

Guidelines for Initial Evaluation of Urogenital Trauma

American College of Surgeons
Committee on Trauma
1997



Guidelines for Initial Evaluation of Urogenital Trauma

by Martin A. Croce, MD, FACS

With suspected injury or hemodynamic instability, immediate surgical consultation is necessary.

Perform ABCs on all patients. Physical examination *must* precede urethral catheterization and include inspection of external genitalia and perineum and digital rectal exam. Cover wounds with moist gauze dressings, and preserve all amputated parts.

Upper Urinary Tract

Suspect injury if

- Hematuria
- Decelerating injury
- Penetrating abdominal or flank wound
- Flank ecchymosis
- Unexplained hypotension

Bladder and Urethra

Suspect injury if

- Blood at urethral meatus or “high-riding” prostate found during rectal exam—DO NOT insert urethral catheter
- Hematuria
- Penetrating abdominal, pelvic, or genital wound
- Anterior arch pelvic fracture
- Open pelvic fracture
- Perineal laceration

External Genitalia

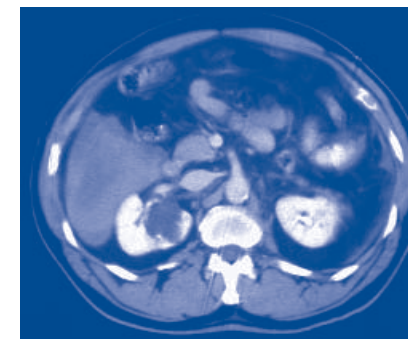
Suspect injury if

- Scrotal hematoma
- Extremely tender or nonpalpable testicles
- Penetrating genital wound
- Open pelvic fracture

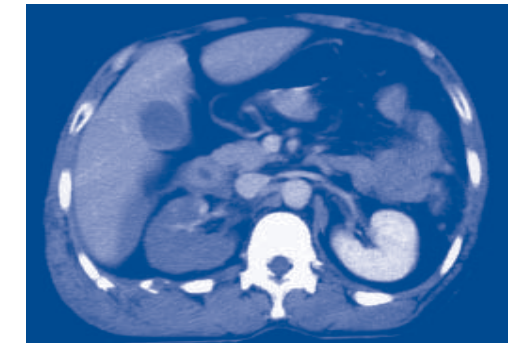
Appropriate Studies

If clinical condition permits:

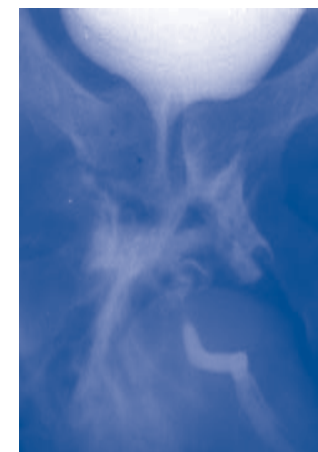
- **Computed tomography** with intravenous contrast medium identifies parenchymal injuries and bladder ruptures (with CT cystogram) and evaluates renal perfusion. *Performance of CT requires hemodynamic stability.*



CT with parenchymal rupture



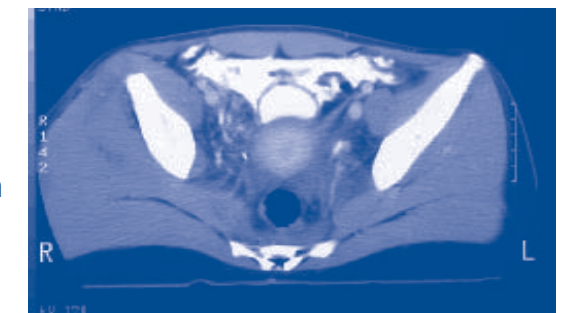
CT with blunt renal artery injury and nonperfused right kidney



Retrograde urethrogram with extravasation

- **Retrograde urethrogram** identifies urethral injuries. This study is necessary in patients with blood at the urethral meatus, a “high-riding” prostate, or if catheterization is difficult. Place a catheter (8 French) into the urethral orifice, *gently* inject 15–20 mL of contrast medium, and obtain an oblique plain film of pelvis. This procedure may also be done under fluoroscopic guidance. Suprapubic catheter drainage of the bladder is required with urethral injuries.

- **Complete cystogram** identifies bladder ruptures. Instill 300–400 mL of contrast medium into the bladder, clamp the urethral catheter, and perform CT or plain films with multiple views. Post-void films *must* be obtained, especially for extraperitoneal ruptures.



CT cystogram with bladder rupture

- **Intravenous pyelogram** identifies the presence of both kidneys and may demonstrate extravasation. A “one-shot” IVP of 100 mL of 60% iodine intravenous contrast medium (1.5 mL/kg or 100 mL for a 70-kg individual or twice that amount if 30% contrast medium is used) followed by abdominal plain film 2 to 5 minutes later can be helpful following penetrating wounds. IVP has virtually been replaced by CT scanning for evaluation of blunt renal injuries.



IVP with nonvisualization of right kidney

This publication is designed to offer information suitable for use by an appropriately trained physician. The information provided is not intended to be comprehensive or to offer a defined standard of care. The user agrees to release and indemnify the American College of Surgeons from claims arising from use of the publication.