Peripheral arterial disease – CVD by any other name?

In this article, general practitioner Dr Sarah Jarvis argues why the much overlooked condition of peripheral arterial disease should be included in the next update of the new General Medical Services (GMS) contract for general practitioners.

Abstract

The National Service Framework for Coronary Heart Disease (CHD) stated that individuals at greatest risk of CHD should be identified. This category included those with diagnosed peripheral vascular disease. Despite this, the condition was not included in the Quality and Outcomes Framework of the new General Medical Services contract. This article looks at the strong evidence to include peripheral arterial disease in the next update of the GMS contract, which is expected in April 2006. It also looks at what is being done to identify such patients, and their relative risk compared to other subpopulations at risk of atherothrombosis. The setting up of an international register – the REACH registry is also discussed.

Key words: peripheral arterial disease, coronary heart disease, National Service Framework, REACH registry, GMS contract.

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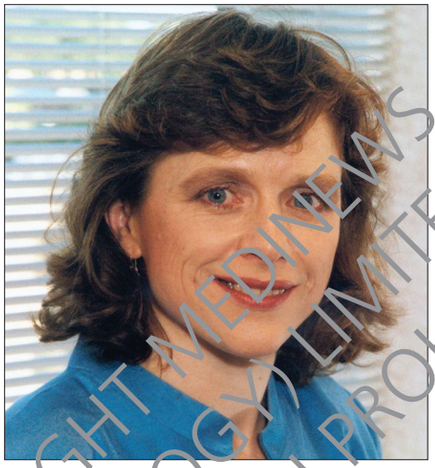
Introduction

In 2000, the National Service Framework for Coronary Heart Disease[1] highlighted the need for recognition and management of individuals at highest risk of cardiovascular events. It stated: "the first priority is to identify those at greatest risk i.e. those with diagnosed coronary heart disease, transient ischaemic attack, stroke and peripheral vascular disease."[1] All the highlighted groups have been targeted for inclusion in the new General Medical Services (GMS) contract[2] – with one obvious exception. Peripheral vascular disease alone (or peripheral arterial disease [PAD] as it is now more commonly known) was lost in the translation.



'There is strong evidence to support management of patients with PAD as CHD risk equivalents'

Sarah Jarvis

As the negotiators prepare to work towards the first new GMS contract revision, due for implementation on 1st April 2006, many GPs, secondary care physicians and surgeons are hoping that the wealth of evidence for PAD as a manifestation of cardiovascular disease will convince the NHS Confederation and the GPC to include it in the revised targets.

So what is the true burden of PAD? Is it more than just "a pain in the leg"? The evidence suggests so. Intermittent claudication, the main manifestation of PAD, affects about 4% of over 50s[3] and 5% of the over 65s,[4] but asymptomatic or undiagnosed PAD may affect up to 20% of over 65s and 30% of over 85s.[4] The most serious local progression of PAD, critical limb ischaemia, costs the NHS over £200 million and includes 20,000 new diagnoses per annum.[5]

From a population point of view, perhaps the most important implication of PAD is that it is a marker for other manifestations of CVD. Patients with PAD are at equally high risk of ischaemic events as those with angina,[6] and one survey of patients with PAD revealed evidence of coronary artery disease (CAD) in 58% and thrombotic brain infarction in 34%.[7] Patients with PAD have an accrued mortality rate of 30% within five years, almost 50% within 10 years and 78% within 15 years (compared with 22% in those without PAD) – and of these, most (60%) will die from myocardial infarction, and a further 12% from stroke.[8,9]

The REACH registry

Despite all this evidence of cross-risk, there is still a relative paucity of data on comparison of risk between subpopulations at risk of atherothrombosis. This, in turn, hinders a global view and possibly a truly 'joined up' approach to the underlying disease entity. This lack of data may be due to a number of factors including: the tendency for studies to focus on specific risk factors; the specific manifestations of the disease; specific geographical settings (mostly Europe

Table 1. Risk factors for atherothrombosis (entry criteria for the REACH registry)

- Male ≥ 65 years or female ≥ 70 years
- Current smoking > 15 cigarettes/day
- Type 1 or type 2 diabetes
- Diabetic nephropathy
- Hypertension
- Hypercholesterolaemia
- Ankle brachial index < 0.9 in either leg at rest
- Asymptomatic carotid stenosis ≤ 70%
- Presence of at least one carotid plaque

Table 2. Atherothrombotic events included in the REACH registry

- Documented cerebrovascular disease – ischaemic stroke or transient ischaemic attack
- Documented coronary disease – angina, myocardial infarction, angioplasty/stent/bypass
- Documented historical or current intermittent claudication (associated with ankle brachial index < 0.9 and/or intervention)

Key messages

- Patients with peripheral arterial disease are at equally high risk of ischaemic events as those with angina
- Patients with PAD have an accrued mortality rate of 30% within five years and almost 50% within 10 years
- Baseline results from the REACH registry show that UK general practitioners pay less attention to PAD than those from other countries
- PAD should be incorporated into the updated Quality and Outcomes Framework of the new General Medical Services contract

and North America); and specific treatment settings (notably high-risk, hospitalised patients).

In response to these perceived limitations, the REACH registry has been set up, and patient recruitment is now complete. This initiative has been sponsored by Sanofi-Synthélabo and Bristol-Myers Squibb. The registry includes 63,814 patients from 39 countries (including 622 from the UK), and comprises two main populations at high risk of atherothrombotic events:

- one group with 'risk factors only', defined as patients included in the global population and presenting with at least three atherothrombotic risk factors (table 1) but without a history of an atherothrombotic event (table 2)
- A second group with a history of a clinical atherothrombotic event (table 2).

The primary objectives of the registry include:

- evaluating long-term risks (in the shape of yearly event rate) of atherothrombotic events in the global population and in different subgroups
- comparing outcomes within different subject profiles (including evaluation of cross-risk in high-risk individuals, and defining predictors of risk for subsequent atherothrombotic events).

Secondary objectives include data collection on:

- treatment strategies used during the registry follow-up
- data on patient management for pharmacoeconomic analysis.

It will be interesting to see whether this exceptionally large registry provides evidence to expand our knowledge of the interface between risk factors and atherothrombotic events. Indeed, although only preliminary results of the registry are, as yet, available, they already suggest that PAD is less well managed than other manifestations of atherothrombosis. Jonathan Morrell, a general practitioner in Hastings, and UK REACH lead investigator, has commented: "Baseline results from REACH already show that UK practitioners pay less attention to PAD than those from other countries and they compound under-recognition with suboptimal levels of intervention to prevent future vascular events. PAD urgently needs to be incorporated into the GMS Quality and Outcomes Framework to fall in line with established national directives and guidelines."

PAD, the GMS contract and implications for practice

The issue of cardiovascular disease risk management in patients with PAD was discussed at one of our recent practice meetings, leading to a registrar-led audit of cholesterol management in patients with PAD. At the first data set collection, it was found that while 79.6% of PAD patients had had their cholesterol checked within the preceding 15 months, only 33.3% had a cholesterol measurement below 4.0 mmol/L (chosen as the target for total cholesterol level for high-risk patients, in light of the BHS-IV recommendations).[10] This was in marked contrast to the 72% of patients with CHD who had total cholesterol levels below 4.0 mmol/L and may reflect the difficulty in implementing stringent targets for management of CHD risk factors in the absence of an organised system of care, despite a commitment to high quality practice.

Since this time, computer prompts have been added to the notes of all patients with PAD, and a second data collection will review the outcome.

Conclusion

PAD is an important risk factor for CHD and there is strong evidence to support management of patients with PAD as CHD risk equivalents. However, its omission from the Quality and Outcomes Framework of the new GMS

contract may well reduce the quality of its recognition and management in primary care.

Negotiations over disease areas for inclusion in the updated Quality and Outcomes Framework, due to be implemented on 1st April 2006, are underway. It is hoped that this omission can be rectified. In the meantime, there is a need for better understanding of the interplay between risk factors for atherothrombosis. The REACH registry of more than 63,000 patients worldwide should go a long way towards furthering our understanding of atherothrombosis.

Conflict of interest

SJ has received honoraria for lecturing and attending advisory boards for AstraZeneca and Sanofi Aventis.

References

1. Department of Health. *National Service Framework for Coronary Heart Disease*. London: Department of Health, 2000.
2. British Medical Association. *Investing in general practice: the new General Medical Services contract*. London, British Medical Association, February 2003.
3. Fowkes FG, Housley E, Cawood EH *et al*. Edinburgh Artery Study: prevalence of asymptomatic and symptomatic peripheral arterial disease in the general population. *Int J Epidemiol* 1991;**20**:384-92.
4. Fowkes FG, Price JF, Leng GC. Targeting subclinical atherosclerosis has the potential to reduce coronary events dramatically. *BMJ* 1998;**316**:1764-70.
5. Hart WM, Guest JF. Critical limb ischaemia: the burden of illness in the UK. *Br J Med Econ* 1995;**8**:211-21.
6. Belch J, Topol E, Agnelli G, Bertrand M. Critical issues in peripheral arterial disease detection and management. *Arch Intern Med* 2003;**163**:884-92.
7. Aronow WS, Ahn C. Prevalence of coexistence of coronary artery disease, peripheral arterial disease, and atherothrombotic brain infarction in men and women 62 years of age. *Am J Cardiol* 1994;**74**:64-5.
8. Tierney S, Fennessy F, Hayes DB. ABC of arterial and vascular disease. Secondary prevention of peripheral vascular disease. *BMJ* 2000;**320**:1262-5.
9. Dormandy JA, Rutherford RB, for the TransAtlantic Inter-Society Consensus (TASC) Working Group. Management of peripheral arterial disease (PAD). *J Vasc Surg* 2000;**31** (suppl):S1-S296.
10. Williams B, Poulter NR, Brown MJ *et al*. Guidelines for management of hypertension: report of the fourth working party of the British Hypertension Society, 2004 – BHS IV. *J Hum Hypertens* 2004;**18**:139-85.

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