Clinicopathological features between patients requiring conversion and those who did not were compared.
Results: We identified 68 patients (3.3%) who underwent conversion to open surgery (group 1) and 2,011 (96.7%) who did not (group 2). The frequency of conversion was greatest during nephroureterectomy (8.49%), followed by simple nephrectomy (5.91%), retroperitoneal lymph node dissection (4.65%), partial nephrectomy (4.32%), radical nephrectomy (2.91%), donor nephrectomy (2.53%) and pyeloplasty (0.33%). The absolute number of conversions and conversions/cases performed per year decreased significantly with time, reaching a nadir of less than 1% per year. Conversion was inversely related to case volume and cumulative experience. Indications included vascular injury in 38.5% of cases, concern with margins in 13.5%, bowel injury in 13.5%, failure to progress in 11.5%, adhesions in 9.6%, diaphragmatic injury in 1.9% and other in 11.5%. The distribution of indications remained similar with time. There were no differences in patient age, gender, surgical history, American Society of Anesthesiologists score or tumor stage between groups 1 and 2. In groups 1 and 2 mean operative time was 304 vs. 219 minutes and estimated blood loss was 904 vs. 255 cc (each $p < 0.0001$).
Conclusions: The rate of conversion during laparoscopic surgery is not uniform across procedures and it is important for patient counseling. The most common indication for conversion is vascular injury. Importantly the frequency of conversion is dynamic and likely related to case volume and cumulative experience.

Editorial Comment

Conversion of laparoscopic to open surgery is not a complication in my view.

The escalation of surgical technique during a difficult case may provide the safe outcome desired for the patient. This large series of laparoscopic cases demonstrate that the vascular injuries are responsible for the majority of the conversions. The longer the clinical experience the rate of conversion tends to decrease even in complex cases. The authors ought to be congratulated to demonstrate that conversion is beneficial for the well being of the patient encouraging novice surgeons to perform it when suited.

Dr. Fernando J. Kim
Chief of Urology, Denver Health Med Ctr
Assistant Professor, Univ Colorado Health Sci Ctr
Denver, Colorado, USA
E-mail: fernando.kim@uchsc.edu

IMAGING

Development of renal scars on CT after abdominal trauma: does grade of injury matter?

Dunfee BL, Lucey BC, Soto JA
Department of Radiology, Division of Body Imaging, Boston University Medical Center, Boston, MA, USA
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Objective: The objective of our study was to determine whether there is an association between the grade of a traumatic renal injury and the subsequent development of renal parenchymal scars on CT.
Materials and Methods: We performed a retrospective study encompassing all acute trauma patients admitted to our institution over a 42-month period found to have renal parenchyma injuries on initial MDCT and also to have undergone a follow-up CT performed at least 1 month after trauma. We identified 54 patients who sustained blunt (n = 44) or penetrating (n = 10) abdominal trauma. The renal injuries were graded by two

radiologists according to the Organ Injury Scaling Committee of the American Association for the Surgery of Trauma (AAST), grades I through V. Follow-up CT was reviewed for the presence of parenchymal distortion, scarring, or perfusion defects.
Results: Of the 54 patients, 12 had grade I injury, eight had grade II injury, 22 had grade III injury, 10 had grade IV injury, and two had grade V injury. Grades I and II traumatic renal injuries were undetectable on follow-up CT. Grade III injuries resulted in the development of renal scars in 14 of 22 (64%) patients. Scarring resulted in all patients with grades IV and V injuries.
Conclusion: Grades I and II renal injuries heal completely, whereas higher grades of renal trauma result in permanent parenchymal scarring. Hence, incidentally discovered renal scars in patients with a history of minor renal trauma should be attributed tentatively to other causes that may or may not require additional investigation.

Editorial Comment

Since the preservation of long-term renal function is often better when renal injuries are treated nonoperatively, in stable patients, conservative management may be preferable even in high-grade injuries. Surgery or interventional radiographic procedures will be used mainly in patients presenting extensive devitalized renal tissue, active hemorrhage, or a large injury to the collecting system with progressive renal compression on follow-up or with ureteral disruption, Overall, with modern management techniques, renal salvage rates approach 85-90%. This report focuses on the follow-up of traumatic blunt or penetrating renal parenchymal damage. The authors used initial and a follow-up CT, which was performed at least 1 month after trauma. The authors concluded that Grades I and II renal injuries heal completely but most of Grade III an all Grades IV and V were associated with variable degree of parenchymal distortion, scarring or perfusion defects. The healing and scar formation were directly correlated with the severity of injury. This is an important observation since areas of parenchymal renal scarring is not an infrequent finding on abdominal CT performed for many other clinical reasons. Radiologist should consider sequelae of high grade renal lesion among the causes of renal scarring such as pyelonephritis, renal emboli and systemic vasculites. We have also to remember that other late complications after renal trauma are hydronephrosis and calculus formation (both secondary to scarring in the region of renal pelvis), arteriovenous fistula (usually after stab wound) and delayed hypertension.

Dr. Adilson Prando
Chief, Department of Radiology and
Diagnostic Imaging, Vera Cruz Hospital
Campinas, São Paulo, Brazil
E-mail: adilson.prando@gmail.com

Prostate cancer: is inapparent tumor at endorectal MR and MR spectroscopic imaging a favorable prognostic finding in patients who select active surveillance?

Cabrera AR, Coakley FV, Westphalen AC, Lu Y, Zhao S, Shinohara K, Carroll PR, Kurhanewicz J
Department of Radiology, University of California, San Francisco, CA, USA
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Purpose: To retrospectively determine whether inapparent tumor at endorectal magnetic resonance (MR) imaging and MR spectroscopic imaging is a favorable prognostic finding in prostate cancer patients who select active surveillance for management.
Materials and Methods: Committee on Human Research approval was obtained and compliance with HIPAA regulations was observed, with waiver of requirement for written consent. Ninety-two men (mean age, 64 years; range, 43-85 years) were retrospectively identified who had biopsy-proved prostate cancer, who had undergone

baseline endorectal MR imaging and MR spectroscopic imaging, and who had selected active surveillance for management. Their mean baseline serum prostate-specific antigen (PSA) level was 5.5 ng/mL, and the median Gleason score was 6. Two readers with 10 and 3 years of experience independently reviewed all MR images and determined whether tumor was apparent on the basis of evaluation of established morphologic and metabolic findings. Another investigator compiled data about baseline clinical stage, biopsy findings, and serum PSA measurements. Multiple logistic regression analysis was used to investigate the relationship between the clinical parameters and tumor apparency at MR imaging and the biochemical outcome.
Results: At baseline MR imaging, readers 1 and 2 considered 54 and 26 patients, respectively, to have inapparent tumor (fair interobserver agreement; kappa = 0.30). During a mean follow-up of 4.8 years, 52 patients had a stable PSA level and 40 had an increasing PSA level. In multivariate analysis, no significant association was found between the baseline clinical stage, Gleason score, serum PSA level, or the presence of apparent tumor at endorectal MR imaging and MR spectroscopic imaging for either reader and the biochemical outcome ($P > .05$ for all).
Conclusion: Endorectal MR imaging and MR spectroscopic imaging findings of tumor apparency or inapparency in prostate cancer patients who select active surveillance for management do not appear to be of prognostic value. (c) RSNA, 2008.

Editorial Comment

Endorectal MR imaging (MRI) and magnetic resonance spectroscopic imaging (MRSI) is emerging as a useful technique for detection and local evaluation of prostate cancer extent and aggressiveness. Combined MRI/MRSI has shown excellent sensitivity and specificity for detecting cancer in the peripheral zone. These techniques are also capable of detecting tumor in the transition zone and may reduce the rate of false-negative biopsies and hence decrease the need for more extensive biopsy protocols and multiple repeat biopsy procedures. The authors of this retrospective study show that tumor apparency or inapparency on MRI/MRSI has no predictive value in the active-surveillance population. In other words, in patients with-low risk prostate cancer, tumor apparency or inapparency on baseline imaging studies are not helpful in predicting disease progression. Patients with negative MRI+MRSI examinations were just as likely to develop an increasing PSA level (progression of disease) as those with radiologically apparent tumors. We agree with the authors' statement that the results of this study do not undermine the role of MRI/MRSI in the evaluation of prostate cancer. In a previous study using extended prostate biopsy (12 cores) as a reference, MRI/MRSI showed a negative predictive value of 100% for the detection of prostate cancer (1). In our small sample, all patients with tumor inapparency on MRI/MRSI had negative extended biopsy. Since published data from the Prostate Cancer Prevention Trial demonstrated that there is no PSA level below which the risk of having prostate cancer is zero, probably the same is happening with currently available armamentarium used to predict its progression. As shown in this study PSA levels and Gleason scores, similar to MRI/MRSI, are of limited value in predicting disease progression. For this purpose, probably we will need a new and more specific biologic marker.

Reference

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Dr. Adilson Prando
Chief, Department of Radiology and
Diagnostic Imaging, Vera Cruz Hospital
Campinas, São Paulo, Brazil
E-mail: adilson.prando@gmail.com