Penile trauma

Etiology
- Rare (1/175,000 hospitalizations). The cause is usually the forced flexion of the penis against the perineum or the pubic bone during intercourse (60%). Less frequently caused by blows and kicks to the penis or perineum, etc.
- Usually affects only one corpus cavernosum (CC), although, depending on the etiology, it can extend to both CCs, the corpus spongiosum, or the urethra (20% of cases).

Symptoms
- A history of trauma accompanied by a thudding, dull pain, and detumescence.
- Obstructive symptoms are sometimes noted due to the subsequent hematoma and edema.
- If there is a urethral lesion, it is associated with urethrorrhage.
- Upon examination, there is usually a hematoma limited to the penile shaft due to the containment of Buck’s fascia; if this breaks, the hematoma can extend to the scrotum or perineum.
- Upon palpation, a painful raised ridge in the area of the fracture may be observed. This must be differentiated from the rupture of the dorsal penile vein, which requires conservative treatment.

Diagnosis
- Medical history and physical examination: usually sufficient for making a diagnosis.
- Cavernosography: usually unnecessary, but can help identify the site of injury with the aid of fluoroscopy (injection of 50 mL of contrast medium with a 21 G butterfly needle).
- Ultrasound: has a limited role because of its high rate of false negatives.
- MRI: allows visualization of the injury to the tunica albuginea and the hematoma, but its high cost makes it justifiable, only in cases of doubt.
- VCUG: if concomitant urethral injury is suspected.

Treatment
- Conservative treatment: in cases of a subcutaneous hematoma without CC rupture. If the CC is ruptured, not repairing it can lead to fibrosis, residual pain, angulation, and ED.
  - Compression bandage on the penile shaft, Foley catheter, antiinflammatories, analgesics.
  - Diazepam to reduce the frequency of erections.
- Surgical treatment:
  - Distal circular incision, evacuation of the hematoma, and control of bleeding.
  - Suturing of the defect in the tunica albuginea of the CC with absorbable sutures.
  - In cases of complete urethral resection, a primary suture should be made over a urethral catheter. If there is loss of substance, opt for a primary repair with skin flap or oral mucosal graft (preferable in blunt trauma) or a suprapubic cystostomy and delayed repair (preferable in penetrating trauma due to the risk of contamination/devitalization).
  - In penetrating trauma: always administer prophylaxis with Amoxicillin/clavulanate and tetanus prophylaxis if the last dose was given >5 years before (passive with Toxoid and active with Immunoglobulin 250 IU). In heavily contaminated wounds (bites, goring, etc.), Vancomycin and Metronidazole are added. In cases of animal bites, rabies vaccine.

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name®</th>
<th>Dose</th>
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</thead>
<tbody>
<tr>
<td>Diazepam</td>
<td>VALIUM 10 mg tablets and solution</td>
<td>10 mg iv or 10 mg oa/24 h</td>
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<tr>
<th>Generic name</th>
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<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin/clavulanic acid</td>
<td>AUGMENTIN inj 2 g/200 mg and tablets 500/125 mg</td>
<td>Initially: inject 2 g before surgery Maintenance: 500/125 mg ao/8 h</td>
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<tr>
<td>Vancomycin</td>
<td>VANCOMYCIN inj 500 mg</td>
<td>500 mg before and 8h after surgery</td>
</tr>
<tr>
<td>Metronidazole</td>
<td>FLAGYL inj 500 mg</td>
<td>500 mg before and 8h after surgery</td>
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Penile trauma

History of trauma
Examination

Contusion without disruption of the CC or urethra
Uncertain diagnosis
Disruption of the cc or urethra

Cavernosography
MRI
VCUG

No disruption
Disruption

Compression
Analgesics
Antiinflammatories

Emergency surgical treatment