A 63-year-old man came to the clinic complaining of leg pain.

Q1. Take a focused history

Q2. Mention the physical findings you'll look for in your examination?

Q3. If the patient, who is a smoker and has uncontrolled DM & HTN, came complaining of calf pain that increases after walking a certain distance and is relieved by rest. Patient's ABI was found to be 0.6. What is your diagnosis?

Q4. Mention 5 differential diagnosis?

Q5. What are the signs of critical Stenosis (>60%)

Q6. What is the Initial investigation of choice In case of lower limb ischemia?

Q7. What's the Gold standard investigation for chronic lower limb ischemia?

Q8. What are the lines of management that we can provide for this patient?

Q9. Mention 3 Early & late complications of bypass surgery?

Q10. What are the indications of amputation?

Q11. What are the types of amputations?

Q1.

Analyze the leg pain (SOCRATES)

Exact site? Unilateral vs. Bilateral?
Onset? Gradual
Characteristic?
Radiation?
Timing? Night pain? Intermittent? Progressive?
Exacerbating/ relieving factors?
Severity?
Associated with

- Intermittent claudication (Always ask about claudication distance in history)
- Burning/aching pain in the feet (especially at night)
- Rest pain

    1. worst at night/lying
    2. Coldness
    3. Numbness
    4. Paresthesias
    5. Color change

- Non healing & or ischemic Ulcers
    - ulcers at the foot dorsum and leg shins
- Gangrene/ pregangrene
    - between the toes
- Erectile dysfunction*
- Cold skin/feet
- Increased occurrence of infection
- Chest pain/abdominal pain

Risk factors:
Atherosclerosis (same as RF's for CAD and CVD)
Smoking (2.5-3x)
Diabetes 3-4x
Hypertension
increased age >50
male and family history
RARE: **homocysteinuria**

Ask about Medical / surgical / social / drug histories?

DM/HTN/Smoking, are they controlled
Hypercholestrolemia/Stroke/AF
Previous Cath? Surgeries?
Does the patient take any medications that may induce vasoconstriction on a daily basis?

Q2.

1. Muscular atrophy
2. Decreased hair growth
3. Thick brittle toenails
4. Tissue necrosis/ulcers/infection
5. Absent pulses
6. Bruit (auscultation)

Q3.

Diagnosis: Peripheral Vascular Disease (PVD) / Intermittent Claudication (The checklist gave a point for whoever said intermittent claudication as the diagnosis)

Q4.

1. **Vascular** ⇒ Deep Venous Thrombosis, Peripheral Vascular Disease.
2. **Neurospinal** ⇒ Disc disease, Spinal stenosis.
3. **Neuropathic** ⇒ Diabetes Mellitus, Chronic ethanol.
4. **MSK** ⇒ Osteoarthritis, Chronic compartment syndrome.

Q5.

Rest pain
Ischemic ulcer
Gangrene

Q6.

Ankle-Brachial Index (ABI) —> Duplex Ultrasound

- Intermittent claudication ⇒ ABI: 0.5-0.9
- Rest pain ⇒ ABI: 0.2-0.49
- Tissue loss ⇒ ABI: <0.2

Q7.

Arteriogram (CT angiogram)

Q8.

Management of PVD:

1. **Medical & lifestyle modification**
    a. Risk factor modification ⇒ smoking cessation, control DM & HTN.
    b. Structured Exercise therapy ⇒ open/increase the collaterals
    c. Drug therapy ⇒ Aspirin, Plavix (clopidogrel), Statins
2. **Endovascular**
    a. thrombolytic therapy ⇒ Acute on top of Chronic.
    b. Peripheral transluminal angioplasty
    c. Peripheral stenting
    d. Atherectomy
3. **Surgery**
    a. bypass graft
    b. Endarterectomy
    c. Amputation (gangrene)

Q9.

Early: postoperative hemorrhage, acute renal failure, trash foot

Late: Failure of the entire reconstruction, pseudoaneurysm, late graft infection.

Q10.

Indications for amputation

1. **Unreconstructable Peripheral Artery Disease.**
2. **Extensive tissue loss =** Gangrene persists and surgery wasn't possible
3. **Fixed flexible deformity**

Q11.

- **Types of amputations**
    1. Digit amputation
    2. Ray amputation (big toe and head of metatarsal)
    3. Transmetatarsal amputation (forefoot)
    4. Syme amputation (ankle disarticulation)
    5. Below knee Amputation (BKA)
    6. Through knee amputation (Knee disarticulation)
    7. Above knee amputation (AKA)
    8. Hip disarticulation.