

- Frequency of bladder rupture mechanism:
Iatrogenic 14%
Spontaneous <1%
Intoxicated 2.9%
Trauma 82%
- 60-85% are caused by blunt trauma (motor vehicle accident: seatbelt; pelvic fx: shearing force)
- 15-40% are caused by penetrating injury (gunshot; OP)

- **Rare causes**
- Migration and erosion of foreign materials: drains, IUD, urinary catheters
- Spontaneous rupture: pre-existing bladder pathology (e.g. chronic retention); most likely associated with minor blunt trauma
- **Serious causes**
- Major trauma.

Symptoms & Signs

- May initially be asymptomatic
- Difficulty in passing urine
- Lower abdominal pain
- Shoulder tip pain: due to diaphragmatic irritation if intraperitoneal urine collects under diaphragm
- Classic triad for bladder injury:
Suprapubic or perineal pain and tenderness
Difficulty or inability to void - low urine output
Hematuria: almost universal finding; >95% cases

Questions to ask

- **Accident?**
Mechanism of injury
- **Have you had any recent surgery on your bladder or prostate?**
A recent resection of prostate or bladder tumor may have caused bladder perforation
- **Have you passed urine since the accident?**
If patient has been able to pass urine, severe bladder or urethral injury is less likely

Order of tests

- Urinalysis
- Complete blood count (CBC)
- Creatinine and blood urea nitrogen (BUN) estimation
- Retrograde urethrogram
- Abdominal and pelvic CT scan
- Cystoscopy

Order of therapies

- Minor: urinary catheterization
- Major: open repair, and may be fatal in some cases

Prevention

- In general, prevention of bladder injury in the community is not possible
- For patients undergoing surgical procedures in which bladder injuries may occur, such injuries are best prevented by careful surgical technique

Goals

- Early identification of bladder injury with minimum of delay
- Identification of any coexisting injuries

Thanks for your attention!!

