

for evaluation of TZ cancers. In our experience, the findings on conventional MR imaging should be associated with these other imaging techniques.

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UROGENITAL TRAUMA

American Association for the Surgery of Trauma Organ Injury Scale for kidney Injuries Predicts Nephrectomy, Dialysis, and Death in Patients with Blunt Injury and Nephrectomy for Penetrating Injuries

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Background: Despite broad clinical use of the American Association of the Surgery of Trauma (AAST) injury scale for kidney, it has only been found to predict the need for renal surgery in single institution series. We sought to validate this scheme for morbidity and mortality in a national cohort of patients with renal injury.

Methods: A retrospective cohort design was used to determine the association between increasing AAST scores and nephrectomy, dialysis, and mortality. The cohort included all patients with a renal injury in the National Trauma Data Bank (NTDB) from 1994 and 2003. Univariate and multivariate prediction models were used for analysis of data.

Results: At the time of review, a total of 742,774 patient records were registered in the NTDB. Renal injury occurred in 8465 patients (1.2%). Increasing injury grade was associated with a greater nephrectomy (RR 12-127), dialysis (RR 1.3-4.7), and mortality (RR 1.3-1.9) rate for blunt kidney injury. For penetrating injury, nephrectomy was the only outcome that was associated with higher grades of renal injury with a RR of 7.7 to 31 for grades III to V injuries.

Conclusion: The AAST injury scale for kidney predicts for morbidity in blunt and penetrating renal injury and for mortality in blunt injury. Thus, we continue to support its use as a clinical and research tool.

Editorial Comment

Thee injury scales developed for kidney trauma were primarily based on the consensus of experts in urologic trauma, and not by evidence based medicine. First reported back in 1989, the AAST injury scales provide a valuable tool to classify injuries, in order to perform clinical research, and to decide on management. (1) The above retrospective review is another in a long line of papers seeking to validate that the AAST scale of degree of kidney injury is an accurate predictor of morbidity and mortality from blunt renal trauma. Since the more severe the mechanism of injury, the higher the likelihood for increased AAST renal injury grade, it is intuitive that the kidney and associated injuries result in higher rates of nephrectomy and mortality.

The National Trauma Data Bank - NTDB - www.facs.org/trauma/ntdb.html - the largest aggregation of trauma registry data ever assembled., managed by the American College of Surgeons, is a national data base of

trauma patients admitted to the hospital from over 405 trauma centers, and contains over 1.5 million records from trauma centers in the U.S. and Puerto Rico. The goal of the NTDB is to inform the medical community, the public, and decision makers about a wide variety of issues that characterize the current state of care for injured persons. The NTDB also proves a unique and powerful tool to study national trauma trends as to urologic and general trauma.

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Organ Injury Scaling: Spleen, Liver, and Kidney

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The Organ Injury Scaling (O.I.S.) Committee of the American Association for the Surgery of Trauma (A.A.S.T.) was appointed by President Trunkey at the 1987 Annual Meeting. The principal charge was to devise injury severity scores for individual organs to facilitate clinical research. The resultant classification scheme is fundamentally an anatomic description, scaled from 1 to 5, representing the least to the most severe injury. A number of similar scales have been developed in the past, but none has been uniformly adopted. In fact, this concept was introduced at the A.A.S.T. in 1979 as the Abdominal Trauma Index (A.T.I.) and has proved useful in several areas of clinical research. The enclosed O.I.S.'s for spleen, liver, and kidney represent an amalgamation of previous scales applied for these organs, and a consensus of the O.I.S. Committee as well as the A.A.S.T. Board of Managers. The O.I.S. differs from the Abbreviated Injury Score (A.I.S.), which is also based on an anatomic scale but designed to reflect the impact of a specific organ injury on ultimate patient outcome. The individual A.I.S.'s are, of course, the basic elements used to calculate the Injury Severity Score (I.S.S.) as well as T.R.I.S.S. methodology. To ensure that the O.I.S. interdiffuses with the A.I.S. and I.C.D.-9 codes, these are listed alongside the respective O.I.S. Both the currently used A.I.S. 85 and proposed A.I.S. 90 are provided because of the obligatory transition period. Indeed, A.I.S. 90 contains the identical descriptive text as the current O.I.S.'s. The Abdominal Trauma Index and other similar indices using organ injury scoring can be easily modified by replacing older scores with the O.I.S.'s.

Urgent Superselective Segmental Renal Artery Embolization in the Treatment of Life-threatening Renal Hemorrhage

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Introduction: Renal hemorrhage is a major life-threatening condition that can be caused by trauma, operation, biopsy, as well as sudden spontaneous rupture of renal tumors or aneurysms. We report our experience with

superselective segmental renal artery catheterization and embolization as therapeutic options for such cases. **Patients and Methods:** Over the last 8 years, 28 patients with severe renal hemorrhage were admitted for evaluation and possible further treatment. Twenty of them had a history of previous biopsy (6 of them one of a transplanted kidney), 1 patient had a recent percutaneous nephrostomy, 4 patients presented with renal mass ruptures (2 patients renal cell carcinoma, 1 patient angiomyolipoma, 1 patient hemorrhagic cysts), 1 patient had rupture of a renal aneurysm during delivery, 1 patient suffered bleeding after partial nephrectomy, and 1 patient was hospitalized after a car accident. They all presented with clinical signs of hemodynamic instability. Angiographic investigation of the kidneys preceded further intervention in all cases. 26 out of the 28 patients underwent superselective embolization of the specific bleeding vessel with the use of microcoils and/or Gelfoam particles. **Results:** All patients treated by superselective segmental renal artery embolization had a successful outcome, including a steady renal function and a stable clinical course. No complications occurred. **Conclusion:** Superselective segmental renal artery catheterization and embolization is a safe and efficient method for the treatment of patients with severe renal hemorrhage, preserving healthy renal parenchyma and renal function.

Editorial Comment

Increasingly, there is wide acceptance and support in the literature for the nonoperative management of nearly all blunt renal trauma, except for the potentially life-threatening injuries that are AAST Grade V. An aggressive approach at nonoperative management, inherently accepts an increased complication rate of delayed bleed or urinary leak. However, such complications can be effectively managed endoscopically or endo-vascularly. Delayed renal bleeding can occur up to several weeks after initial injury, although the period of greatest risk is within the first two to three weeks after injury. Clot lysis and hematoma liquefaction begins around day 5 to 7 and continues for another 2 weeks or so. It is during this time that renal bleeding is most likely. The kidney can bleed either into the collecting system, into the perirenal space, or as an arteriovenous fistula. Overall, delayed bleeding after trauma is rare, effecting less than one percent of all renal injuries. Penetrating injuries managed conservatively, in particular stab wounds, are especially prone to delayed bleeding, occurring in up to 18% of cases. Conservatively managed large devascularized renal segments with an associated bowel injury are also prone to delayed hemorrhage.

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PATHOLOGY

What's New in Prostate Cancer Disease Assessment in 2006?

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Purpose of Review: Issues relating to the disease are critical in the diagnosis, management, and prognostication of prostate cancer.