

Lead Examiner

Candidate Number:

Co-Examiner

Final Mark:

SCENARIO

A 27 year old woman presents to your Emergency Department with left calf swelling for the last 2 days. She is a smoker who had a left knee arthroscopy approximately 10 days ago. She is otherwise healthy, takes no other medications, and has no drug allergies.

Question 1: How would you assess this patient's risk of a DVT?

Expected Response	Details & Comments	1.5 min
Prompt for pre-test risk if they move to investigation.		
History	Recent surgery , obesity, previous DVT , immobility , oestrogen therapy, other trauma, pregnancy, FHx, malignancy , smoking , hypercoagulable states, long-haul flight.	4 bold 1 other
Examination	Less than 50% predictive Swelling, tenderness, Homan's sign, fever. Consider also features suggestive of other pathology – eg wound infection, cellulitis	
Well's Criteria	1 point for: paralysis, cast, major surgery, local tenderness over deep vein, swelling of entire leg, affected calf 3cm greater than asymptomatic, unilateral pitting oedema. 2 points deducted if alternate diagnosis is at least as likely. Score 0 (Low Probability): 55% of patients but <5% incidence DVT. Score 1-2 (Moderate Probability): 30% of patients, 14% incidence DVT. Score ≥3 (High Probability): 15% of patients, 50-80% incidence DVT.	

Question 2: Discuss the investigations available for DVT.

Expected Response	Details & Comments	2 min
Ultrasound	Looking for venous compressibility. Serial USS may be indicated if intermediate+ risk. Pro: Non-invasive , painless, inexpensive and available. highly sensitive (above knee) with Doppler , repeatable. Con: Lower yield for distal veins or small calf veins. Operator-dependent. May require serial studies.	
D-dimer	Marker of coagulation activity. - In low risk patients negative test excludes diagnosis. - In medium risk patients role is not clear. <i>Of no value in this patient, as risk is high, and imaging indicated anyway.</i> Pro: 70-90% sensitive, proportionate to clot load. Con: Multiple techniques with very different sensitivities and cut-off values, large number of false positives. ELISA: "Gold Standard" but labour intensive. Latex Agglutination: inexpensive, rapid bedside tests but lower sensitivity – SimpliRED is best of these.	
Venography	Pro: "Gold standard". Con: Painful, 1% DVT risk, ?historical.	
MRI/CT +/- venography	Pro: 80% sensitive, 100% with venography, cheaper than venography. Con: limited availability, high cost.	

Question 3: The scan confirms the presence of an isolated, below-knee DVT. Describe and justify your management.

Expected Response	Details & Comments	2.5 min
Key Issues	- Explanation and consent to Rx - Symptomatic Rx - Risk factor control - Need for anticoagulation - Follow up	
Supportive	Explanation of findings, treatment and implications. Establish no contraindications: pregnancy, bleeding diathesis, bleeding lesions • Address risk factors – smoking cessation not likely to succeed at this stage • Simple analgesia	
Anticoagulation / Antiplatelets This is controversial. No clear evidence of benefit in this case, provided not recurrent, and no reversible risk factors Candidates expected to demonstrate familiarity with options, and justify choice	OPTIONS (may be used in combination) 1. Aspirin with follow-up 2. Heparin - Low molecular weight heparin eg enoxaparin 1.5 mg/kg sc daily or 1 mg/kg sc bd – most practical immediate option, as may be administered on outpatient basis 3. Warfarin for 3 months – INR target 2.0 – 3.0	
Disposition	Short stay or Hospital-in-the-Home admissions are feasible Repeat USS 7 to 10 days (depending on options) – may see no difference, but key is to detect clot progression Follow up with Haematology, and Orthopaedics Anti-embolic stockings – minimises post-thrombotic syndrome	
Implications	Discuss with, and inform patient of implications for: - Activities: sporting, other high risk - Menstruation: no effect expected - Employment: esp if involves physical tasks - Pregnancy: family planning requires discontinuation of warfarin - Travel: esp if on long-haul journeys - Duration of warfarin: typically 3 months, provided not recurrent - Complications: post-thrombotic syndrome, hence importance of compression garments, recurrent DVT - Ongoing risks: smoking, future surgery, OCP	optional

Question 4: If this patient was pregnant, how would this influence your management?

Expected Response	Details & Comments	1 min
Aspirin only	Ongoing risks, ?reconsider anticoagulation.	
Warfarin	Prompt if not raised. Absolutely contra-indicated during first trimester due to teratogenicity. Not usually used during rest of pregnancy unless mechanical valve.	
LMWH's	Anticoagulant of choice.	
Unfractionated Heparin	May consider changing to this peripartum	
Duration	Continue until at least 6 weeks post partum and minimum of 6 months total.	
Notifications	Patient's obstetrician and antenatal service GP	

Comments: (if you fail the candidate, please state why)

If the candidate fails the exam overall, what feedback would you suggest CIC provide for this SCE?

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