

GENITOURINARY (GU) TRAUMA MANAGEMENT

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HEMODYNAMICALLY STABLE

- CT with contrast, arterial and delayed
- CT cystogram – bladder injury suspected
- Identify hemorrhage
- Identify collecting system injuries
- Establish urinary drainage

HEMODYNAMICALLY UNSTABLE

- Laparotomy/hemorrhage control
- On-table Intravenous Pyelogram (IVP) (if available) or methylene blue administration → ureters
- Retrograde fill bladder (300cc)

HEMATURIA

- Blood at meatus + retrograde urethrography - catheter attempt
- Unsuccessful → suprapubic catheter
- Gross hematuria → Cystogram

Kidneys

Repair vs. nephrectomy? Nephrectomy if unstable

Blunt

- Nonexpanding hematoma → observe
- Expanding/midline hematoma → Explore possible hilar/aortic/ caval injury

Penetrating

- Explore all zone 2 retroperitoneal hematoma

Ureters

- High index of suspicion with Injuries near path of ureter

- Repair requires stent, tension free, watertight

Transection

Avoid skeletonizing ureter distal to iliac vessels → re-implant

Contusion

Stent vs excise/re-anastomose with wide spatula

Laceration

Primary closure

Bladder

- Evaluation with CT cystogram or retrograde fill at laparotomy

Blunt

- Associated with pelvic fracture
- Gross hematuria

- Intraperitoneal injury: Repair. 2-layer closure

Penetrating

Index of suspicion based on trajectory

Extraperitoneal:

- Simple → catheter 10-14 days
- Complex → ? Repair
- Vaginal/rectal injury
- Bladder neck injury

Urethra

- Blood at meatus or unable to pass foley → RUG
- Anterior Urethra Injury – place suprapubic catheter
- Posterior Urethra Injury – place suprapubic catheter
- Urethral Transection - place suprapubic catheter

An increased incidence of GU injuries is associated with complex blast injuries

External Genitalia

- Hemorrhage control
- Tissue preservation

- Foreign body removal
- Copious irrigation

- Debride non-viable tissue
- Low threshold for bilat scrotal exploration 2° small entry wounds

Testicular Injury

- Easily missed (FB + air on CT)
- Blunt trauma → ultrasound
- Debride necrotic seminiferous tubules
- Close tunica albuginea

Penile Injury

- Corpora cavernosa-approximate tunical margins
- Corpus Spongiosum-avoid aggressive oversewing
- Glans-interrupted sutures
- Dorsal shaft-precise cautery

Scrotal Injury

- Wide suture
- Penrose drain

Clinical tips based on the Genitourinary Trauma Management CPG.
JTS CPGs can be found at:

https://jts.health.mil/index.cfm/pl_cpgs/cpgs



- ✓ Document a GU exam
- ✓ Attempt renal salvage in HD stable
- ✓ Urethral injury managed with suprapubic catheter
- ✓ Hematuria prompt evaluation for GU injury
 - Blood at urethral meatus → RUG
 - Blunt trauma/pelvic fx & hematuria → cystogram