Background:

- Missed diagnoses of limb ischaemia are common causes of litigation against GPs, as delays in diagnosis result in the avoidable loss of a limb.

- Why is it missed? Often due to failure to be considered as a diagnosis, esp. younger patients.
  - In many missed cases doctors have purported to have felt pulses that could not have been present - a ‘weak’ or ‘faint’ pulse is likely not present at all.

- Chronic limb threatening ischaemia (CLTI) is particularly difficult to pick up, and although chronic in presentation still needs immediate vascular review to reduce risk of amputation:
  - It can have a slow, insidious onset and often no history of intermittent claudication.
  - It is relatively rare; even in patients with intermittent claudication only 1-2% will go on to develop CLTI (a full time GP may expect to see 1 case of CLTI per year).

Assessment:

- Consider acute limb ischaemia in all cases of acute leg pain, including those under the age of 60 and without risk factors, if any of ‘The 6 Ps’ is present:
  - Pain – always present
  - Pulselessness – ankle pulses always absent (if pulse feels weak, you’re probably not feeling it)
  - Pallor (or cyanosis and mottling) variable may be subtle, compare sides
  - Perishing coldness may be subtle, compare sides
  - Paralysis and Paraesthesia or reduced sensation are late, limb threatening signs
  - If limb ischaemia is a possibility - measure ankle blood pressure with a pocket Doppler and cuff; no Doppler signals mean a threatened limb requiring emergency referral

- Consider chronic limb threatening ischaemia and assess as follows:
  - Persistent pain in the forefoot and toes, typically worse at night and relieved by hanging legs down; typically patients are woken in the early hours with pain which is eased by hanging their foot down, and they may take to sleeping in a chair
  - Non-healing foot wound +/- infection (be aware patients with peripheral neuropathy may present with CLTI with NO pain due to the neuropathy)
  - Be aware symptoms can easily be confused with other causes of foot pain e.g. cellulitis, gout, arthritis and that the foot often looks pink or red with apparently normal capillary refill time when sitting with the foot down, due to hyperaemia
  - Foot pulses should be palpated but be mindful that there is a substantial false positive and negative rate even by experienced vascular surgeons
  - Do Buerger’s test: lay patient down, elevate both legs to 45 degrees for 1-2 minutes and look for pallor; then hang legs down at 90 degrees and look for reactive hyperaemia
  - ABPI is unreliable in suspected CLTI - do not use ABPI in primary care to determine referral in patients in whom CLTI is suspected
  - Have a high index of suspicion in patients presenting with foot symptoms if they have risk factors for PAD - IHD, stroke, smoking, diabetes (esp. if peripheral neuropathy as symptoms will be masked)

Management:

- ALL cases of acute OR chronic limb threatening ischaemia need urgent admission to vascular surgeon.

References: BMJ 2013  BMJ 2018