



OSCE 6

Candidate Instructions

This is a **7 minute** station.

You are the consultant in a rural emergency department. You are 3 hours away from your accepting tertiary hospital. A junior doctor (PGY3) would like to speak to you about a patient they are about to see.

A 40 year old male has presented at triage complaining of a sustained erection. He has tried a cold shower at home, but it has not relieved the erection.

The patient has no medical conditions, no regular medications, and no drug allergies.

Your tasks are to teach the junior doctor how to:

- Assess this patient
- Manage this patient

This OSCE will assess the following domains:

- Medical Expertise – 75%
 - Assessment (25%)
 - Management (50%)
- Scholarship and Teaching – 25%



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Examiner Instructions

This is a **7 minute** station.

Teaching station covering assessment and management of a patient presenting to a rural ED with priapism.

Please see **Candidate Instructions for full instructions/domains provided to candidates.*



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Role player Instructions

- **Gender:** Registrar (male or female)
- **Age range:** 20-30s
- **Role to be played by:** FACEM

You are a junior doctor (PGY3) at a rural emergency department, 3 hours away from your accepting tertiary hospital. You approach the consultant in charge to discuss a patient you are about to see.

Role background:

- Junior doctor PGY3 at a rural emergency department
- Never seen priapism
- Never thought about how to manage it

Patient details:

- 40 year old male
- Presented at triage complaining of a sustained erection
- Has tried a cold shower at home, but it has not relieved the erection
- No medical conditions, no regular medications, and no drug allergies



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Role player Script

Part 1 (0 – 2 mins 30 secs): Assessment

Opening statement:

“Hi I’m [Insert own name]. I have never seen a patient with priapism before. How should I assess them?”

Expected candidate answer:

Identify likely diagnosis and differentials

- 2 types:
 - Ischaemic (low flow):
 - Majority
 - Causes: idiopathic, erectile dysfunction, anti-hypertensives, neuroleptics
 - Painful
 - Non-Ischaemic (high flow):
 - Rare
 - Causes: trauma, injecting cavernosal artery

History key features

- Duration of erection:
 - >4 hours in hours in absence of sexual interest or stimulation
 - Increased duration increases risk of long term erectile dysfunction. Exact timeframe unclear, treatment in < 4 hours ideal.
- Degree of pain (ischaemic priapism = more severe pain)
- High risks for priapism:
 - History of trauma (pelvic, perineal, genital)
 - PHx of:
 - Priapism and treatment
 - Malignancy (particularly GU)
 - Personal or FH of sickle cell disease/other hematological abnormality
- Drug history:
 - Intercavernosal (papaverine, phentolamine, PGE1), anticoagulants, SSRIs, hypnotics, erectile dysfunction medications, illicit drugs (cocaine, ecstasy)
- If inadequate assessment (history), then PROMPT:
“What’s important in the history?”

Candidate is expected to outline potential causes.

- If they outline some causes but do not give a detailed list, ask in a neutral voice:
“Are there other causes of priapism that I should be considering?”



Examination key features

- Penis:
 - Corpora cavernosa - rigid penile shaft (non-ischaemic priapism usually not fully rigid)
 - Corpus spongiosum and glans penis - soft
 - Painful and tender on palpation (more so with ischaemic)
- Genitalia, perineum, and abdomen should be examined looking for trauma/ malignancy
- If inadequate examination, PROMPT:
“What do I look for on examination?”

Investigations – limited utility:

- Intracorporal blood gas:
 - Shows hypoxic, hypercarbic and acidotic
- Penile duplex doppler US - if diagnosis is indeterminate

Part 2 (2 mins 30 secs – 5 mins 30 secs): Management and Procedure

By **2 minutes 30 seconds**, ask:

“How should we manage this patient?”

Expected candidate answer:

Overview:

- Analgesia should be provided, conservative measures have little evidence of success.
- It is appropriate to progress to aspiration +/- irrigation/ vasoactive injection as initial management.
- They should identify/convey that there is urgency to address the priapism and that with a 3 hour transfer time the procedure needs to be done in their ED.
- Analgesia:
 - Awareness that systemic analgesia may not be effective
 - PO (Paracetamol 1g, Ibuprofen 400mg, Endone 5-10mg)
 - IV Fentanyl 25-50mcg, Morphine 2.5-5mg
- Conservative / Supportive:
 - Cold compress
 - Relief of urinary obstruction/ IDC
 - IV access / IV hydration (1L Normal saline)
 - Terbutaline PO (5-10mg) / SC 0.25-0.5mg – can repeat once after 15 mins if no effect (little evidence)
 - Hemodynamic monitoring if considering using or escalate to ephedrine/ phenylephrine/ other vasoactive injection
- Consent

Procedure - escalating approach, typically in order below. However, there is also evidence to support direct injection of phenylephrine/vasoactive as primary ‘minimally invasive’ procedure.



Use these PROMPTS as necessary: They must all demonstrate their knowledge of the time frame/urgency and how to do the procedure:

- If they mention aspiration etc., then PROMPT:
“Can you teach me about that?”
- If the urgency/ time frame for the procedure is not clear, PROMPT:
“What time frame would we need to do this procedure in?”
- If they suggest a need to consult Urology but not why, PROMPT:
“What would we be contacting Urology about?”
- If they mention aspiration/ drainage etc., then PROMPT:
“Can you teach me about that?”
- If no mention of procedure at **3 minutes 30 seconds**, then PROMPT:
“I heard that they sometimes need a drainage procedure or something ... Can you teach me about that?”

(*If candidate makes no mention of need for this procedure before this prompt given, then to be marked below standard in this domain)

- Local Anaesthetic: LA 1-2% Lignocaine, small needle (not required if minimally invasive tech):
 - Dorsal nerve block – insert at 2 and 10 o'clock position at base of penis OR
 - Ring block – inject around base of penis for complete block OR
 - At site of butterfly needle insertion
- Aspiration:
 - 19G butterfly needle into corpus cavernosa at 10 o'clock or 2 o'clock position (no need to do both sides as they communicate)
 - Anywhere along the corpus cavernosa (not the glans)
 - Advance needle 45 degrees to skin drawing back on the syringe until blood is returned
 - Continue aspirating until either bright red blood is returned or detumescence is achieved
- Aspirate and Irrigation:
 - If inadequate blood returns on aspiration or detumescence is not achieved can use saline 10-20ml N saline, up to 200ml
- Intracorporeal vasoactive injection (a wide range of potential acceptable options):
 - Minimally invasive technique: Insert 25-27g butterfly needle into base of penis (Corpus cavernosum), aspirate blood to confirm the position and as primary procedure inject:
 - Phenylephrine 100-500mcg in 1-2 ml N saline every 3-5 minutes OR
 - Adrenaline eg. 100mcg in ~1ml N saline, can be repeated every 20 mins up to 3 attempts (Roberts and Hedges)
 - Use existing butterfly used for aspiration/ irrigation:
 - Phenylephrine 100-500 mcg every 3-5 mins for up to 1 hour. Roberts and Hedges – 200-400 mcg in 10-20 ml repeat flushes.
 - Adrenaline Dunn: 1-2 ml (10-20 mcg) of 1: 10 000 repeated 5 mins up to 10 ml (100 mcg). Roberts and Hedges: 10-20 ml of 1 mcg/ml repeated irrigations/flushes.
 - Metaraminol or Noradrenaline in appropriate dilution (e.g. Norad 1 mcg/ml 10-20 mls)



- If no mention of escalation of techniques:

“What do we do if that doesn’t work?”

Success = sustained detumescence, resolution of pain.

Part 3 (5 mins 30 secs – 7 mins): Disposition/ Ongoing care

By **5 minutes 30 seconds**, ask:

“So, what happens next?”

Expected candidate answer:

Post Procedure Cares

- Potential complications:
 - Infection, bleeding, recurrence, specifically – risk of erectile dysfunction
- If no mention of complications, PROMPT:

“Are there any complications we should worry about?”
- Disposition:
 - Successful procedure:
 - The penis may be swollen but should not be rigid or engorged/ aspirated blood should be bright red
 - Period of observation to ensure detumescence / remains flaccid. 2 hours seems a reasonable minimum (Roberts and Hedges), obtain urological advice +/- follow up
 - I.e. follow up with Urology the next day, and at 4-6 week (no intercourse until then)
 - Unsuccessful procedure:
 - Urgent Urology referral for a shunt (Winters procedure)
- If no mention of disposition, PROMPT:

“So can these patients go home?”



Domain	Criteria	Marking rules to be 'at a minimum level of competence' /other comment	Criteria met / not met
Medical Expertise: Assessment (25%)	<u>Identify likely diagnosis and differentials</u> • 2 types: ○ Ischaemic (low flow): ▪ Majority ▪ Causes: idiopathic, erectile dysfunction treatment, anti-hypertensives, neuroleptics ▪ Painful ○ Non-Ischaemic (high flow): ▪ Rare ▪ Causes: trauma, injecting cavernosal artery <u>History key features</u> • Duration of erection: ○ >4 hours in hours in absence of sexual interest or stimulation ○ Increased duration increases risk of long term erectile dysfunction • Degree of pain • High risks for priapism: ○ History of trauma (pelvic, perineal, genital) ○ PHx of: ▪ Priapism and treatment ▪ Malignancy (particularly GU) ▪ Personal or FH of sickle cell disease/other hematological abnormality • Drug history ○ Intracavernosal (papaverine, phentolamine, PGE1), anticoagulants, SSRIs, hypnotics, erectile dysfunction medications, illicit drugs (cocaine, ecstasy) <u>Examination key features</u> • Penis: ○ Corpora cavernosa - rigid penile shaft ○ Corpus spongiosum and glans penis - soft ○ Painful and tender on palpation • Genitalia, perineum, and abdomen should be examined looking for trauma/ malignancy <u>Investigations – limited utility</u> • Intracorporal blood gas: ○ Shows hypoxic, hypercarbic and acidotic • Penile duplex doppler US - if diagnosis is indeterminate	• History: ○ Critical timing/duration - MUST relay a sense of urgency around the condition and link this to ischaemia (candidate may address this in answer to part 2) ○ Causes: ▪ 1 drug ▪ 1 other • Examination: ○ 2 out of 3 of: ▪ Tender ▪ Rigid / engorged penile shaft ▪ Soft glans	
		Feedback Statements – Did the candidate adequately:	
		• Identify key features of history of urological urgency • Demonstrate an awareness of underlying causes of the condition • Identify key features on examination	



Medical Expertise: Management (50%)	<u>Overview</u> - Analgesia should be provided, conservative measures have little evidence of success. - It is appropriate to progress to aspiration +/- irrigation/ vasoactive injection as initial management. - They should identify/convey that there is urgency to address the priapism and that with a 3 hour transfer time the procedure needs to be done in their ED. <u>Pre-Procedure</u> - Analgesia: PO (Paracetamol 1g, Ibuprofen 400mg, Endone 5-10mg). IV Fentanyl 25-50mcg, Morphine 2.5-5mg - Conservative / Supportive: Cold compress / IDC / IV saline hydration - Terbutaline PO (5-10mg) / SC 0.25-0.5mg – can repeat once after 15 mins if no effect (little evidence) - Haemodynamic monitoring if considering using or escalate to ephedrine/ phenylephrine/ other vasoactive injection - Consent <u>Procedure</u> - escalating approach, typically in order below. Also evidence to support direct injection of phenylephrine/vasoactive as primary 'minimally invasive' procedure. - Must be done in ED as >3h to transfer and time critical (<i>Must identify that procedure has urgency if d/w Urology regarding performing procedure. If does not mention need for aspiration/ flushing/ vasoactive procedure in some way before 3.5 minute prompt then must be marked below minimum standard</i>) - Local Anaesthetic: LA 1-2% Lignocaine, small needle. (not required if minimally invasive tech): - Dorsal nerve block - insert at 2 and 10 o'clock position at base of penis OR Ring block - inject around base of penis for complete block OR At site of butterfly needle insertion - Aspiration: 19G butterfly needle into corpus cavernosa at 10 o'clock or 2 o'clock position (no need to do both sides as they communicate) - Anywhere along the corpus cavernosa (not the glans) - Advance needle 45 degrees to skin drawing back on the syringe until blood is returned - Continue aspirating until either bright red blood is returned or detumescence is achieved - Aspirate and Irrigation: - if inadequate blood returns on aspiration or detumescence is not achieved can use saline 10-20ml N saline, up to 200ml - Intracorporeal vasoactive injection (a wide range of potential acceptable options) - Minimally invasive technique: Insert 25-27g butterfly needle into base of penis (Corpus cavernosum), aspirate blood to confirm the position and as primary procedure inject: - Phenylephrine 100-500mcg in 1-2 ml N saline every 3-5 minutes OR - Adrenaline e.g. 100mcg in ~1ml N saline, can be repeated every 20mins up to 3 attempts (Roberts and Hedges) - Use existing butterfly used for aspiration/ irrigation: - Phenylephrine 100-500 mcg every 3-5 mins for up to 1 hour. Roberts and Hedges – 200-400 mcg in 10-20 ml repeat flushes. - Adrenaline Dunn: 1-2 ml (10-20 mcg) of 1: 10 000 repeated 5 mins up to 10 ml (100 mcg). Roberts and Hedges: 10-20 ml of 1 mcg/ml repeated irrigations/flushes. - Metaraminol or Noradrenaline in appropriate dilution (e.g. Norad 1 mcg/ml 10-20 mls) - Success = sustained detumescence, resolution of pain. <u>Post Procedure Cares</u> - Potential complications: infection, bleeding, recurrence, specifically – risk of erectile dysfunction - Disposition – Successful procedure: - The penis may be swollen but should not be rigid or engorged/ aspirated blood should be bright red - Period of observation to ensure detumescence / remains flaccid. 2 hours a reasonable minimum (Roberts and Hedges), obtain urological advice +/- follow-up (e.g. review with Urology the next day, and at 4-6 week (no intercourse until then) - Unsuccessful procedure: Urgent Urology referral for a shunt (Winters procedure)	Minimally Competent Criteria: <u>Pre-Procedure:</u> - Use of LA as per left including site of injection <u>Procedure</u> - escalated approach: - Must be done in ED as >3h to transfer and time critical - Safely describes/details the procedure - Escalated approach: - Aspiration technique followed by flushing with saline then injection of vasoactive agent OR - Aspiration technique followed by vasoactive injection as per left OR - Describes primary injection of vaso-active (Note: Doses not required to be at standard, acceptable to check with reference or Urology) <u>Post Procedure Cares</u> - Complications - 2 of 4 from left including erectile dysfunction - Disposition: - Successful: - Dx post obs period with Urology FU - Unsuccessful: - Admit Urology	Feedback Statements - Did the candidate adequately: - Describe the preparation for procedure - Describe the actual procedure involved - Outline any potential complications - Outline the appropriate post procedure care
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Domain	Criteria	Marking rules to be 'at a minimum level of competence'/other comment	Criteria met / not met
Scholarship & Teaching (25%)	<u>Demonstrate skills in building the teacher learner relationship</u> • Check for level of understanding • Define learning goals matched to learner's needs • Demonstrate a structured approach to the topic • Establish rapport • Make the learner feel safe and supported • Encourage learner participation	• Develops rapport • Demonstrate a structured approach to the topic • Uses an appropriate teaching method: – Well-paced – Covers the topic in appropriate detail – Checks learner understanding/ clarifies uncertainty during the session	
	<u>Teaching technique</u> • Demonstrate well-paced communication • Use language appropriate for learner's level • Cover the topic in appropriate detail	Feedback Statements - Did the candidate adequately:	
	<u>Ensuring the learner has received and understood the relevant information</u> • Check understanding in learner (regularly and at conclusion) • Invite questions and clarify any areas of uncertainty • Summarise the session with appropriate emphasis of key elements • Suggest follow up activities/advise where to find resources. Note: A 'just at standard' candidate may provide a generic answer however an 'above standard' candidate is expected to name a source for the resource e.g., a national guideline, published article, specific chapter of textbook.	• Develop rapport with the junior doctor • Demonstrate a structured approach to the topic • Demonstrate well-paced communication • Check learner understanding and clarify any uncertainty	