Metabolic syndrome in systemic lupus erythematosus: lower prevalence in Brazil than in the USA

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We read with great interest the recent article by Chung *et al* on the high prevalence of metabolic syndrome (MetS) in patients with systemic lupus erythematosus (SLE).¹ This topic is extremely relevant as regards the current clinical management of patients with SLE, since findings from several studies point to increased cardiovascular risk associated with this disease.²⁻⁴ As with most previous research on the incidence of MetS, this study was conducted in the American population where the prevalence of obesity is higher than in other countries.¹ However, it is very important to consider the results from studies conducted in different populations when analysing the influence of obesity and other important factors such as genetic background, dietary habits and lifestyle characteristics on the prevalence of MetS in patients with SLE.

Given that no data have been published on the frequency of MetS and its components in other non-US patients with SLE, we conducted a pilot study to estimate the prevalence of MetS according to the National Cholesterol Education Program (NCEP) criteria in a cohort of Brazilian patients with SLE compared to age-matched controls.⁵ Brazilian patients with SLE had a higher prevalence of MetS (20.0%) and its individual components compared to controls (5.4%; $p = 0.03$) and this prevalence was not related to the duration of disease. In comparison with controls, we observed that patients with SLE had significantly higher mean (SD) waist circumference (77.8 (10.0) and 83.3 (10.6) cm, respectively; $p = 0.01$), higher systolic (110.5 (12.0) and 121.0 (17.3) mm Hg; $p = 0.001$) and diastolic arterial pressure (72.3 (10.0) and 79.7 (12.5) mm Hg; $p = 0.004$), higher triglycerides (111.4 (55.0) and 165.9 (89.1) mg/dl; $p = 0.0009$) and higher total cholesterol (181.6 (43.5) and 219.1 (53.3) mg/dl; $p = 0.001$).⁶

Therefore, we suggest that MetS is less prevalent in Brazilian patients with SLE than in American patients with SLE. There are no published references on the age-adjusted prevalence of MetS in the general Brazilian population. However, limited information can be obtained from a recent study on a specific sample of a rural population from Bahia, Brazil, which showed a 7% prevalence of MetS in a 25–34-year-old group, similar to that found for our control group.⁷ Since the prevalence of MetS in the general Brazilian population is also lower than that in the US population,⁸ we can conclude that several factors may be implicated and could be attributed to differences in the prevalence of obesity between Brazilian and American populations, genetic factors and differences in lifestyle and dietary habits. It is also relevant to point out that patients with diabetes and nephrotic syndrome were excluded from our study, which could also explain the lower prevalence in our report.

Since Natal, Brazil is a tropical city where the incidence of SLE is very high (8.7/100 000/year), we conclude that the high prevalence of MetS in patients with SLE represents an enormous cardiovascular risk with serious implications for

the public health system in Brazil.⁹ Thus, clinicians should screen for MetS as part of their management of patients with SLE. The results emphasise the need to optimise preventive, diagnostic and care strategies for cardiovascular disease in patients with SLE.

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