

# Urinary tract injuries

(February 2017)

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## Rationale

Urinary tract injuries are usually blunt rather than penetrating. They may affect the kidneys and/or the collecting system and may lead to life-threatening bleeding.

## Causal Conditions

(list not exhaustive)

- Kidney (BLOOD IN URINE/HEMATURIA)
- Bladder and urethra
  - a. Distal urethra (e.g., straddle injuries bicycle riding, monkey bars)
  - b. Proximal urethra/bladder (e.g., pelvic fracture, abdominal injury)

## Key Objectives

Given a patient with a urinary tract injury, the candidate will diagnose the cause, severity and complications, and initiate an appropriate management plan. In particular, the candidate will consider trauma to bladder or posterior urethra in patients with pelvic fracture.

## Enabling Objectives

Given a patient with a potential urinary tract injury, the candidate will:

- list and interpret the critical clinical findings, including
  - a. history data regarding the mechanism of the injury and symptoms (e.g., abdominal pain, difficulty voiding, blood in urine or at meatus);
  - b. perineal swelling/bruising;
  - c. prostate gland injury detected by digital rectal examination;

- list and interpret critical investigations, including
  - a. appropriate imaging, if required (e.g., retrograde urethrogram for urethral injury, cystogram for bladder injury, computed tomography scan for renal injury);
- construct an effective initial management plan, including
  - a. initiate resuscitation of the injured patient and assess the patient's response to resuscitation;
  - b. avoid repeated attempts at bladder catheterization when unsuccessful;
  - c. initiate management of anterior urethral injury;
  - d. refer the patient for specialized care, if necessary.