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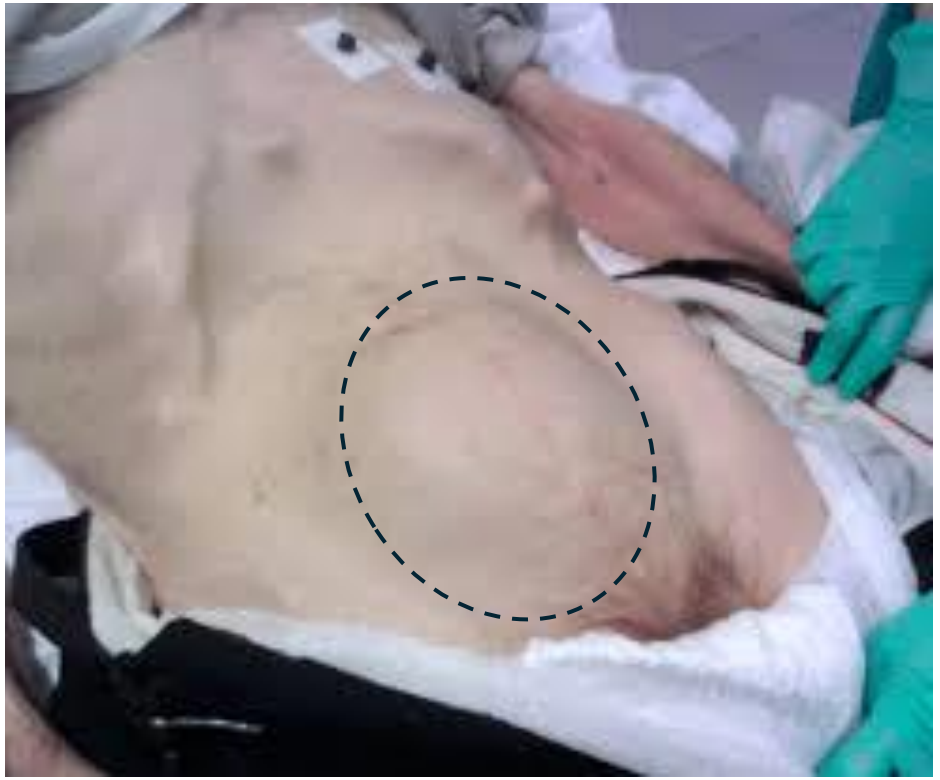
Approach to Urinary Retention and Priapism

ACUTE URINARY RETENTION

- Painful
- Inability to pass urine
- Palpable or percussible bladder

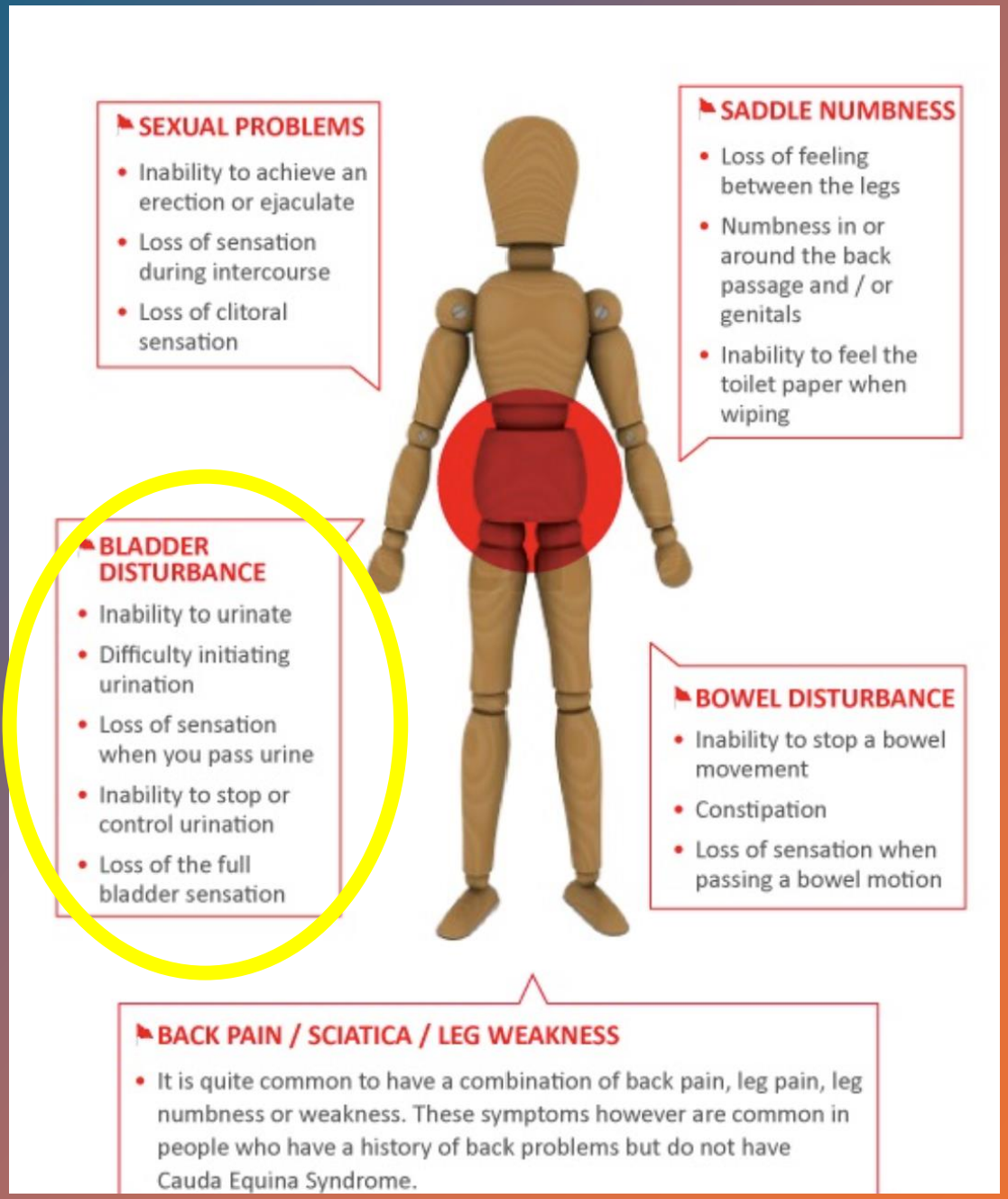


Abrams B, Cadozo L, Fall M et al 2003 The standardisation of terminology in lower urinary tract function: report from the standardisation sub-committee of the International Continence Society. Urology Jan;61(1):37-49. doi: 10.1016/s0090-4295(02)02243-4

*risks in men versus women

ACUTE URINARY RETENTION

OBSTRUCTIVE ANATOMICAL	OBSTRUCTIVE LUMINAL	FUNCTIONAL	NEUROLOGICAL
BPH Masses Stenosis Pregnancy	Clot Stone	Cystitis Drugs e.g. Anticholinergics Anaesthesia Constipation	Spinal cord Compression- Cauda Equina Syndrome, disc prolapss, Tumour Stroke Multiple sclerosis
TRAUMA	**TRAUMA**	**TRAUMA**	**TRAUMA**



Cauda Equina

- Quick review

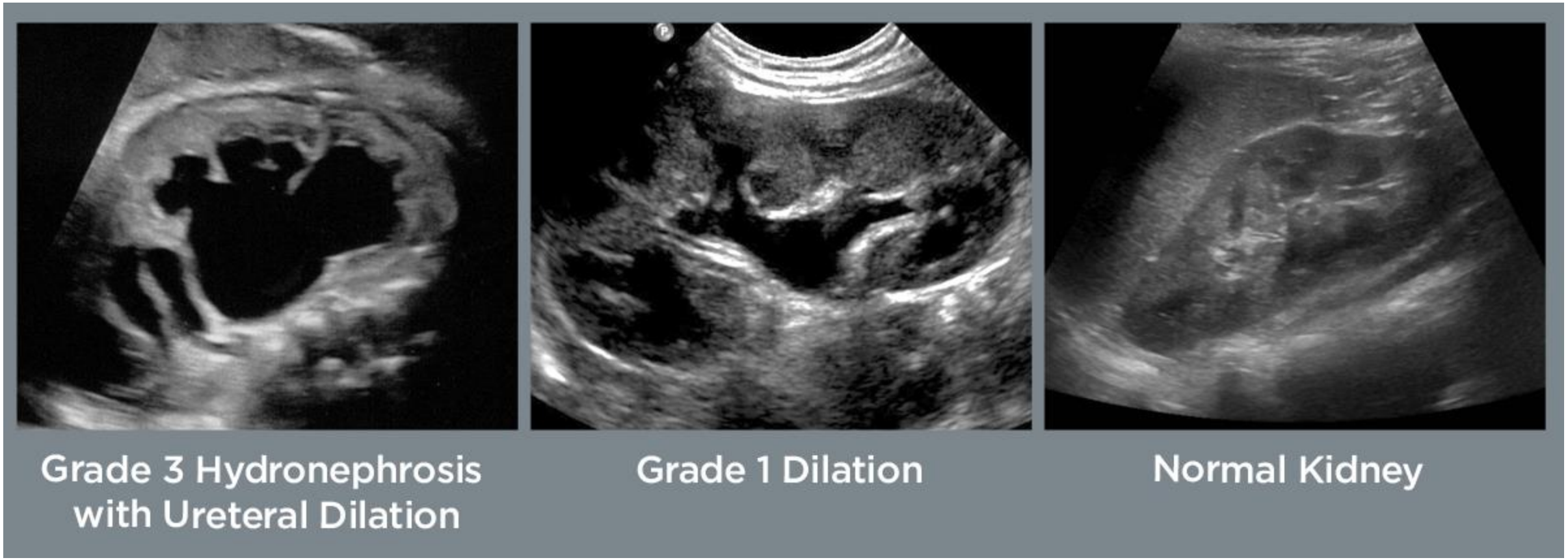
When to catheterise?

AIM = to protect the kidneys

- No specific volume – varies between people
- Pain
- Overflow with high post void residual

** infection risk*

Effects of obstruction



What are the most common mistakes you see during IDC insertion?

- ***Tips and Tricks from a Urologist***
  - Lubrication +++ (hold it in place)
  - Tension on penis at 90 degrees
  - Advance all the way to the Y
  - Use a **larger size** for BPH
  - If these don't work then → suprapubic

Investigations

- Must perform DRE!
  - If suspected cancer then get PSA immediately

- Urine for MC&S
- CBC

- Renal Function Test

Investigations

- **Ultrasound KUB** (Kidney-Ureter-Bladder)
  - Concern for persistent obstruction
  - *E.g. no improvement of renal impairment post catheterisation*
- Neurological / Trauma cause
  - **CT spinal**
  - Especially if bony mets from e.g. prostate cancer

Which patients need to be admitted?

- **Chronic urinary retention**
- **Acute renal impairment**
- **Post-Obstructive diuresis**
  - >200 ml/hour for 2 hours
  - Monitor for electrolyte loss = especially **hypo**natraemia
  - Fluid maintenance +/- hypertonic saline

When do you remove the catheter?

- Trial of removal / void
- In clinic
- No specific timeframe – patient dependent
  - *After imaging, RFT improving …*

Do you routinely use medications in patients with BPH to decrease risk of retention?

No rush!

Can be managed in outpatients

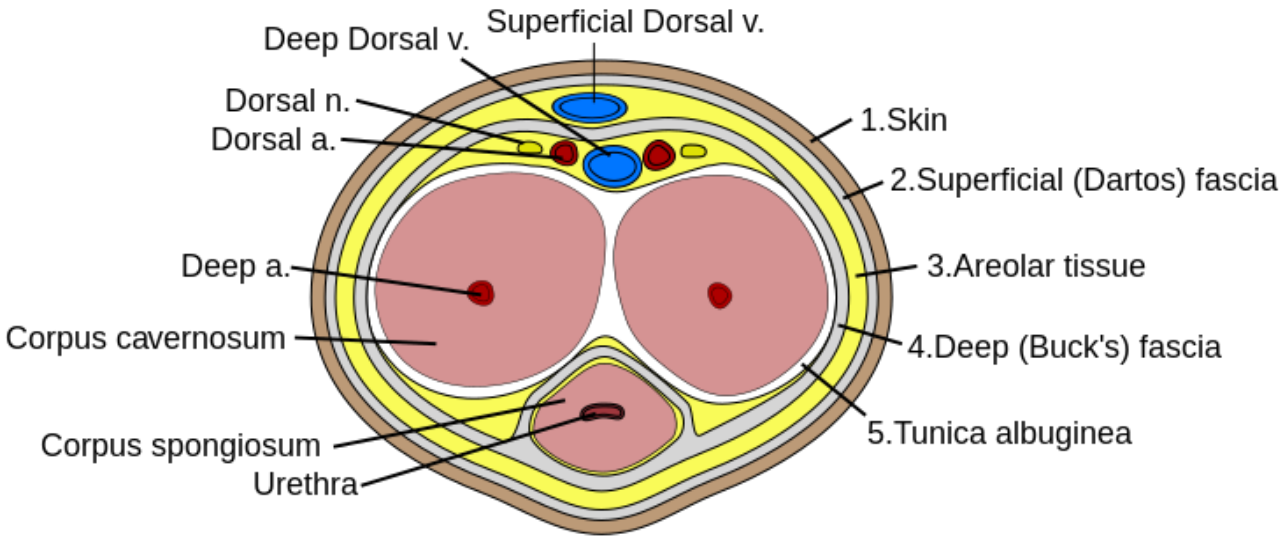
E.g. Alpa blockers

No role for prophylactic antibiotics

PRIAPISM

PAINFUL + SUSTAINED (4h) + UNWANTED

ERECTION **with or without orgasm*



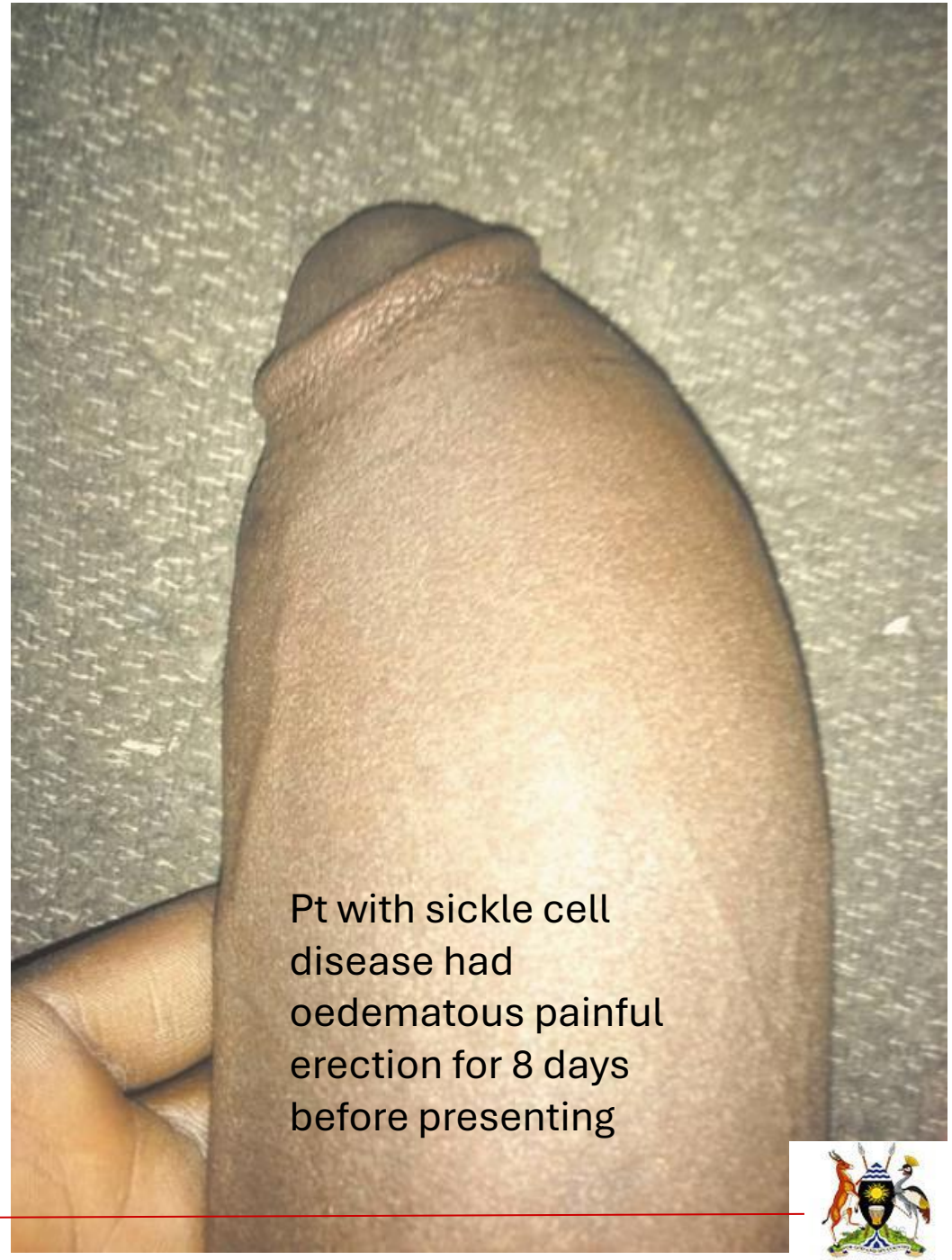
PRIAPISM

TIME IS TISSUE

4h reversible

24h 90% irreversible

48h 100% irreversible



Pt with sickle cell disease had oedematous painful erection for 8 days before presenting

PRIAPISM

TIME IS TISSUE

Erectile dysfunction

Impotence

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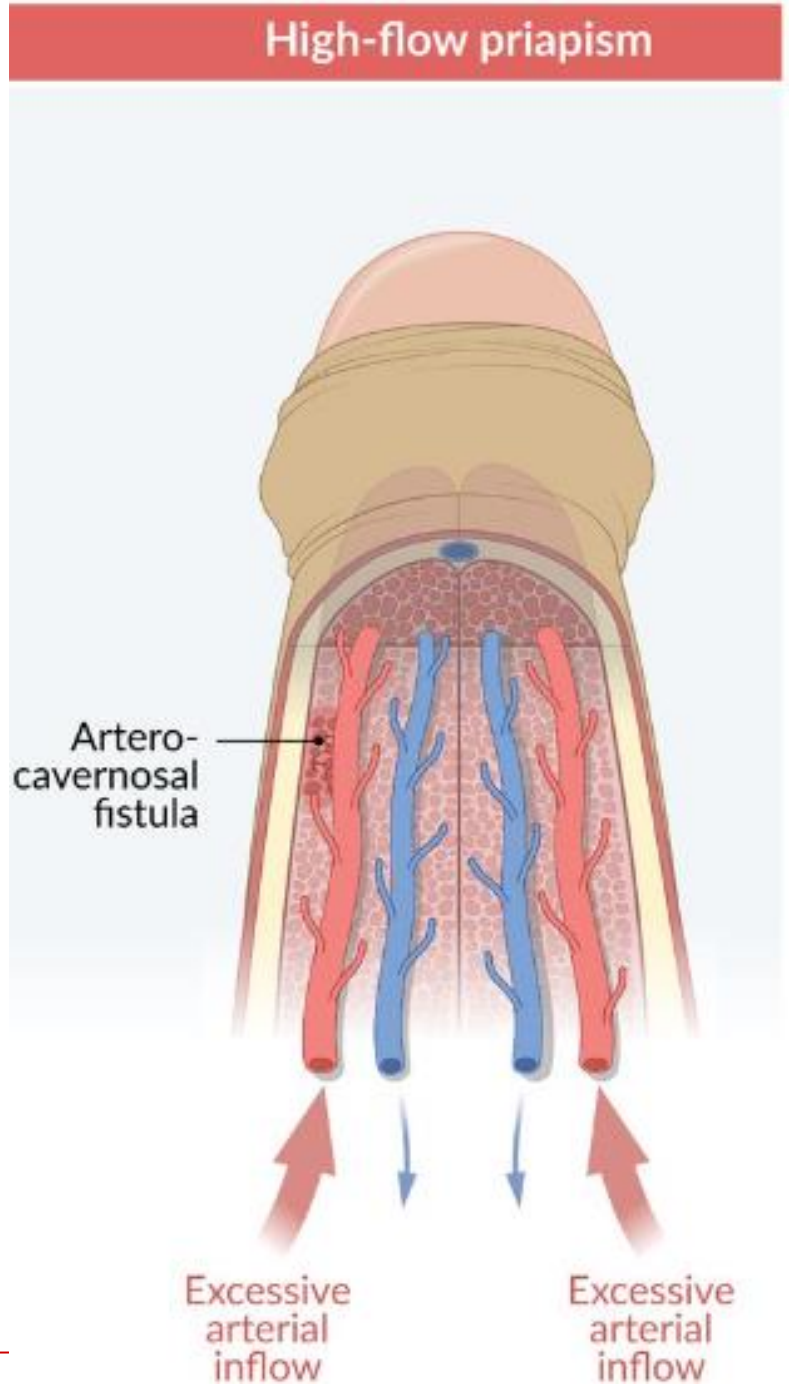
Types of Priapism

EMERGENCY	NON-EMERGENCY
LOW-FLOW ISCHAEMIC	HIGH-FLOW NON-ISCHAEMIC

PRIAPISM



NON-ISCHAEMIC (HIGH FLOW)

Uncommon (2%)

Not painful

Usually in <u>context of trauma</u>

Or

Post treatment for low flow priapism

O2 is still getting into the tissue

PRIAPISM

ISCHAEMIC (LOW FLOW)

Sickle cell disease

Idiopathic

Drugs

- Intracavernosal Injections
- Antihypertensives eg hydralazine
- Anticonvulsants e.g. Na Valproate
- Antipsychotics
- Alpha blockers eg prazosin
- Anticoagulants e.g. warfarin
- Recreational drugs (cocaine, marijuana)

Haematological cancers

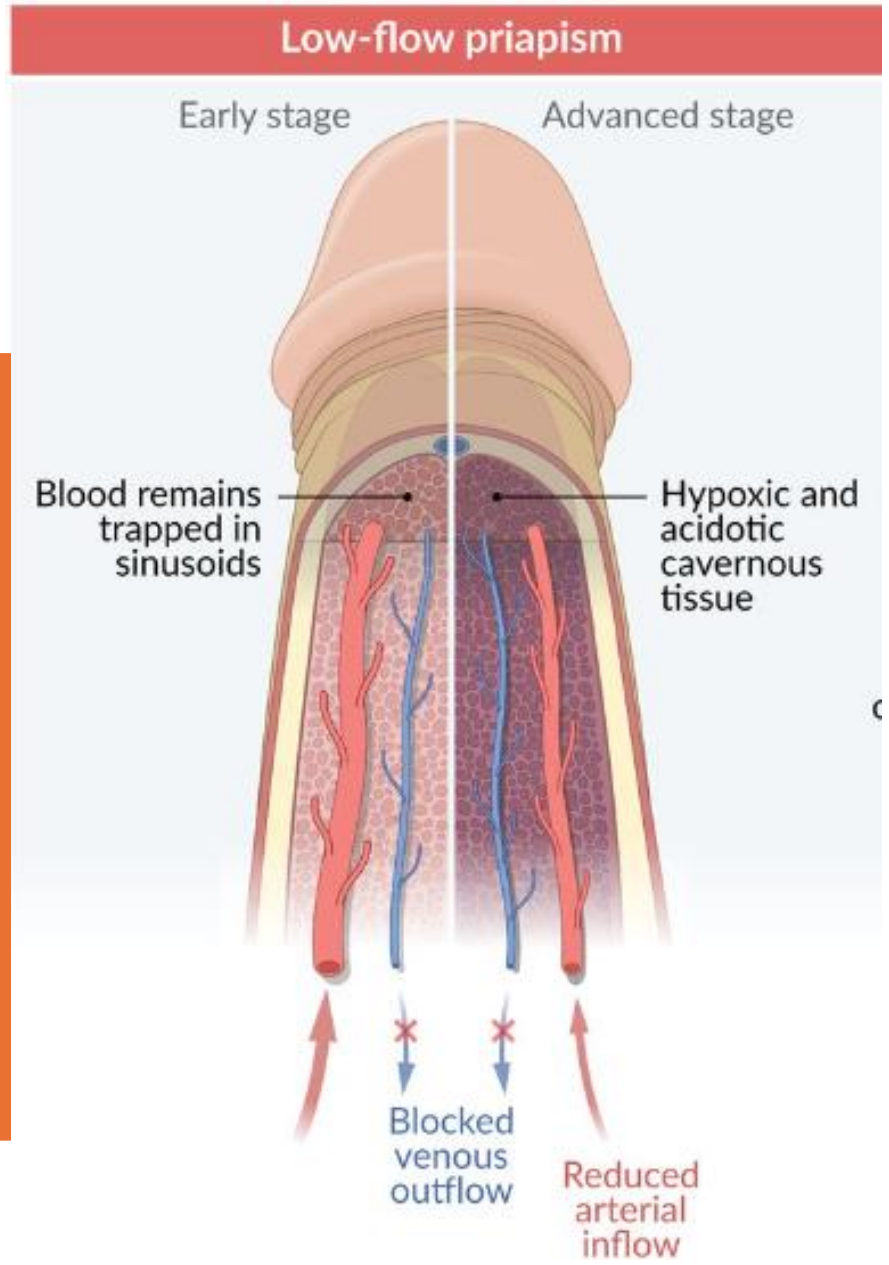
Spinal cord injury

Painful

Tense / tumescent cavernosum

Trapped blood

Less likely to have a soft glans



Priapism and Sickle Cell Disease

33% adults (often recurrent)
3% children

Rate of erectile dysfunction

- 2.5x normal population
- 5x higher that patients with priapism

Epidemiology and treatment of priapism in sickle cell disease
Hematology Am Soc Hematol Educ Program (2022) 2022 (1): 450–458.
https://doi.org/10.1182/hematology.2022000380

- NEED TO EDUCATE your SCD patients to prevent complications

Priapism is associated with a high rate of unrecognized mental health challenges, including suicidality, depression, and anxiety.

Target = DE-TUMESCENCE

Educate

Aspirate

Aspirate

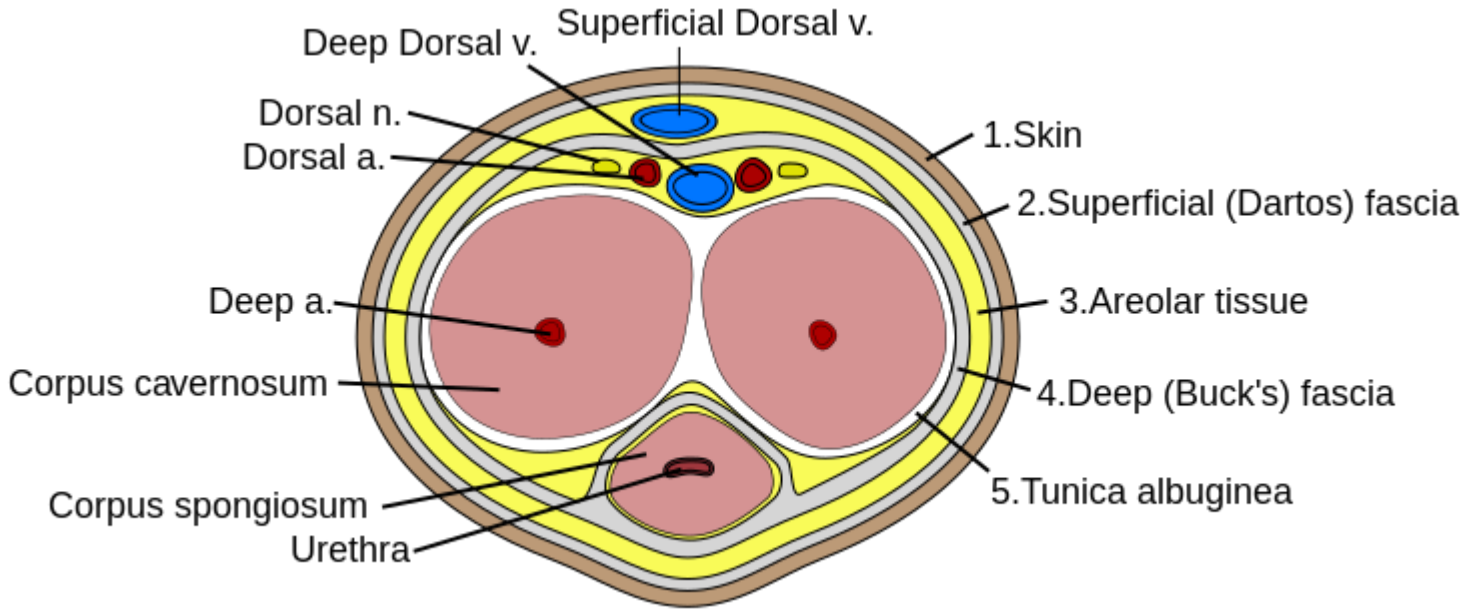
Irrigate - Saline

Infiltrate – medications

Operate

ASPIRATE

1. Dorsal Penile Nerve block

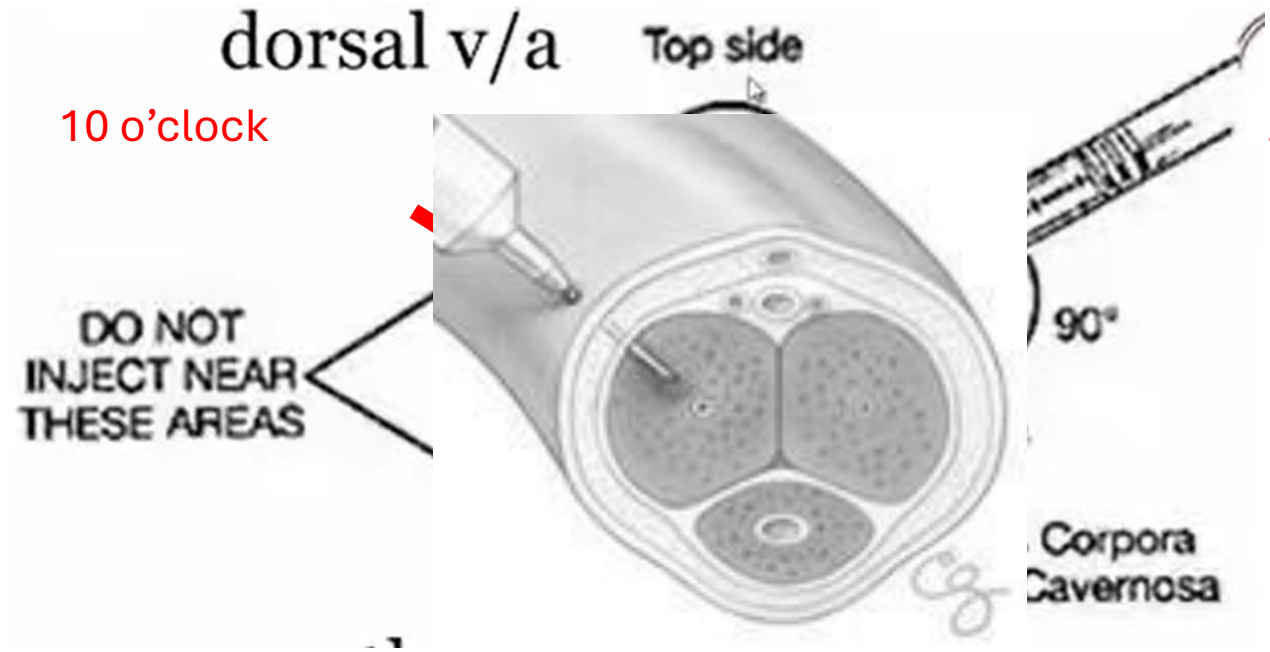


ASPIRATE

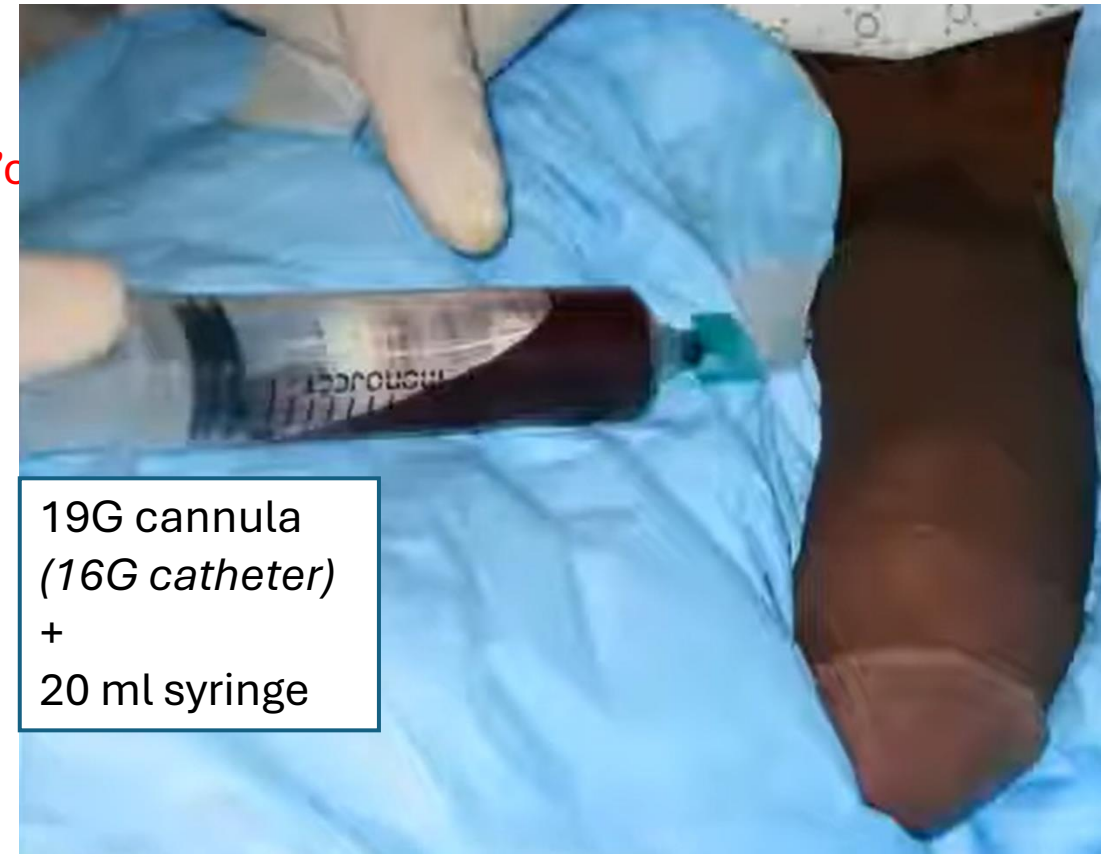
1. Dorsal Penile Nerve block

ASPIRATE – 2 attempts

2. Dorsal cavernosum aspiration 10 and 2 o'clock



2 o'c



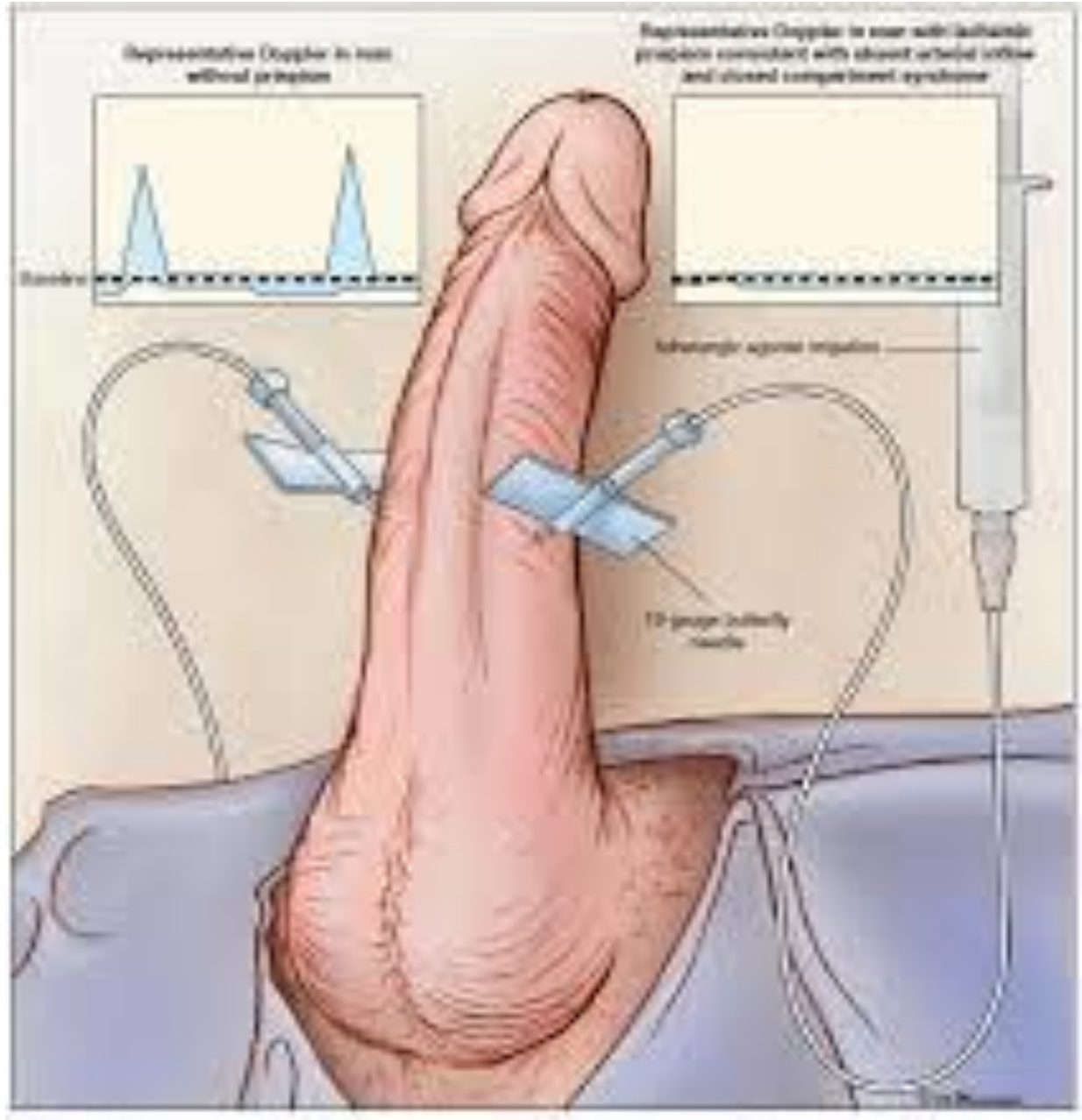


Figure 1 Initial assessment of priapism requires assessment of corporal blood flow (eg, palpation of glandular penile consistency, corporal blood gas (pH, PO2, PCO2) or color duplex ultrasound). No doppler flow is evident in ischemic priapism. (J Sex Med 2006; 3:749–759.)

IRRIGATE

Flush with 10-20ml normal saline

Either side

Attempt to loosen clots

Then aspirate

Squeeze the penis until you see fresh blood

INFILTRATE

Phenylephrine –

Mechanism of Action: *α1-adrenoceptor agonist*

= Vasoconstriction

<u>MUST DILUTE</u>: 10mg/ml into 100ml = **100mcg/ml**

Inject <u>1ml</u> every 5-10 min <u>maximum</u> 5 times

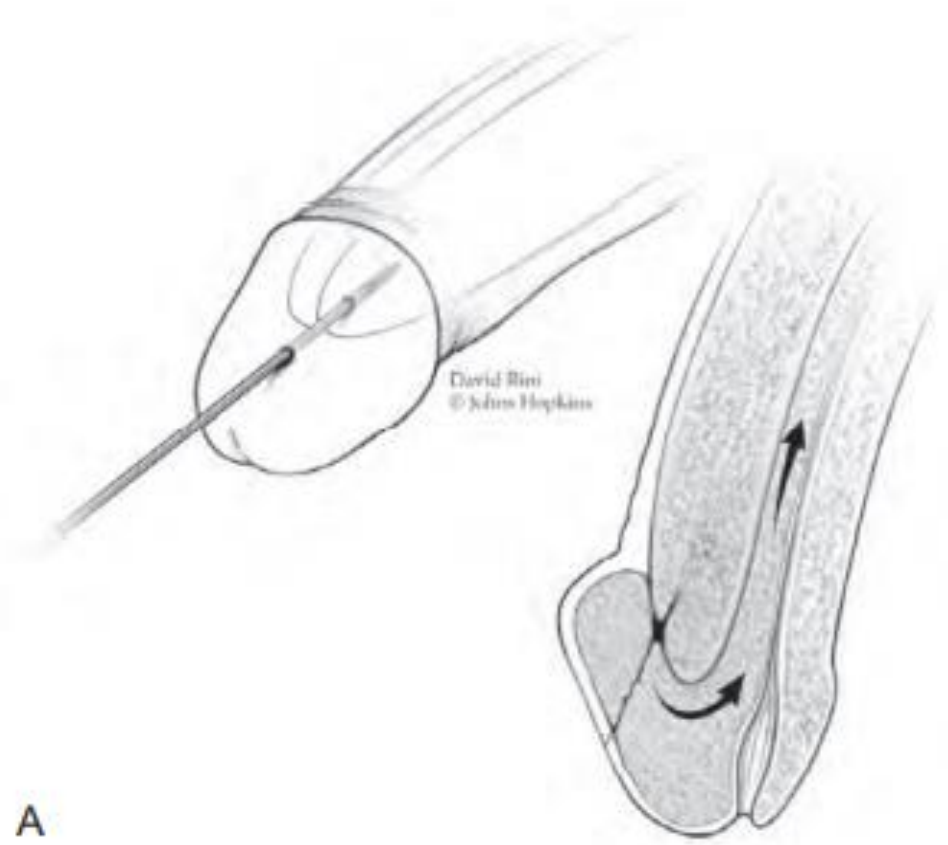
SURGICAL MANAGEMENT

Urological review

- Re-establish corporal flow
- Proximal or distal **SHUNTS**

Longer term

- Address erectile dysfunction
- Penile **IMPLANTS**



SUMMARY

URINARY RETENTION

It's not always BPH!

Think

- ***Obstructive*** – anatomical
- ***Obstructive*** – luminal
- ***Functional*** – drugs and infection
- ***Neurological***

Tips and Tricks from a Urologist

Lubrication +++ (hold it in place)

Tension on penis at 90 degrees

Advance all the way to the Y

Use a **larger size** for BPH

If these don't work then → suprapubic

PRIAPISM

Educate

Aspirate

Aspirate

Irrigate - Saline

Infiltrate – phenylephrine

Operate

The end

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