

EDITORIAL

Time to Close the Stable Doors Before the Horse Has Bolted

The perfect storm of a mushrooming diabetic epidemic and an aging population is upon us. Peripheral arterial disease (PAD) is prevalent and has poor prognosis,^{1,2} but has been neglected both in terms of research and primary prevention.^{3,4} The disease has a strong age-related prevalence and mortality, so, as the global number of individuals aged 75 years and over rapidly increases (119 million in 1990 to over 250 million currently), it has driven up the burden of this disease substantially.⁵ The burden is long-term disability more than premature mortality, with recent data showing that both have increased significantly over the last 20 years, with increases being greatest in women, and in the developing nations.⁶

Currently over 200 million people are affected by this condition worldwide, making it a global pandemic.⁷ Compared with HIV (another pandemic disease), PAD affects six times as many individuals with a higher case-fatality.⁸ Yet of all clinical trials performed in the last decade, less than 2% were for PAD,⁹ and of these most have been focused on novel devices and have been industry sponsored and funded. When considering preventative research, trials have largely omitted peripheral arterial events as a discrete outcome measure; ascertained in only 11 out of the 91 largest blood pressure-lowering treatment trials over the last two decades.¹⁰

Primary and secondary prevention continue to be grossly under-utilised, despite good evidence for multiple strategies in at-risk groups, including antiplatelet, statin, and antihypertensive therapy, smoking cessation, and supervised exercise programmes.^{11–13} Cardio-embolic events account for over 20% of all patients hospitalised with PAD. Anti-coagulation is highly effective in the prevention of these events,¹⁴ yet population-based data have shown that less than 15% of patients suffering acute cardio-embolic peripheral arterial events are anticoagulated prior to event, despite over 80% having CHA₂DS₂VASC scores ≥ 2 without contraindications to anticoagulation.¹⁰

The leading seven risk factors for death in the UK across all ages are poor diet, high blood pressure, smoking, high body-mass index, physical inactivity, hyperlipidaemia, and hyperglycaemia.¹⁵ These risk factors account for over 85% of the attributable risk for atherosclerotic disease,¹⁶ and so, although much of limited current research focuses on novel biogenetic markers and invasive treatment options, improving our understanding and treatment of traditional

cardiovascular risk factors will have by far the greatest impact on the outcome of PAD at a population level. As recent evidence has shown that patients with PAD do not receive the same intensity of atherosclerotic risk factor intervention when compared with patients with isolated coronary heart disease, it is clear that more needs to be done.¹⁷

Unfortunately the end result of chronic academic and clinical neglect are excessively high major amputation rates, which have been realised in the UK and US recently.^{18,19} A UK quality improvement framework and a recent National Confidential Enquiry into Patient Outcome and Death (NCEPOD) review have focused on improving the care of patients undergoing major limb amputation and reducing mortality, but there are no policy documents in existence that focus on the prevention of amputation. With over 100 major amputations being performed per week in the UK and over half of these patients subsequently dying within 2 years, failure to target the root causes of PAD will inevitably lead to ongoing preventable death and disability. From an economic perspective, major amputation is one of the most expensive interventions performed in any healthcare system. When acute care costs, long-term rehabilitation, and subsequent patient dependence are taken into account, each procedure incurs an average economic cost of \$170,000 in the USA,¹⁹ with obvious major implications for individuals, the health service, and economy.

More data are required on the incidence, risk factors, levels of preventative treatment, and outcome for patients with PAD to enable risk stratification, inform patients about risks and prognosis, facilitate health service planning, and prevent excessive death and disability. It is high time to focus on improving prevention rather than palliation and close the stable doors before the horse has bolted.

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