found benignity in 27% of 58 small solid renal lesions. It would be interesting to know, how many of these lesions were part of that small group of hyperattenuating, homogeneously enhancing renal mass.

As pointed out by the authors one important limitation of this study is that 81% of their biopsies were performed before percutaneous ablation. As we know the ideal evaluation of the biopsy specimens is made by histologic, cytologic and immunohistochemistry evaluation. Biopsy specimens analyzed as frozen sections and hematoxylin-eosin staining, usually done prior ablation, is rapid but usually incomplete. For this reason, to establish a definitive diagnosis immunohistochemical staining was necessary, in 17 (89%) of 19 nondiagnostic samples using hematoxylin-eosin staining. This is very important information of this publication. Biopsy results are crucial in some situations where the urologist has to decide whether the lesion should be removed or clinically followed. We agree with the authors conclusion that there is a definite role for imaging-guided biopsy of small solid renal masses before intervention, particularly those hyperattenuating and homogeneous. In our opinion when surgery is contemplated, and biopsy is not performed, enucleation or partial nephrectomy should be the primary indication in this small group of lesions.
Reference

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Diagnosis of Prostate Cancer in Patients with an Elevated Prostate-Specific Antigen Level: Role of Endorectal MRI and MR Spectroscopic Imaging
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Objective: The objective of our study was to determine the accuracy of endorectal MRI and MR spectroscopic imaging (MRSI) in the diagnosis of prostate cancer in patients with an elevated serum prostate-specific antigen (PSA) level.

Materials and Methods: We retrospectively identified 40 patients with an elevated serum PSA level and without a histologic diagnosis of prostate cancer who underwent endorectal MRI and MRSI at our institution. On the basis of MRI findings alone and then combined MRI and MRSI findings, a single experienced observer rated the presence or absence of prostate cancer in each side of the prostate on a 5-point scale (1 = definitely absent, 5 = definitely present). Areas under the receiver operating characteristic (ROC) curve were calculated using the hemiprostate as the unit of analysis. The presence or absence of cancer on subsequent endorectal sonographically guided sextant biopsy was used as the standard of reference.

Results: Biopsy revealed no cancer in 24 patients, bilateral cancer in 11, and unilateral cancer in five. The areas under the ROC curve for the diagnosis of prostate cancer by hemigland was 0.70 for MRI alone and 0.63 for combined MRI and MRSI (no significant difference, p = 0.32).

Conclusion: Endorectal MRI and MRSI are reasonably accurate for the diagnosis of prostate cancer in patients with an elevated serum PSA level, but the remaining limitations suggest that MRI and MRSI should be used as a supplement rather than a replacement for biopsy using the current technology and diagnostic criteria.

Editorial Comment
The authors present a retrospective study to determine if conventional and 3D-spectroscopic endorectal magnetic resonance imaging (3D-MRSI) techniques are accurate for the diagnosis of prostate cancer in patients with an elevated PSA. They had a 63% accuracy using conventional MRI and 3D-MRSI. Previous study on this subject has demonstrated an accuracy ranging from 67% to 79% (1). One important limitation of this study is related to the fact that the cancer was determined to be present or absent in each hemiprostate on the basis of the presence or absence of an ipsilateral positive biopsy result, on a subsequent endorectal sonographically guided biopsy. These biopsies were performed within 2 years of MRI and MRSI. In other words, the standard sextant sonographically guided biopsy was performed without the knowledge of the results obtained with the MRI and 3D-MRSI and was considered the standard of reference. In our institution the abnormal areas (areas with abnormal voxels), seen on 3D-MRSI are projected on the film containing the conventional axial T2 sequence, and external and internal prostate landmarks obtained from these images are used during transrectal ultrasound examination to adequate biopsy the areas containing the suspicious voxels. As we have already pointed out this process has...
limitation since is not an easy task, but allows an accuracy of 67% in patients with grade 4 (possible cancer) and accuracy of 79% in patients presenting at least one voxel grade 5 (cancer is definite present).

Although the author’s conclusion is that addition of MRSI to MRI alone does not significantly improve the diagnostic accuracy for prostate cancer detection they also concluded that MRI and MRSI might still serve as a useful supplement to endorectal sonographically guided biopsy on an individual basis. A repeat biopsy could target regions that show an abnormality on MRI and MRSI to help improve the diagnostic yield of endorectal sonographically guided biopsy, as we have previously shown.

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UROGENITAL TRAUMA

Nonoperative Management Outcomes of Isolated Urinary Extravasation Following Renal Lacerations Due To External Trauma
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Purpose: Urinary extravasation is a common finding in grade 4 and 5 renal injuries. To date there has been little written about the natural course of urinary extravasation following renal trauma. We reviewed data on the outcomes of urinary extravasation in the traumatized kidney when managed nonoperatively.

Materials and Methods: A retrospective review of the prospectively entered urological trauma database from San Francisco General Hospital was performed from 1979 to 2005. All patients with urinary extravasation after sustaining traumatic injury to the kidney as seen on computerized tomography were included in analysis.

Results: A total of 61 patients with urinary extravasation were identified. Of these patients 27 (44%) were treated operatively (26 of 27 underwent immediate and 1 of 27 underwent delayed open surgery). All (100%) operatively treated patients underwent renal exploration and repair at primary surgical management of associated abdominal and/or vascular injuries. Open surgical exploration resulted in nephrectomy in 5 of 27 (19%) patients. Of the 34 (56%) patients treated nonoperatively only 3 (9%) had persistent, nonprogressing urinary extravasation by computerized tomography 3 to 7 days after injury. All 3 (100%) of these patients underwent uncomplicated endoscopic ureteral stent placement followed by complete resolution of urinary extravasation.

Conclusions: Nonoperative management of urinary extravasation in patients sustaining traumatic injury to the kidney without associated abdominal or vascular injury is safe and results in resolution in more than 90%. In patients with persistent urinary leakage endoscopic ureteral stent placement may be needed and is successful.