

**Instruction to Candidates** – Aim for 8 minutes

**You are a Foundation doctor working in a General Practice.**

**Rupert Brown is presenting with leg pain.**

**You have 6 minutes to take a focused history and perform the appropriate examination, after which the examiner will ask you some questions.**

**Patient name:** Rupert Brown

**Age:** 56 years

Patient looks comfortable at rest.

**Focused History:**

**PC & HPC**

“I’ve been having a lot of pain in my leg; I can’t walk to work without stopping a few times!”

You have been experiencing this pain for the last month or so. The distance you are able to walk before you have to stop due to the pain has been getting shorter and shorter.

The pain is in your right calf, comes on when you walk around 200 metres, “feels like cramping”, does not radiate, gets relieved by rest (when you stop walking), you have tried taking ibuprofen since you thought it was a muscle cramp, this has not really helped.

No shortness of breath. You feel that the cramping in your leg is stopping you from continuing to walk.

Associated with some cramping in the right buttock.

Severity: 9/10

ICE: “I hope it’s just muscular pain... I’d like some painkillers to make it go away so that I don’t have to keep stopping multiple times like that on my way to work.”

**PMH**

MI 2 years ago – stent *in situ*

Hypercholesterolaemia

**DH**

Atorvastatin

Aspirin

Clopidogrel

Bisoprolol

Losartan

Allergies: Cannot tolerate Ramipril (Dry cough)

## **SH**

Ex-heavy smoker – 40 a day, started at 14 years old, stopped 2 years ago when he suffered from a heart attack

Drinks 1 pint of lager daily

Works in Asda

Is divorced and his wife is the sole custodian of their only daughter

## **FH**

Father died of MI at the age of 61

### **Peripheral Vascular Examination**

**Findings** (To be communicated to the student)

Inspection: The skin looks thinned.

You find that there are absent femoral, popliteal, dorsalis pedis and posterior tibial pulses.

The right leg turns pale when you raise it by less than 20 degrees, the left leg needs to be raised at 45 degrees for this to happen.

### **What are your differentials?**

Intermittent claudication

(Also: peripheral arterial disease, limb ischemia... Ask student to clarify)

Musculoskeletal pain (Rheumatological/ Orthopaedic causes)

(Diabetic) neuropathy

### **What do you suspect the diagnosis to be?**

Intermittent claudication (Fontaine classification\*[insert hyperlink to classification\\*](#): Stage II of Peripheral Arterial Disease)

### **What first-line imaging test could be performed in order to confirm your diagnosis?**

Colour duplex ultrasound

### **What bedside test could be done in order to rule out critical limb ischemia?**

Ankle-brachial pressure index (ABPI) [\\*insert hyperlink to how to do an ABPI\\*](#)

Area	Clear Fail	Fail	Satisfactory	Good	Excellent
PC & HPC: Good range of open and closed questions asked.					
PMH & DH					
SH					
FH					
ICE					
Performed appropriate (focused lower limb peripheral vascular examination)					
Differential dx					
Investigations					
Rapport/communication skill					
<b>Overall</b>					

## **Feedback**

### **Examination**

Clarify the exact site of the pain before starting examination

Inspect and compare each lower limb for colour, ulcers, gangrene (tissue necrosis), missing limbs or toes, scars, hair loss, muscle wasting (mention loudly to the examiner what you are looking for)

Palpate both legs for temperature, capillary refill time, and pulses: (offer to palpate the femoral pulse, examiner will ask you to move on to other pulses), popliteal, posterior tibial and dorsalis pedis pulses

Perform a gross assessment of peripheral sensation

Perform Buerger's test:

Buerger's test is used to assess the adequacy of the arterial supply to the leg. It is performed in two stages:

1. With the patient supine, elevate both legs to an angle of 45 degrees and hold for 1 to 2 minutes. Observe the colour of the feet. Pallor on elevation of the leg by less than 20 degrees indicates severe ischaemia.
2. Then sit the patient up and ask them to hang their legs down over the side of the bed at an angle of 90 degrees. Gravity aids blood flow and colour returns in the ischaemic leg. The skin at first becomes blue, as blood is deoxygenated in its passage through the ischaemic tissue, and then red, due to reactive hyperaemia from post-hypoxic vasodilatation.

Both legs are examined simultaneously as the changes are most obvious when one leg has a normal circulation.

Tip: Remember the 6 Ps of Peripheral Arterial Disease:

1. PAIN
2. PALLOR
3. PULSELESSNESS
4. PARAESTHESIA
5. PARALYSIS
6. (PERISHINGLY) COLD

References (Accessed July 2020):

Oxford Handbook of Clinical Medicine 9<sup>th</sup> Edition

GP Notebook (<https://gpnotebook.com/simplepage.cfm?ID=-1932525545>)

NICE guidance (<https://www.nice.org.uk/guidance/cg147/chapter/Recommendations>)

Geeky Medics (<https://geekymedics.com/peripheral-vascular-examination/>)