PERIPHERAL ARTERIAL DISEASE

(i)**Atherosclerosis**
(ii)**Thromboembolic** (atherosclerosis/cardioembolic/aneurysm)
(iii)**Anatomical**
Pop art entrapment:
anat=courses around meial head of gastroc w/ IC on flexion; 2/3 bilat, 10% involve vein; divide gastroc medial head
func=normal position, compressed against hypertrophic soleus/gastroc; treat if symptomatic only
(iv)**Developmental** (FMD/ACD: cystic degenof adv w/ rapid onset severe IC; smooth stenosis on angio; resect w/ vein graft)
(v)**Inflammatory** (Buerger's/Takayusu's)
(vi)**Vasospastic**
(vii)**Hypercoagulable states**

INTERMITTENT CLAUDICATION (ABPI 0.5-0.9)

Reproducible pain in specific muscle compartment precipitated by exertion and relieved by rest
Blood flow insufficient for metabolic demands of muscle (130-150mls at rest, 10x on exertion) → "angina"
Patterns: Buttock/Thigh (**aortoiliac**)//calf (**SFA**)//LeRiche's= **both int iliacs** so both buttocks and impotence
Progression: Slow allows collaterals and resolution ||acute has no collaterals
Associated: **paraesthesia** due to (a) skin->muscle shunting (b) nerve ischamia

Diff Dx:
SpSt: occlusion of cauda equina in extension; relieved on flexion so sit down and forwards
Prolapsed IVD/nerve root compression: not relieved on standing still
Hip/knee OA: present from first step and gets better on walking
Venous claudication: occlusion of iliofemoraldeep veins on exercise → bursting pain/swelling

CRITICAL LIMB ISCHAEMIA (ABPI <0.5)

Rest pain (i)requiring opiates for 2+ wks (ii) with tissue loss with (iii) ankle BP <50/toe<30 (TASC II=70/50)
Often lie in bed with leg hanging dependent/pain at junction of normal and affected tissues
Ulcers: full thickness tissue loss >4wks; **punched out on bony prominences**
Gangrene: **tissue necrosis + infection** (dry: line of demarcation, shrunken)(wet:no line of demarcation, swollen)
autoamputates spreads to threaten limb

INVESTIGATIONS

NICE: Duplex US first-line if considering revasc/assess treatment response; MRA if need more Ix before intervention
General indications: PAD symptoms/atypical leg pain/non-healing ulcer/planning intervention/before compression

1. Doppler: Pulses + ABPI
*ABPI: (i)CLIP<0.5 (ii)IC 0.5-0.9 (iii) >1.0 calcification (diabetes/renal failure) *Normal ABPI w/IC: do exercise ABPI**
(increased flow reveals occult stenosis)
2.Duplex US: first-line in all if considering revasc/assess treatment response
3.MRA: Good=non-invasive, no radiation/no Ca2+ degradation||Bad=poor resolution/Nephrogenis Systemic Fibrosis
4. CTA: Good=Good resolution, non-invasive||Bad: calcium degradation/contrast/radiation
5**. Catheter Arteriography:** stenosis <70%/short lesions <10cm may be amenable to angioplasty