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.

Reference

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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.

Editorial Comment

This article by Alsikafi et al., reports on the experience from San Francisco General Hospital over a 26-year period. This article further illustrates that the paradigm of blunt renal trauma management is typically conservative and expectant. American Association for the Surgery of Trauma grade IV injuries with extravasation of contrast are merely relative indications for renal exploration. The only absolute indications for renal exploration are grade V injuries that are life threatening due to massive bleeding. All other types of kidney trauma have a relative indication. Further points illustrated are that the treatment algorithm of nonoperative management of urinary extravasation is bed rest till the urine clears, serial hematocrits, followed by repeat CT a couple of days after initial injury. Extravasation that is stable or worse (i.e. an expanding urinoma) warrants ureteral stenting for 4 to 6 weeks. Extravasation that improves on subsequent imaging should be followed. Overall, 90% of grade IV renal injuries without major associated vascular or abdominal injuries are managed successfully without intervention.

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Delayed Diagnosis of Traumatic Ureteral Injuries

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Purpose: We review our experience with traumatic ureteral injuries missed at exploration. We also conduct meta-analysis to define factors contributing to missed injury, comparing outcomes of early vs late diagnosis.
Materials and Methods: Our genitourinary trauma database was retrospectively reviewed from 1995 through 2004. A total of 40 ureteral injuries were identified including 5 with delayed diagnosis. Previously published series of ureteral trauma were then analyzed for injuries with delayed diagnosis, with data extracted and collated for meta-analysis.
Results: A total of 40 patients with traumatic ureteral injuries was identified, all of whom underwent laparotomy. Five (12.5%) injuries were discovered at a mean of 6.0 +/- 3.0 days after laparotomy. The number of associated injuries for early and delayed diagnosis was 3.2 and 2.6 ($p = 0.25$), respectively. Mean hospital stay was 19.2 vs 36.6 days ($p = 0.18$) for those with immediate vs delayed diagnosis, respectively. Only 2 of 5 (40%) patients achieved satisfactory results during initial hospitalization. Literature review revealed 48 missed ureteral injuries, representing 11.1% of all patients with ureteral injuries who underwent laparotomy. Rates of nephrectomy for early and late diagnosis were 2.4% and 18.4% ($p = 0.0001$). Mortality related to traumatic injuries occurred in 6.1% with early diagnosis and 13.2% with missed injuries ($p = 0.089$).
Conclusions: Despite preoperative studies and intraoperative inspection, ureteral injury may remain undiagnosed until after laparotomy. We report intraoperative exploration to have a sensitivity of 88.9% across multiple series for traumatic ureteral injuries. Delayed diagnosis of ureteral injuries produces an association with prolonged hospital stay, and meta-analysis reveals a statistically significant increase in the rate of nephrectomy when ureteral injury is missed at exploration.

Editorial Comment

Kunkle et al. report on their experience with missed ureteral injuries at a busy inner city trauma center. This is a well written and comprehensive paper on delayed diagnosis. Tables 3 and 4 are nice metanalyses demonstrating that roughly 11% of ureteral injuries are missed at laparotomy, resulting in an overall nephrectomy rate of 18% and death at 13%. Even in the busiest of trauma centers, external ureteral injuries are rare, typically with fewer then 10 injuries seen per year. In the literature, there are only a few series with a sizable experience, and they are all retrospective, cover long study periods (10-40 years), and are mostly treated by heterogeneous groups of physicians. Most external ureteral injuries occur from gunshot wounds. Missile path even in proximity to the ureter can cause significant delayed tissue destruction. Such injuries can be difficult to identify initially and often present in a delayed fashion. Penetrating ureteral injuries are almost always associated with multiple intra-abdominal organ injuries (such as, small bowel, colon, liver and iliac vessels. Associated injuries are often more obvious and overshadow the ureteral injury. Ureteral injuries from blunt trauma are equally rare. They usually occur in children during rapid deceleration, causing excessive hyperextension and disruption at the ureteropelvic junction. Such patients are usually poly-traumatized and have associated multiple organ injuries (mostly liver, spleen and skeletal system).

In the acute trauma setting, therefore, the diagnosis of ureteral injury can be difficult. When the ureteral injury is missed and not diagnosed till late or the primary repair fails, the complication rate increases considerably, including renal loss and even death.

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PATHOLOGY

Are There Morphologic Correlates of Prostate Cancer Associated with TMPRSS2-ERG Molecular Abnormalities?

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Background: Recent studies have shown that TMPRSS2-ERG fusion is common in prostate cancer, varying from 30-70% of cases in published series. The molecular abnormalities include formation of a fusion gene, in a majority of cases due to deletion of a region on chromosome 21. While the histologic features of these tumors have not been elucidated, it has been suggested that these molecular genetic events may be associated with distinct morphologic characteristics, such as cribriform architecture and the presence of blue mucin.
Design: Blinded histologic review was conducted on 67 cases comprising two tissue microarrays (TMA) on which fluorescent in situ hybridization (FISH) had previously been performed to delineate molecular abnormalities.
Results: By FISH, 37/67 cases showed molecular abnormalities, including 21 deletions, 5 translocations, and 11 cases with other abnormalities. The other 30 cases were negative on FISH analysis. 8/37 (16.7%) cases with and 9/30 (30%) cases without molecular abnormalities showed cribriform glands or glomerulations. Intralumi-