

Improving Quality of Life in Patients with Peripheral Arterial Disease: An Important Goal

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For patients suffering from peripheral arterial disease (PAD), quality of life (QoL) has become as important as medical outcome end points, such as mortality and morbidity, to evaluate the effect of disease and treatment.¹ Furthermore, impaired QoL has been associated with an increased risk of poor clinical course and prognosis. Measures of PAD severity, such as the ankle-brachial index (ABI), may predict functional impairment, but they are only partially associated with QoL. Therefore, other factors that may influence QoL in PAD patients have to be considered.²

In this issue of the journal, Remes et al.,³ using several assessment methods, such as the 15D Health-related QoL instrument, the Geriatric Depression Scale (GDS) and the Self-reported Life Satisfaction score (LS), evaluated the QoL of PAD patients, who had undergone either percutaneous transluminal angioplasty (PTA) only and/or surgical revascularisation(s). A total of 131 patients at a mean time of 2.7 years after PTA and 100 patients at a mean time of 3.5 years after surgical revascularisation, and their age- and gender-matched controls were studied. The results showed that patients after endovascular and/or surgical revascularisation had similarly lower QoL, GDS and LS, and indicated more depression than their controls.

Previous studies have shown worse outcomes for patients with depression undergoing coronary artery bypass grafting or after myocardial infarction.⁴ Depression was associated with progression of coronary artery disease and recurrent symptoms. Results from studies assessing the association between depression and PAD in patients with both symptomatic and asymptomatic PAD are rather conflicting. In a recent study, the prevalence of depression among patients undergoing lower-extremity revascularisation was 36%.⁵ A population-based study of patients aged ≥ 60 years found no association between PAD and depression, noting that 8.1% of patients with PAD (ABI < 0.9) had depressive symptoms compared with 6.5% of patients without PAD.⁶ However, another study found that significantly more patients with ABI-diagnosed PAD (24%) had depressive symptoms compared with those without PAD (12%).⁷ The same group found that the proportion of patients with ischaemic symptoms at exercise or at rest rose significantly with increasing depressive symptoms.⁸ Adjusting for age, gender, number of co-morbidities, ABI, smoking status and antidepressant drug use, an increasing number of depressive symptoms was also associated with poorer lower-extremity function.

What are the biological mechanisms that could explain a possible association between depression and adverse cardiovascular events? These include dysregulation of the hypothalamic-pituitary axis and the autonomous nervous system, a common genetic vulnerability to depression and cardiovascular events, increased platelet activation and increased levels of catecholamine and serotonin.⁹ The association between depression and worse cardiovascular outcomes may also be mediated by behavioural mechanisms, including non-compliance with diet, medical or exercise therapy.

In order to make invasive or percutaneous peripheral revascularisation procedures more effective, it is necessary to concentrate on these patients' rehabilitation and exercise programmes, which necessitate proper comprehensive assessment. As Remes et al.³ correctly pointed out, innovative and active sports programmes delivering mental and social peer support should be developed. Proper follow-up, ABI measurements, organised exercise schedule and a more positive attitude towards the whole illness of PAD should be implemented. Revascularisation, whether percutaneous or surgical, is simply not enough to achieve optimal long-term results in PAD patients.

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