Urology CHEAT SHEETS

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MANAGEMENT OF PENILE PROSTHESIS COMPLICATIONS

Standardization of surgical technique in **penile prosthesis implants (IPP)** and **improvements in device construction** have reduced all-cause **complication rates to less than 5%**. Nonetheless, complications can appear, and strongly impact **morbidity and the quality of life** of patients. Prosthetic urologists must be aware of the constellation of complications that can arise during or after IPP placement.

PREVENTIVE STRATEGIES

PATIENT SELECTION

1. Optimize **HbA1c** in diabetic patients
2. **Cardiology/medical clearance**
3. Beware of **psychosocial variables** that can negatively affect operative success and patient outcomes
4. Obtain **urine culture**
5. Stop **antiplatelet** therapy 7 days prior SX

DEVICE SELECTION

1. Determine if patient preference for **inflatable vs malleable**
2. **Peyronie's disease:** Use Boston Scientific CX or Coloplast Titan
3. **Severe fibrosis:** Use Coloplast or Boston Scientific narrow devices
4. **Large and wide penis:** Use Coloplast Titan or Boston LGX

INFORMED CONSENT

Provide appropiate patient counselling to set realistic expectations about:

1. **Size of erect penis**
2. **Sensory changes**
3. **Ejaculatory change**
4. **Postoperative pain**
5. **Possibility of reoperation** due to mechanical failure, infection or erosion

Scherzer N.S,et al: 2019 J Sex Med

INTRAOPERATIVE COMPLICATIONS

HEMATOMA

Incidence: 0.2% - 3.6%.
Prevention:
- Compressive dressing + partial device inflation.
- Closed suction drainage.
- Hold anticoagulation therapy.
- Stop antiplatelet therapy 7 days pre-op.
- Limit physical activity for 1-2 weeks.

Management:
- Conservative with dressing and warm baths if the wound is closed.
- Surgical drainage only if it is too big and painful.

CORPORAL CROSSOVER AND PERFORATION

Incidence: 25-31% in fibrotic corpora that requires use of cavernotomes.
Diagnosis: - **Proximal**:"field goal".
- **Distal**:"distal fluid challenge test."
Prevention: Place Keith needle through glans before placing cylinders. Initial dilation should be performed gradually and directed laterally. If there´s fibrosis may use cavernotomes.
Management:
- **Proximal**: Corporotomy sutures above and below the outlet tubing in addition to a rear tip extender sling or windsock patch to prevent proximal migration of the implant.
- **Distal**: Stop surgery if distal perforation, perform "distal fluid challenge test" to evaluate for urethral injury.

FLOPPY GLANS

Incidence: 1% - 5%.
Prevention: Choose a proper size cylinder.
Management:
- Usually self correction due to normal healing and capsule formation.
- Surgical correction (Glanspexy).

URETRAL INJURY

Incidence: 0.1-4.0%
Prevention: Stay as lateral as possible when dilating the corpora
Management:
Distal: Stop procedure. (Only in special circumstances repair distal injury and place suprapubic cystostomy for 4-8 weeks before activating implant)
Proximal: Close proximal or mid urethral injury directly and proceed with implant.

BLADDER INJURY

Incidence: <1%
Prevention: Always drain bladder prior to reservoir placement.
- If a fibrotic pelvis, mesh graft, or transplant are present a submuscular reservoir placement or a 2-piece IPP may be considered.
Management: If bladder is injured, perform immediate 2-layered repair. Contralateral or ectopic placement of reservoir is recommended.

POST-OPERATIVE COMPLICATIONS

INFECTION

Incidence 1- 4%.
Prevention:
1 Proper patient selection
2. Limit duration of surgery and operating room traffic
3. Employ "no-skin touch" concept as much as possible
4. Use antibiotic-impregnated hydrophilic-coated implants
5. Perform frequent irrigation of field with antibiotic solution

Management:
- At the start of a clinical infection, provide antibiotics
- If surgery is indicated: Remove or Mulcahy salvage procedure

IMPENDING EROSION

Incidence: 1- 6%.
Risk factors: More likely when urethra is violated during surgery and in patients with a spinal cord injury
Management:
If **Erosion + infection**: explant PP.
If **Ventrolateral/ventrodistal:** **Mulcahy's corporoplasty** should be performed. It reseats the cylinder in a more medial and secure position under the glans penis by creating a new cavity for the cylinder behind the back wall of the fibrotic sheath.

TRADITIONAL REMOVAL	INMEDIATE SALVAGE R.
- Replace in 2 – 6 months - Corporal fibrosis - Shortened penis (4- 6 cm) - Very difficult reimplantation	- Preserves implanted status - Prevents penile shortening - Avoids difficult reops.

GLANDULAR ISCHEMIA

Incidence: <0.5%.
Risk factors: Atherosclerotic disease, diabetes mellitus, smoking, previous prosthetic explantation, radiation therapy, occlusive elastic penile bandages.
Management:
- Be aware of presence of a "dusky glans" on post-operative day 1
- Treat with:
immediate prosthesis removal

Scherzer N.S,et al: 2019 J Sex Med.
Levine L.A, et al: 2016 J Sex Med.
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Sharma D, et al: 2017 Transl Androl Urol.