Out-patient Referrals to the West Yorkshire Vascular Service (WYVaS) for Intermittent Claudication

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Aim:
To ensure patients with suspected peripheral arterial disease receive a comprehensive assessment and accurate diagnosis, appropriate secondary prevention with exercise advice, and are referred to the vascular service at the right time when they have significantly limiting/disabling intermittent claudication in line with NICE guidance and a contemporaneous evidence based.

Benefits:

- Improved patient functional ability and independence
- Improved patient outcomes through secondary prevention reducing cardiovascular events/mortality and disease progression/limb loss
- Improved patient experience as increased number of patients can be managed within primary care/close to home
- Improved patient knowledge and empowerment to be involved in their own care through smoking cessation and self-directed/supervised exercise
- Improved compliance in primary and secondary care with NICE guidance
- Evidence based practice in primary and secondary care
- Improved out-patient capacity in secondary care
- Reduce health inequalities between patient groups and conditions – CAD vs PAD
- Reduce variation in care around the region
- Cost benefits to primary and secondary care that can be shared and used collaboratively to deliver smoking cessation and exercise programmes
- Ensure patients only undergo high risk invasive treatment when all other non-invasive interventions have been trialled

Background:
Peripheral Arterial Disease (PAD) is atherosclerotic stenotic or occlusive disease of the lower limb arterial supply that produces a spectrum of disease from asymptomatic, though Intermittent Claudication (IC) to Critical Limb Ischaemia (CLI).

IC is muscle discomfort in the lower limb reproducibly produced by exercise and relieved by rest within 10 minutes due to peripheral vascular disease.\(^1\)
CLI is defined by the presence of PAD in combination with rest pain, gangrene, or a lower limb ulceration over 2 weeks duration. All patients with suspected CLI should be referred urgently to the vascular service.

As well as creating a functional disability and risk of limb loss, symptomatic PAD signifies a 6-fold increase in cardiovascular mortality.

NICE CG 147 *Peripheral arterial disease – diagnosis and management* highlights, in IC, the need for Ankle Brachial Pressure Index assessment, secondary prevention, cardiovascular risk factor optimisation and supervised exercise prior to any imaging and consideration of radiological or surgical intervention.

Following a review of the West Yorkshire Vascular Service by the Getting It Right First Time (GIRFT) National Vascular team a specific recommendation was that ‘*claudicants should be managed in primary care unless they are very limited in their activities.*’ Recommendation 5E in the GIRFT Programme National Vascular Specialty Report states ‘primary care to consider use of NICE clinical audit tool to implement diagnosis recommendations in NICE guideline.

**Current Evidence:**

*Ankle Brachial Pressure Index* – This is a simple, quick, non-invasive, bedside tool with a high diagnostic sensitivity and specificity that increases diagnostic accuracy but also identifies elevated cardiovascular risk, a low ABPI is associated with a 4.2-fold increase in cardiovascular mortality relative risk as compared to those with normal ABPI.

*Exercise Programmes* – Programmes improve pain-free and maximum walking distance in IC patients and their quality of life.

Where possible this can be offered through a supervised exercise programme but if individuals are more motivated, and in the current COVID time, this can be self-directed following the infographic below and/or the link (https://www.circulationfoundation.org.uk/news/covid-19-special) for guidance in line with COVID.

Implementing a community-based structured exercise programme in conjunction with an existing cardiac rehabilitation service can also result in better outcomes.

*Smoking* – aside from the respiratory and cardiac benefits of smoking cessation, active smoking at the time of intervention for IC is associated with decreased long-term patency and decreased overall survival.

*Secondary prevention* – a study of 4.6 million individuals in the UK between 2006 and 2015, showed the incidence of Coronary Artery Disease was stable but mortality rates were falling, whereas the incidence of PAD fell 15% but mortality rates did not. Only 55% of PAD patients were prescribed long-term statins, the study identified the need for early detection of PAD.

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and disease modifying interventions such as secondary prevention and smoking cessation to improve cardiovascular outcomes\textsuperscript{12}.

The Vascular and Endovascular Research Network collected cardiovascular profiles of PAD patients to assess practice against UK and European best medical therapy guidelines. 78\% were active smokers with only 11.1\% being prescribed high-dose statin therapy and 39.1\% on an antithrombotic agent. The median calculated risk of a major cardiovascular event over 10 years was 53\%\textsuperscript{13}.

\textit{Early intervention for IC} – After 5 years of follow-up, a revascularisation strategy had lost its early benefit and did not result in any long-term improvement in health-related quality of life or walking capacity compared to a non-invasive treatment strategy\textsuperscript{14}. Additionally, patients with IC who underwent early revascularisation appeared to be at higher risk of amputation than those who had initial conservative treatment\textsuperscript{15}.

Clearly intervention, radiological or surgical, for significantly limiting/disabling IC and CLI is absolutely warranted.

\textbf{Current Local Practice:}

The Calderdale and Huddersfield NHS Foundation Trust Vascular Department undertook and audit of new primary care referrals for patients referred with leg pain. Only 14\% or referrals had a documented Ankle Brachial Pressure Index, 40\% were current smokers, with 42\% receiving an anti-platelet agent or anticoagulation and 62\% on a statin. Not a single referral described a supervised or self-directed exercise approach. 44\% of referrals were discharged after the first appointment with no imaging and a diagnosis of no or mild PAD. At 6 months follow up 80\% of referrals had been discharged or were being managed conservatively with only 20\% of the original referrals proceeding to intervention.

Over a one year period in the Mid Yorkshire Hospitals NHS Trust dedicated claudication clinic 53\% were discharged with either no PAD, no restrictive symptoms or for exercise.

We believe these figures are similar across all local vascular departments.

\textbf{Crude estimated impact:}

To create, at this stage, a crude estimate of volume of patients affected and financial impact we employed the following methodology:

From one non-arterial centre we looked at one week in January 2020 (pre COVID) where all nurse specialist, middle grade and consultant clinic templates were running and counted the number of new patients referred with leg pain or IC. We then excluded those with features of critical limb ischaemia, and re-referrals with an established PAD diagnosis or previous intervention. This number was taken to represent the number of new leg pain/IC referrals per week to this organisation.
This was extrapolated to one year and then multiplied by 5 to reflect the volume across 5 trusts, assuming a relatively homogenous population and capacity.

This estimated the total number of referrals across the region of which, based on the above 2 site audit data, approximately 50% would be discharged with no intervention at first appointment.

For financial impact we used the tariff of £185 for a first out-patient attendance with a single professional.

This crude calculation would suggest the proposed change would affect in excess of 3100 patients per year in the region and involve over £577K worth of out-patient appointments.

Clearly that does not include those who do have follow up appointments from which they are discharged.

**Recommendation:**

Patients with suspected IC should be managed as per the below pathway based on the above evidence and review of local practice. This should be collaboratively implemented through the CCGs and WYVaS representatives. This should ensure patients receive optimal care, at the correct stage of their process as close to home as possible.
Exercise for Intermittent Claudication

What is intermittent claudication?
- Leg muscle pain or discomfort during walking
- Usually caused by narrowed arteries

NICE National Institute for Health and Care Excellence
RECOMMENDS EXERCISE
Supervised exercise classes produce the greatest benefits - ask your doctor or specialist if these are available locally

Benefits of exercise
- Reduces pain
- Reduces the need for vascular procedures
- Improves heart and vascular health
- Improves mood
- ZZ Improves sleep
- Maintains healthy weight

Key recommendations
- Aim to complete 30-60 minutes of walking per session
- Follow the walk-rest-walk pattern (central diagram)
- 3-5 sessions per week

Walk regularly for exercise
some is good, more is better, make it a habit

Further guidance
- Do not fear walking with leg pain – it will not harm you
- Build up gradually – your walking speed and time
- Be patient – it usually takes several weeks of exercise to improve symptoms

General tips
- Wear comfortable clothing, keep hydrated
- Choose routes with resting places
- Build in variety, involve others, keep it fun
- Do not exercise if you are unwell
- Seek medical advice if you experience chest pain, dizziness or sickness

Do strengthening and balance activities as well
... on at least 2 days per week
... to stay strong and reduce the risk of falling

Where can I find out more information about this condition?
The Circulation Foundation: www.circulationfoundation.org.uk

Source:

Disclaimer:
This infographic is not a validated clinical decision aid.
Any reliance placed on this information is strictly at the user's own risk.

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Management of Intermittent Claudication (IC)
(nice.org.uk/guidance/cg147)

Primary Care Assessment

‘Non-disabling’ Intermittent Claudication
Diagnostic doubt / ‘Disabling’ Claudication
Primary Care Diagnosis of Critical Limb Ischaemia

Vascular Outpatients:
- Clinical assessment inc. ABPI
- Consider imaging and intervention based on severity

Secondary prevention:
- Anti-platelet agent
- Atorvastatin 80mg
- Smoking Cessation
- DM/HTN optimisation
- Exercise programme
- Patient education
- Discharge

A. Primary Care Assessment should include:
- Severity of symptoms, Cardiovascular risk factors / Pre-existing cardiovascular disease
- Absence of lower limb pulses
- ABPI

B. Diagnosis:
- Intermittent claudication is described as reproducible, exercise related pain in muscles, typically cramp/ache which disappears within 10 minutes of standing / rest
- Critical Limb Ischaemia is described as pain at rest in foot or ulcers/gangrene

Patients referred with disabling symptoms should have
1. Symptoms which significantly impact on ADLs, (eg walking distance < 50 metres, threatened employment) **AND** ceased smoking and already be on secondary prevention
References


4. NICE CG 147: Peripheral arterial disease – diagnosis and management


