

06.k • Management of urological trauma



Urological trauma is rare and the incidence of severe urethral trauma is 1 / million population / year. The majority of cases are due to blunt high-energy trauma with associated multi-system injuries and 80% of these cases are associated with pelvic fractures. Urological injuries are potentially fatal and can result in severe long-term disability.

Inclusions: patients of all ages with potential bladder or urethral trauma

Standards

1. All Major Trauma Centres and trauma units should have agreed, written guidelines for the management of suspected urological trauma and these must be easily available within the Emergency Department.
2. All patients suffering high-energy trauma must have examination of the perineum and genitalia plus a rectal examination and the findings recorded in the medical records.
3. A single, gentle attempt at catheterisation, by an experienced doctor, is permissible, even if the clinical or CT findings suggest urethral injury. In adults, a 16F soft, silicone catheter should be used. The procedure and the presence of clear or blood stained urine must be recorded in the medical records.
4. The finding of blood stained urine mandates a retrograde cystogram via the catheter.
5. If the catheter will not pass or passes and drains only blood, do NOT inflate balloon. Withdraw catheter and perform a retrograde urethrogram.
6. If there is a urethral or bladder injury, the on-call urologist should be informed immediately so that a treatment plan can be formulated and recorded in the notes.
7. If a urethral catheter cannot be passed, a suprapubic catheter is required. This can be inserted during emergency laparotomy but otherwise a percutaneous suprapubic catheter should be placed.
8. A percutaneous, suprapubic catheter should be placed using a Seldinger technique under ultrasound control by a doctor experienced in this technique. The skin insertion point MUST be in the midline and should be 3 to 4 fingers-breadths above the symphysis. A 16F silicone catheter should be used.
9. The placement of a suprapubic catheter may alter the timing of pelvic fracture surgery and so the pelvic fracture service should be involved at an early stage.
10. If there is a urine leak from either the bladder or urethra, the pelvic fracture should be treated like an open long-bone fracture with appropriate antibiotics for 72 hours and early fracture fixation if the patient's physiology allows.
11. Intraperitoneal bladder rupture requires emergency laparotomy and direct repair.
12. Extraperitoneal rupture of the bladder may be treated by catheter drainage alone. However, in the presence of an unstable pelvic fracture, it is recommended that fracture reduction and fixation is performed along with primary repair of the bladder.
13. Extraperitoneal rupture of the bladder neck continues to leak even in the presence of a catheter and requires primary repair.
14. Bladder injuries identified during pelvic fracture surgery should be repaired at the same time and bladder drainage (via urethral or suprapubic catheter, as appropriate) ensured.