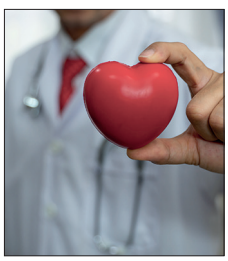
Systemic lupus erythematosus: managing cardiovascular risk factors



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Cardiovascular disease is one of the major comorbidities and most important causes of death in patients with systemic lupus erythematosus (SLE). Young women with SLE are 50 times more likely to have a myocardial infarction than age and sex-matched controls.[1] Furthermore, patients with SLE often have these events at an unusually young age.

There have been many studies from different groups exploring the risk factors that contribute to this increased cardiovascular risk. This work has been reviewed elsewhere.[2] The risk factors include those that are non-modifiable such as age and sex,[3] disease-related factors for which no agreed cardiovascular risk modification strategy exists (such as disease activity), but also traditional cardiovascular risk factors such as hypertension, smoking, and hyperlipidaemia. For the traditional risk factors, there are well-established evidence-based methods of reducing cardiovascular risk such as appropriate use of antihypertensives and statins. Guidelines on the management of cardiovascular risk in patients with rheumatic diseases from the European Alliance of Associations for Rheumatology recommend that these factors should be addressed in all patients with SLE.[4] It has been shown that appropriate management of these risk factors reduces the progression of subclinical atherosclerosis in patients with SLE.[5]

Despite widespread agreement that these traditional cardiovascular risk factors need to be managed in patients with SLE, it is far from clear how well this goal is actually achieved. Many of the reports investigating this question come from single centres and it is unclear to what extent the findings are generalisable to other places—especially when comparing centres in high-income countries with those in middle-income or low-income countries.

In *The Lancet Rheumatology*, Eleana Bolla and colleagues[6] describe an ambitious and far-reaching study in which they carried out a cross-sectional survey of clinicians from 24 countries who reported on the prevalence of cardiovascular risk factors in 3401 adult patients with SLE. They also assessed the level of success in attaining treatment targets for those cardiovascular risk factors compared with standards suggested in the 2016 European Society of Cardiology Guidelines.[7] Importantly, they included both high-income countries (n=14) and middle-income countries (n=10) and were thus able to compare patients from those groups. All data were extracted from the medical records of the patients.

The authors noted that across the whole study population, cardiovascular risk factors were highly prevalent: 1210 (35·6%) of 3398 patients had hypertension, 751 (23·7%) of 3169 had obesity, 650 (19·8%) of 3279 had hyperlipidaemia, and 393 (12·0%) of 3281 were current smokers..

Classification of cardiovascular disease risk showed that 2390 (79·3%) of 3015 patients were low-to-moderate risk, 211 (7·0%) of 3015 were high risk, and 414 (13·7%) of 3015 were very high risk. Very high risk patients were twice as frequent in high-income countries as in middle-income countries (16·3% [325 of 1995 patients] *vs* 8·7% [89 of 1020 patients]), due to increased prevalence of hypertension, hyperlipidaemia, obesity, and smoking.

Cardiovascular risk factor target attainment was better for some factors than others. For smoking and blood pressure (target <140/90 mm Hg), targets attained by 2888 (88·0%) of 3281 patients and 2607 (80·4%) of 3241 patients, respectively. Conversely, targets were attained much less frequently for BMI (1542 [48·7%] of 3169 patients) and lipids (ranging from 1159 [59·7%] of 1942 patients for low-density lipoprotein to 1503 [73·4%] of 2049 patients for triglycerides) or for a more rigorous blood pressure target of 130/80 mm Hg (1689 [52·1%] of 3241 patients). Comparing high-income countries with middle-income countries, smoking, and BMI targets were attained more often in the middle-income countries whereas lipids and blood pressure targets were attained more often in high-income countries.

The study specifically considers the subgroup of 556 patients who had concomitant antiphospholipid syndrome, as this has previously been noted as an important cardiovascular risk factor in patients with SLE. The SLE with antiphospholipid syndrome group

fared less well than the patients with SLE without antiphospholipid syndrome group in this study with higher prevalence of hypertension, hyperlipidaemia, and obesity, and more patients classified as having very high cardiovascular disease risk.

The key message of this study by Bolla and colleagues[6] is that traditional cardiovascular risk factors remain highly prevalent in patients with SLE across a range of different countries and, yet, they are often not managed successfully. This situation represents a substantial unmet need that could be addressed using currently available treatments. The key will be to make assessment of these cardiovascular risk factors routine in the management of every patient with SLE. Any cardiovascular risk factors identified should then be controlled according to established guidelines. It is important, however, to bear in mind the challenges inherent in achieving such control. Patients could be reluctant to take medications such as statins and anti-hypertensives for many years to reduce the long-term risk of a cardiovascular event rather than to control their current symptoms. Good communication between clinicians and patients will help to overcome this reluctance.

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