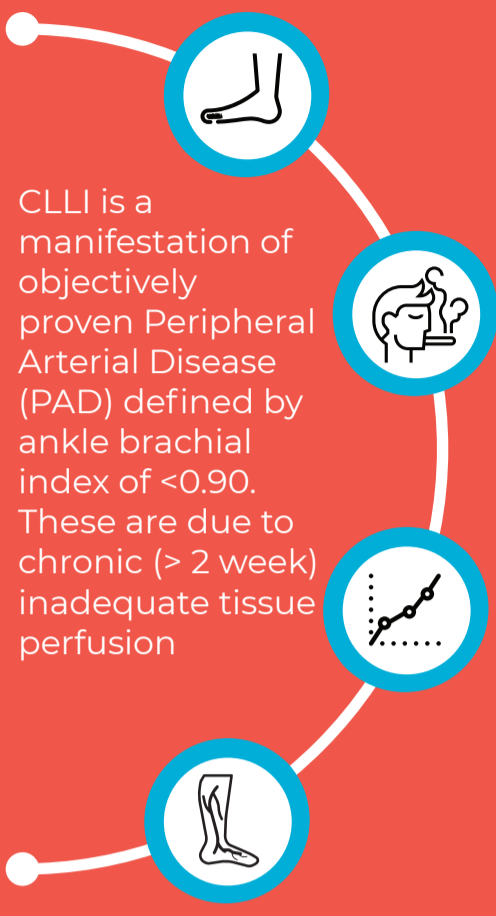




# Standard Treatment Workflow CHRONIC LOWER LIMB ISCHEMIA (CLLI)

## ICD-10-M62.262



### PRESENTATION

- Claudication or pain at rest, paresthesia, with or without tissue loss, impaired healing or infection (ulcer or gangrene)
- Absent/weak pulse depending on level of occlusion

### COMMON CAUSES OF CLLI

- Atherosclerosis: Elderly, smokers with diabetes mellitus or chronic renal insufficiency
- Vasculitis: Buerger's disease, Takayasu arteritis
- Aortic coarctation
- Delayed presentation of an Acute Ischemic Insult: Trauma, Thromboembolism, Dissection

### CLINICAL STAGING

- The clinical profile is classified into
- Asymptomatic
  - Mild claudication (No life-style limitation)
  - Moderate or severe claudication (Life style limiting)
  - Chronic severe (or critical) limb ischemia: Compromised blood flow, causing limb pain at rest +/- ulcers or gangrene

### ANKLE BRACHIAL INDEX: Ratio of Blood Pressure in ankle and in arm. The resting ankle brachial index (ABI) is the initial diagnostic test

- Interpretation
  - 0.90 to 1.40 is normal
  - <0.90 is abnormal and indicates presence of PAD
  - 0.41 to 0.90 indicates mild to moderate PAD
  - <0.40 indicates severe PAD
  - >1.40 indicates abnormal (calcified arteries)

### CLINICAL EVALUATION

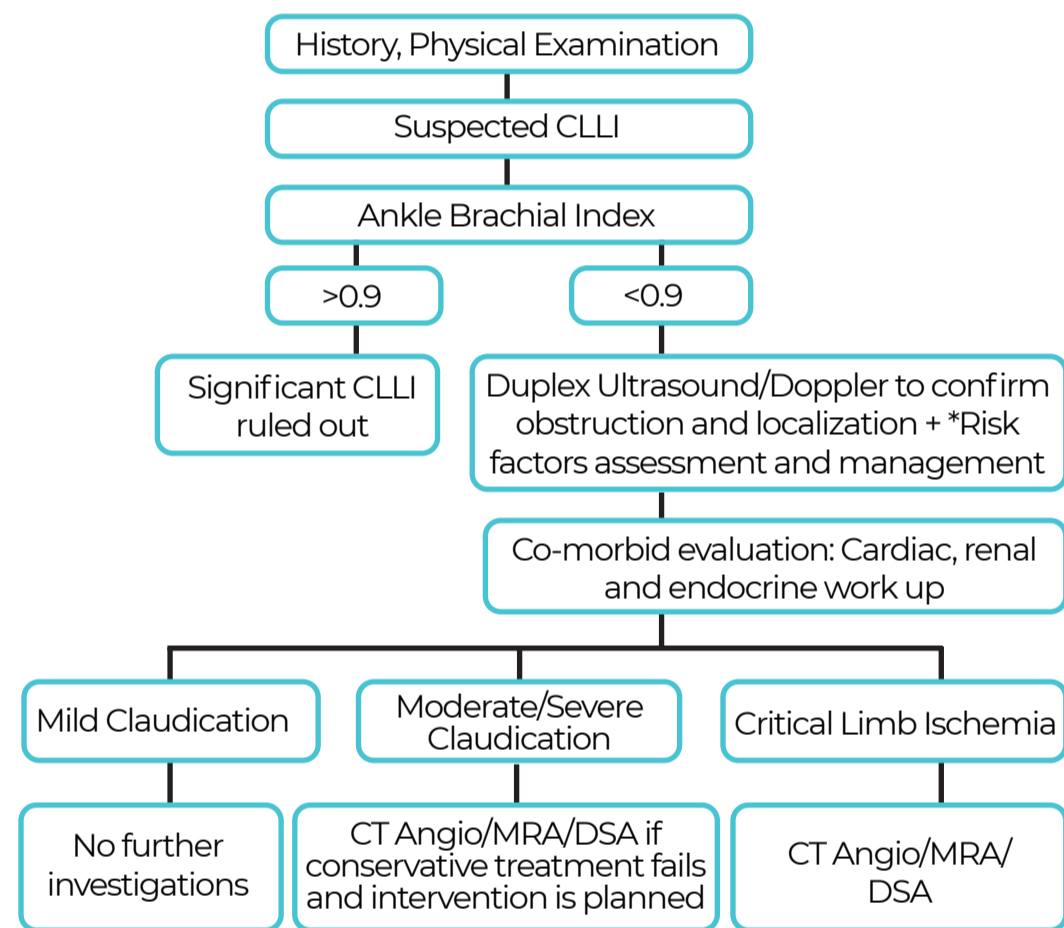
#### HISTORY

- Claudication: Pain/cramp in calf/foot/thigh/buttock with walking that is relieved with rest
- Duration and progress of symptoms
- Onset, duration and progress of ulcer/gangrene, if any
- Rest pain
- Identifying risk factors: Diabetes, hypertension, smoking, ischemic heart disease, family history, dyslipidaemia
- Syncope/blackout/stroke/mesenteric ischemia
- History suggestive of cardiac disorder (angina/palpitations, shortness of breath/loss of consciousness)

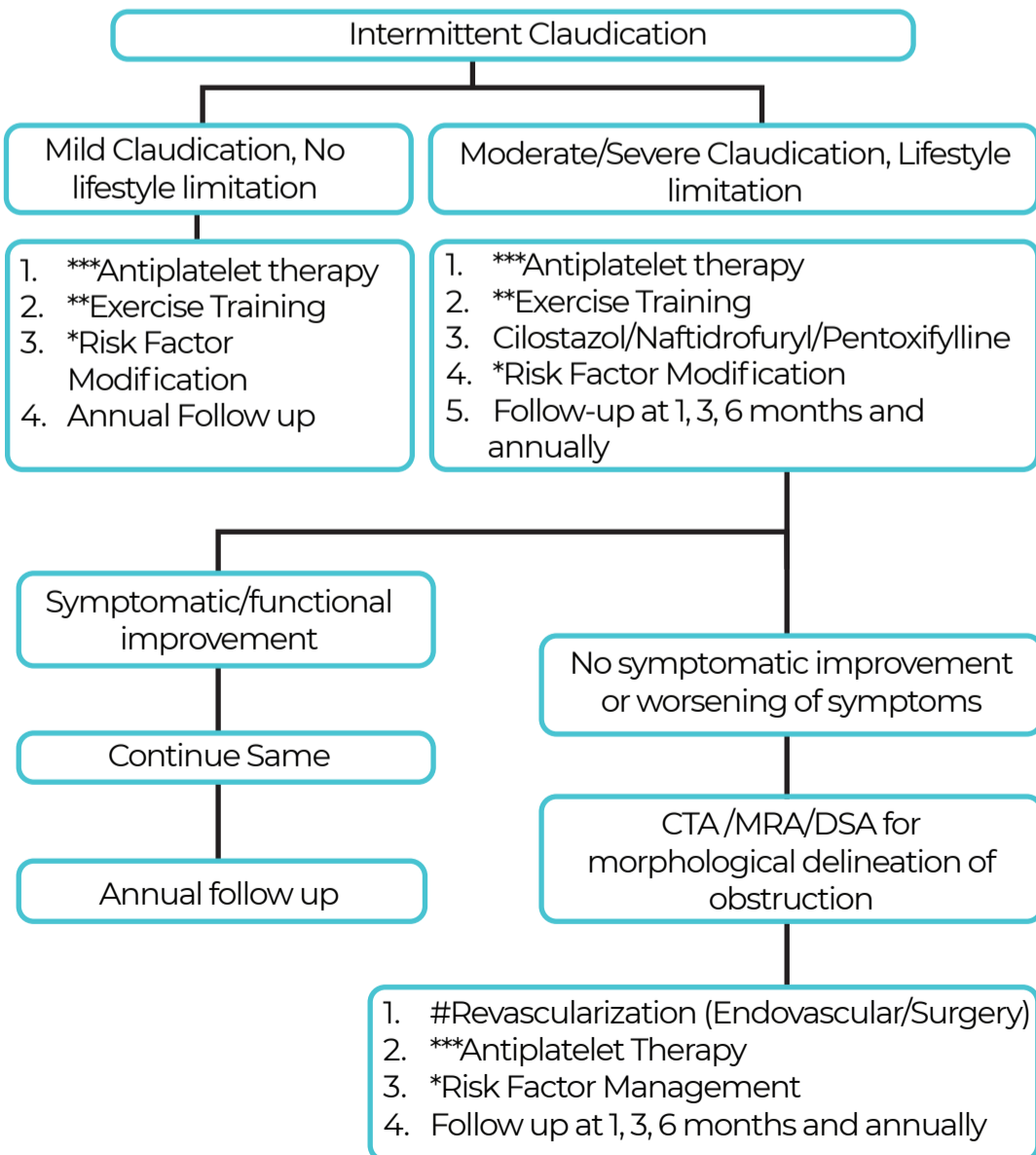
#### EXAMINATION

- Blood Pressure (Including ankle-brachial index, toe-brachial index in diabetes, elderly, renal insufficiency)
- All peripheral pulses
- Condition of the limb: temperature, colour, hair loss, atrophy, nail bed capillary filling, sensation and motor power, gangrene/pre-gangrene
- Wound inspection (if any)
- Comorbidity evaluation: CVS, Renal Diabetes mellitus, CNS, neuropathy
- Evaluation for possible venous conduits

### DIAGNOSTIC EVALUATION OF A PATIENT WITH CLLI



### MANAGEMENT OF INTERMITTENT CLAUDICATION



DIFFERENTIAL DIAGNOSIS OF CLLI	DIFFERENTIATING TEST
Spinal stenosis, root compression	Ankle brachial index (ABI), Doppler
Arthritis	ABI, Doppler, X-Ray
Venous Claudication	ABI, Doppler
Compartment Syndrome	ABI, Doppler, compartment pressure

### MANAGEMENT

#### \*RISK FACTOR MANAGEMENT

- Lifestyle modification (graded exercise)
- Control of HTN (BP < 140/90), Control of Diabetes Mellitus (HbA1c < 7.0)
- Low fat diet, exercise
- Atherosclerosis: Start statins, antiplatelets

#### \*\*EXERCISE REHABILITATION FOR CLAUDICATION

Graded and supervised walking three times a week, beginning with 30mins and increasing to 1 hour per session, at an intensity that will induce claudication within 3-5 mins

#### \*REVASCULARISATION (PREREQUISITES)

- Good distal vessels (run-off)
- Able to walk before critical limb ischemia
- Life expectancy of >1 year
- Satisfactory general condition

#### MEDICAL MANAGEMENT

- Antiplatelets\*\*\* – Aspirin 75-100mg orally/ Clopidogrel 75mg orally OD
- Analgesic – Paracetamol +Opioid
- **CIRCULATORY MODULATORS**
- Cilostazol 100mg orally. (C.I. in CHF, unstable Angina, Recent M.I., Tachyarrhythmias)
- Naftidrofuryl 200mg orally TDS
- Pentoxifylline 400mg orally TDS (C.I. in recent cerebral/retinal haemorrhage, intolerance of methyl xanthines)

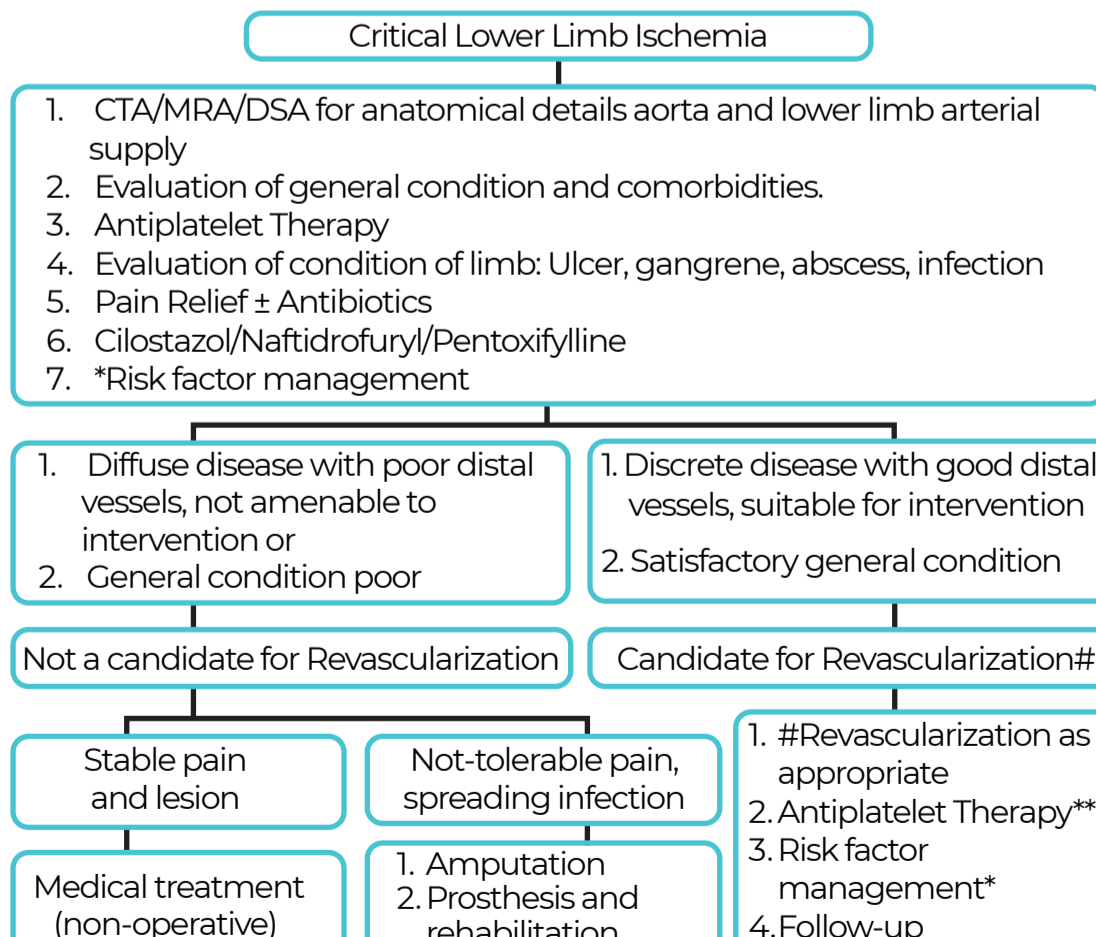
#### LOCAL WOUND MANAGEMENT

- Prevention and treatment of infection
- Leg dependency, off-loading, non-adherent dressing, abscess drainage, debridement, digital amputation<sup>\$</sup>

#### AMPUTATION<sup>\$</sup>

- Non-salvageable limbs, fixed contractures, severe infected/necrosis, failed revascularisation with persistent tissue loss

### MANAGEMENT OF CRITICAL LOWER LIMB ISCHEMIA



### ABBREVIATIONS

CT: Computed Tomography Angiography  
DSA: Digital Subtraction Angiography

MRA: Magnetic Resonance Angiography  
PAD: Peripheral Arterial Disease

### REFERENCE

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### KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES