The excellent CME article by Dr. Velladaruchi and Prof. Sritharan[1] provides a comprehensive review about approach to a patient with peripheral arterial disease (PAD) – which conventionally refers to lower-limb arterial disease. Since this is a significant problem in India, few additional vignettes might underscore the importance of clinical exam in this patient population. CME articles in IJVES are aimed towards junior doctors, especially those in training in specialties other than vascular surgery.

Few facts to be borne in mind as follows:
1. A third of patients with PAD are asymptomatic. They do not need any further work up apart from good clinical exam and ankle-brachial index (ABI) but need aggressive medical therapy to prevent future systemic cardiovascular events like myocardial infarction, stroke, limb loss etc., since these patients are at a high risk for these rest of their life. Presence of PAD, symptomatic or not, is the leading indicator of systemic atherosclerotic burden and predictor of future cardiovascular events
2. Claudicators rarely progress to Chronic Limb Threatening Ischemia (CLTI) –<1% undergo amputation over a year. However, in India, external injury, mostly because of barefoot walking, pushes a patient toward limb and life-threatening ischemia. Hence, the importance of preventing a wound with good foot care and footwear needs to be emphasized
3. Once the patient develops limb-threatening ischemia (rest pain, wound and gangrene), there are no effective medical therapies, and patients need revascularization as soon as possible
4. It is well documented that primary amputation in these patients is more expensive with increased complications than vascular reconstruction in mid and long term. The following diagram illustrates the published data [Figure 1]
5. As indicated in the CME article, the diagnosis of PAD remains completely clinical, and further diagnostics and therapies are dictated by clinical findings as indicated in Table 1 below.

At the end of a good clinical examination, which takes about 15 minutes, a clinician should be able to achieve comprehensive diagnostic and management strategies, before subjecting the patient to any further invasive testing or interventions. The five endpoints of clinical examination are as follows:
1. Reach presumptive diagnosis, grade functional severity of disease – asymptomatic, caludicant – disabling versus non disabling, chronic limb-threatening ischemia, which could also be life threatening
2. Determine the anatomical level of the diseases such as aortic, aortoiliac, femoral, and distal

3. Assess the present and future systemic risk factors for cardiovascular complications
4. Determine the pathological diagnosis – atherosclerosis, thromboangiitis obliterans, vasculitis etc
5. Determine the need for noninvasive workup – ABI, duplex.

Any further invasive investigation, if required, should be performed only after consultation with vascular specialist, which ideally should be a vascular surgeon.

Claudication is not an “automatic” indication for invasive workup and revascularization. Intermittent claudication should be further defined as follows:
• Nondisabling claudication does not interfere with patient’s daily lifestyle. The same claudication distance may have different effect depending on patient’s lifestyle. For example, a 70-year-old patient walking 200 m may not be disabling. A younger patient, especially manual worker who can walk even 1 km, can be disabling for him/her. However, initial workup remains only Doppler examination and aggressive medical therapy with lifestyle modification (stop smoking, control DM, and foot care) and medical/exercise therapy. Walking distance can be measured on a treadmill (if no cardiac history) and repeated at about 6 weeks to document any improvement. As a rule, nondisabling claudication does not warrant any form of angiogram or intervention
• Disabling claudication: limitations that affect the quality of life are as follows:
  • Affects daily living or earning a livelihood
  • History of significant exercise intolerance
  • Reduced function by appropriate quality of life questionnaire

![Figure 1: Relative mortality rates](image)
Reduced treadmill performance in nonspecific leg symptoms.
Note: Only the first is absolute and others are relative.
Initial therapy consists of aggressive medical therapy as outlined. Failure to improve 6 weeks to 3 months would be an indication for further workup and therapy, only after evaluation by a vascular surgeon. Response is upward of 80% in patients with femoral-distal occlusive diseases.

Unfortunately in India, the patients with chronic limb-threatening ischemia (CLTI which will replace critical limb ischemia in the future) are referred late to vascular surgeons though most present early to medical professionals. This contributes significantly to the overall outcome and cost of providing care to these patients.

1. Late referral results in patient presenting in systemic sepsis with its inherent problems
2. Patient will need to undergo multiple procedures (wound debridements and revascularization). This comes at a cost of increased morbidity and mortality
3. This also lowers the chances of limb salvage in spite of successful revascularization
4. Increase in systemic events such as major adverse cardiac events, renal dysfunctions, and others markedly increase patient morbidity
5. Since the patient comes with septic foot/significant wound burden, the healing process is prolonged
6. Overall cost is markedly increased.

Now with increasing availability of well-trained vascular surgeons (whose focus is only on vascular diseases) across the country, good clinical evaluation and early referral will save many limbs and lives.

Kalkunte R Suresh
JIVAS, Bengaluru, Karnataka, India

Address for correspondence: Dr. Kalkunte R Suresh,
E-mail: kalsuresh48@gmail.com

REFERENCE
1. Narayanan S, Boolagapandian V. How to approach a patient with peripheral arterial disease. Indian J Vasc Endovasc Surg 2018;5:274-80.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.