

NEWCASTLE, NORTH TYNESIDE AND NORTHUMBERLAND GUIDELINES FOR THE DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH PERIPHERAL ARTERIAL DISEASE (PAD)

October 2008

These notes should be read in conjunction with the summary

DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH PERIPHERAL ARTERIAL DISEASE (PAD)

INTRODUCTION

This local guideline is a review and update of the local Newcastle PAD guideline initially developed in 2005.

Patients with suspected PAD should have an appropriate assessment and accurate diagnosis. Those with confirmed disease require appropriate management, including measures aimed at reducing cardiovascular risk, improving symptoms and making progression of disease less likely. Those with critical ischaemia (rest pain, necrosis or gangrene) are at high risk of progressing to amputation and need urgent/emergency referral for a vascular surgical opinion. Patients with PAD are at increased risk of having other forms of occlusive vascular disease (coronary heart disease, cerebro-vascular disease) and if they have symptoms of these require appropriate assessment and management.

This local guideline is intended for all clinicians in the Newcastle, North Tyneside and Northumberland areas involved in the diagnosis and management of patients with PAD. It does not include detailed recommendations for the management of patients seen in vascular surgical clinics, but does make recommendations to ensure care is effectively integrated between primary and secondary care.

This guideline makes recommendations for the diagnosis and management of PAD. The interventions should be offered to all people who are likely to benefit, irrespective of race, disability, gender, age, sexual orientation or religion. Information should be provided to patients in an accessible format and consideration should be given to mobility and communication issues, and being aware of sensitive and cultural issues.

HOW TO USE THE LOCAL GUIDELINE

The guideline has 2 parts; a summary (at the end of this document) which can be folded to be double sided A5, easily laminated and kept readily available, and a set of supporting resource notes. The notes contain each of the summary statements with some background detail and in some cases expands the summary statement providing more detailed guidance. Clinicians should be familiar with these and use them to refer to for further clarification of management in individual patients as needed.

Where appropriate referral is made to other local guidelines and these are not duplicated here. Prescribers should review patients for any contra-indications before initiating drugs. The drugs are recommended assuming there are no contra-indications to treatment, and no contra-indications develop.

PATIENTS WITH SUSPECTED PAD

- Ask about symptoms; Which leg?
Pain only on walking?
Pain resolves with rest?
Pain worse walking up hill/quickly?
Any associated numbness / pain?
Location of pain?
Symptoms/history other vascular disease

These are the questions which should be asked about routinely and are based on the Edinburgh Claudication Questionnaire:

- Which leg (right, left or both)?
- Does the pain only occur on walking? If no, it is less likely the patient has intermittent claudication (IC)
- Does the pain go away on stopping? If yes, it is more likely the patient has IC
- Is the pain worse going uphill or walking fast? If yes, it is more likely the patient has IC.
- Does the patient have any associated numbness or weakness? If so, it might suggest spinal claudication. If so, enquire about back symptoms.
- Where does the patient feel the pain? Pain from IC will be in a muscle group, most often the calf, sometimes the thigh or buttock.

- Examination; Necrosis / critical ischaemia – refer
Peripheral pulses?
Signs other cardiovascular disease?
Check ABI (see notes)
Leg ulcer – refer to local guidelines

- Initial assessment will identify those with who need urgent/ emergency referral (urgent letter/fax, phone the on-call vascular team at Freeman Hospital for advice, emergency admission, depending on severity). Those with acute ischaemia require emergency admission without delay, many patients with necrosis also require urgent admission (if in doubt discuss with the on call vascular team). Those with rest pain require urgent referral.
- Peripheral pulses should be assessed and documented in all patients. However, the presence of pulses does not exclude the diagnosis of PAD.
- Patients may have signs of other vascular disease, and occasionally of vascular risk factors (eg xanthelasmata, xanthomata). The presence of other vascular disease or the presence of multiple vascular risk factors makes it more likely the patient will have PAD.
- PAD is an important diagnosis to make, is associated with an adverse prognosis, and patients require lifelong treatment and regular review. All patients with suspected PAD should have the diagnosis confirmed with measurement of the ankle brachial index (ABI), unless co-morbidity makes this inappropriate or the patient declines. It is

anticipated that all GP practices will have access to an appropriately trained nurse competent in ABI assessment. ABI < 0.8 is consistent with a diagnosis of PAD (the ABI should be taken by an appropriately trained individual and where there is doubt it should be re-checked). Patients who have been referred for assessment by the vascular surgeons will have ABI measurements as part of the hospital assessment.

- Patients with a leg ulcer should be assessed and managed in line with the Newcastle, Northumberland and North Tyneside leg ulcer guidelines.
- If patients have mainly sensory symptoms, particularly if bilateral, spinal claudication is more likely (however, many patients with spinal claudication have co-existent vascular disease). Where doubt exists referral to the vascular surgeons for investigation is indicated.

ASSESSMENT OF ALL PATIENTS WITH CONFIRMED PAD

- Ask about severity of symptoms; Distance able to walk, effect on quality of life, any threat to employment

Patients with confirmed PAD should be asked about their symptoms. It is important to establish the impact of patients symptoms on their quality of life as well as the distance a patient can walk before developing IC.

- Check for symptoms/signs other cardiovascular disease

About 75% of patients will have other forms of vascular disease. This should be identified and appropriately managed.

- Identify lifestyle risk factors (smoking, exercise, diet, alcohol, BMI), blood pressure, known diabetes

Lifestyle risk factors should be identified, blood pressure checked and those with known diabetes identified and managed in line with local guidelines.

- FBC, U&E, glucose, lipids, LFT, TFT at baseline. Annual U&E, lipids, glucose. FBC if worsening symptoms or anaemia suspected

- FBC; exclude anaemia, polycythaemia, thrombocythaemia
- U&E; exclude chronic kidney disease (CKD). Patients are at risk of reno-vascular disease (if CKD, refer to local guidelines)
- Glucose; can be a random sample, but those with a raised level will require a fasting sample taken to exclude diabetes or impaired fasting glycaemia
- Lipids; in line with FATS
- LFTs; in line with FATS
- TFTs; in line with FATS

MANAGEMENT OF PATIENTS WITH CONFIRMED PAD

- Ensure on disease register; Read codes G73, Xa01v

Consistent Read coding in each practice will facilitate audit. Read codes for PAD are G73, Xa01v (systemone). Read code for ABI is Xalup.

- Arrange annual review

All practices should have an accurate and regularly maintained disease register which is used to ensure patients are offered an annual review.

- Lifestyle vascular risk factors;
 - Smoking (stop smoking service referral if motivated to quit)
 - Healthy eating, alcohol safe limits
 - Regular physical activity (consider referral for supervised exercise)
 - Weight reduction if appropriate

All patients should be offered advice about risk factors, and be encouraged to set appropriate goals to address them. Those making changes to their lifestyle may need additional review for support and monitoring. Referral to other services may be appropriate eg stop smoking, weight management, exercise referral. Some patients may find that activities such as swimming, cycling allow them to achieve and maintain a higher level of fitness than walking, and programmes of supervised exercise have been shown to increase the distance that patients are able to walk before developing IC.

- Lipids – refer to FATS

All patients should have lipids assessed and monitored in line with the recommendations in FATS. Patients with PAD have established atheromatous disease and should be managed as having occlusive vascular disease.

- Hypertension – refer to local hypertension guidelines

All patients should have blood pressure measured and hypertension managed in line with the local hypertension guidelines. Beta blockers are not specifically contra-indicated in PAD. Particular attention should be made to monitoring renal function in those treated with an ACE inhibitor in view of the increased risk of reno-vascular disease.

In general patients with critical ischaemia should have further assessment of the PAD before high blood pressure is lowered. If high blood pressure is felt to need immediate treatment in such patients, this should be discussed with the vascular surgeons first.

- Optimal diabetes control – refer to local guidelines

Patients with established diabetes, or those in whom the diagnosis is made during the baseline assessment should be managed in line with local guidelines. Foot care is particularly important.

- Anti-platelet agents – aspirin first line, refer to local guidelines

All patients should take anti-platelet agents. Aspirin is first line. There are local guidelines with the indications for use of other agents second line.

- Therapeutic interventions;
 - Regular physical activity – consider supervised exercise
 - Specific drug therapy- only after full conservative treatment for 6 mths+, other therapeutic interventions not possible/declined
 - Cilostazol – consider drug interactions and contraindications (see BNF)
 - Naftidrofuryl oxalate (second line, in those with contra-indications to cilostazol)

All patients with IC should have a therapeutic management plan which includes intensive lifestyle measures. A programme of regular physical activity should be discussed with the patient and goals set, with the aim of gradually increasing their claudication distance. Advice should be given that patients should aim for activity levels which lead to claudication pain, walking through the pain as far as possible (unlike patients with angina who are advised to stop / slow down if they develop angina). Supervised exercise programmes have been shown to increase the distance patients can walk before developing IC and have been shown to be superior to advice to exercise alone. Referral to an exercise programme should be considered. Weight loss in those who are obese or overweight is also likely to improve symptoms. Stopping smoking will not improve symptoms of claudication, but will substantially reduce cardio-vascular risk, the chances of disease progression, and the chances of success from any revascularisation procedure.

Specific drug therapy should only be considered in those with persistent significant limitation in activity which is leading to a reduced quality of life and or threatened employment. Patients should have had at least 6 months of intensive conservative management, and been considered for other therapeutic interventions (unless declined).

Cilostazol has both vasodilatory and anti-platelet properties and is licensed as treatment to improve walking distance in patients with IC who do not have rest pain or evidence of peripheral tissue necrosis. The potential for drug to drug interactions should be taken note of, these include omeprazole, lansoprazole, diltiazem and erythromycin, but there are others and the BNF should be referred to for further details. Some patients develop headaches when they first start treatment, but these often improve if they can persevere with treatment. A few patients may respond to naftidrofuryl oxalate. For those who meet the criteria for drug therapy, cilostazol is first line therapy with naftidrofuryl oxalate as

second choice and reserved for those with contraindications to cilostazol. All patients treated with cilostazol or naftidrofuryl oxalate should be assessed 3 months after initiation and treatment only continued if there has been a clear improvement in symptoms.

- Patient / carer information and support, including appropriate foot care

Patients and their carers as appropriate should be provided with appropriate information about the nature of the disease, possible interventions and risk factor management. This should include the importance of appropriate foot care. Written information has been developed by the British Heart Foundation (<http://www.bhf.org.uk>) and the Circulation Foundation (<http://www.circulationfoundation.org.uk/>)

- Identification of patients for specialist referral
Critical ischaemia (rest pain, necrosis, gangrene) – urgent/emergency
Limiting symptoms, threatened employment, diagnostic doubt
Leg ulcer – refer to local guidelines

- Patients with definite or possible critical ischaemia need urgent/emergency specialist referral (urgent letter/fax, phone the on-call vascular team at Freeman Hospital for advice, emergency admission, depending on severity). If there are signs of cellulitis, swabs should be taken and the patient treated with antibiotics at the same time as referral is considered. Staph. Aureus is a likely pathogen and flucloxacillin (at least 500mg qds) should be considered as first line (refer to the local primary care antibiotic guidelines). In patients with infected necrotic tissue or gangrene anaerobes are likely but such patients will usually require admission and should be discussed with the on call vascular team. Patients who are pyrexial and or have other signs of systemic upset should be admitted.
- Patients with limiting symptoms should be referred. Generally such patients should have had 6 months of intensive conservative management, including exercise. However, those with more severe symptoms or whose employment is threatened should be referred earlier. Patients with absent femoral pulses and more proximal disease are more likely to be suitable for revascularisation than those with more distal disease.
- Patients without a secure diagnosis should be referred early.
- Patients with a leg ulcer should be assessed and managed in line with the Newcastle, Northumberland and North Tyneside leg ulcer guidelines. Approximately 10% of ankle ulcers are due to a combination of venous and arterial disease.

For all patients who are referred, the following minimum information is helpful;

- Brief summary of current symptoms. If critical ischaemia is present this should be emphasised.
- Baseline assessment including, presence or absence of pulses, results of any baseline biochemical and haematological investigations and ABI measurement.
- Previous / current management plan
- Current medication
- Important past medical history

APPENDIX

Members of the group

Dr Jane Skinner, Consultant Community Cardiologist, Newcastle upon Tyne Hospitals
NHS Foundation Trust
Professor Gerry Stansby, Professor of Vascular Surgery, Newcastle upon Tyne Hospitals
NHS Foundation Trust
Dr Mike Scott, GP, Newcastle upon Tyne
Mrs Margaret King, Programme Co-ordinator, Community Cardiac Care, Newcastle PCT
Mrs Lisa English, Community Cardiology Co-ordinator, North Tyneside PCT
Mr Glyn Trueman, Formulary Pharmacist, Newcastle Hospitals
Ms Zahra Irranejad, Lead Pharmaceutical Advisor, North of Tyne PCTs (represented by
Lindsay White)
Ms Sheila Dugdill, Peripheral Arterial Nurse Specialist, Freeman Hospital
Mrs Susan Turner, Pharmaceutical Advisor (commissioning), NHS North of Tyne
Mrs Alice Wincup, Cardiac rehabilitation nurse, Northumberland Care Trust

Declared conflicts of interest

None declared

Date of development

October 2008

Proposed date of review

October 2011, or earlier if new evidence makes this appropriate

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Please use in conjunction with the resource notes.

It is assumed that patients with contraindications will be identified and excluded (refer to the BNF).

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- FBC, U&E, glucose, lipids, LFT, TFT at baseline. Annual U&E, lipids, glucose. FBC if worsening symptoms or anaemia suspected
- Urgent / emergency hospital referral; Rest pain, necrosis, acute ischaemia

MANAGEMENT OF PATIENTS WITH CONFIRMED PAD

- Ensure on disease register; read codes G73, Xa01v
- Arrange annual review
- Lifestyle vascular risk factors;
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- Hypertension – refer to local hypertension guidelines
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