

## *Lower limb ischemia*

<b>Chronic lower limb ischemia</b>	<b>Acute lower limb ischemia</b>
<p>chronic occlusion of the artery that supply the limb usually by <b>atheroma</b></p>	<p>Sudden occlusion of the artery that supply the limb usually by <b>embolus</b> (from left atrial fibrillation )</p>
<p><b>Risk factors:</b> DM , smoking , HTN , hyperlipidemia</p>	
<p><b>Symptoms</b> Intermittent claudication Brought by walking , relieved by standing still <b>Most common : in the calf</b> SFA &gt; 70% &gt; calf Aortoiliac &gt; 30% &gt; buttock and thigh <b>Rest pain</b> Mainly at night , exacerbated by elevate the limb or lying down , lessened by hanging the foot out of the limb or sleep on the chair <b>Ulcers</b> on the shin , dorsum of the feet <b>Gangrene</b> Affect the most distal part of the limb &gt; Between the toes <b>Dry</b> : gradual occlusion of bloodstream <b>Wet</b> : superadded infections are present <b>Erectile dysfunction</b> &gt; leriche's syndrome</p>	<p><b>6 Ps</b> Pallor pulseless paresthesia paralysis pain on squeezing muscle perishing cold</p>

## Sensorimotor impairment

### Physical exam

**Inspection** : Thick shiny skin , brittle nails , pale limb , muscle atrophy , loss of hair , ulcers and tissue loss

**Palpation** : cold limb , delayed capillary refill , edema , reduce pulses distal to the occlusion

**Auscultation** : femoral bruit

+ **Burger test** :

pale leg by elevation

Flushed red foot by place in dependent position

### Diagnosis

1-Doppler and ankle brachial index  
<0.9 is diagnostic

0.5-0.9 - claudication

0.2-0.49 - Rest pain

< 0.2 -Tissue loss

2-Duplex US

3-CT angiogram

4-Angiogram

### Medical Treatment :

1-risk factors modifications

**Smoking cessation : the most imp**

2-excresive therapy : to improve the collaterals

3-Drug therapy

-DM control

Oral if HbA1c < 7 , fasting Blood glucose in the range of 140-180

Insulin if fasting blood glucose >180

### Diagnosis

#### Clinically

Pt suddenly developed severe pain or numbness

Pt have no history of claudication and have the source of emboli

### Emergency case

Ischemia >6 hours results in limb loss

#### Treatment

1-I.V heparin

2-pain control

3-Embolectomy

-Thrombolysis

-statin : LDL level should be below 100  
 - clopidogrel and aspirin  
 -ACE inhibitor  
 Catheter based revascularization

**Operation**

-Direct procedure: aortoiliac endarterectomy  
 -Bypass surgery

**Postoperative complications**

**Early**

Hemorrhage  
 Acute Graft occlusion  
 Bowel and spinal cord ischemia  
 AKI  
 Acute limb ischemia

**Late**

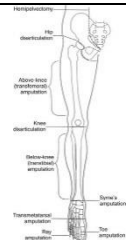
Graft occlusion secondary to obliterative disease  
 Failure of reconstruction  
 Pseudoaneurysm  
 Post op iatrogenic impotence  
 Late graft infection  
 Aortoenteric fistula

Complications of **delayed** management

- 1- limb loss
- 2- compartment syndrome

**Amputation**

Unreconstructable peripheral vascular disease  
 Fixed flexion deformities  
 Extensive tissue loss



## Critical limb ischemia (CLI)

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- Indicative of limb-threatening arterial occlusion
- Characterized by the presence of any one of the following:
  - Rest pain lasting  $\geq 2$  weeks
  - Nonhealing ulcers
  - Tissue loss (gangrene)

## Lower limb arterial anatomy:

- Starting at the abdominal aorta, the abdominal aorta splits into common iliac arteries; right and left >The common iliac arteries then divide into the internal and external branches >the external iliac artery becomes the common femoral artery as it crosses under the inguinal ligament to enter the femoral triangle>The common femoral artery then gives off a deep branch known as the profunda femoris artery, this is also known as the deep femoral artery and the femoral artery then continues as the superficial femoral artery >passes into the posterior compartment of the leg becoming the popliteal artery >which divides into anterior and posterior tibial arteries>posterior tibial artery gives off a fibular artery, which is referred to sometimes as the peroneal artery, the anterior tibial artery becomes the dorsalis pedis artery.

*Good luck*