



## Editorial

# Diet and lupus<sup>☆</sup>

## Dieta y lupus



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Significant scientific and economic efforts have been made in the quest to identifying a pharmacological therapy for the management of systemic erythematous lupus (SLE). Aware of the current causes of mortality in these patients, we have seen a change that challenges the current management of patients with this condition.

The development of early atherosclerosis, with fatal outcomes such as myocardial infarction or cerebrovascular disease,<sup>1,2</sup> force us to consider that there are important other aspects in managing patients, besides pharmacological therapy.

One of the several aspects is diet which is becoming increasingly important. The article in this issue "Assessment of nutritional status and disease activity level in systemic lupus erythematous patients at a tertiary care hospital" by Behiry et al.,<sup>3</sup> assessed the nutritional status of female patients with lupus, and how to correlate such nutritional status with the activity of the disease.

The nutritional status and the quality of the diet was established with the use of qualitative tools in a group of 65 patients.

A finding worth mentioning – though statistically weak – is the correlation between a high body mass index (BMI) and the activity measured with SLEDAI. Multiple evidences have associated obesity with an increase in the inflammatory condition and a larger production of antibodies; obesity has been known to increase the adipokines expressed in the adipose tissue, increasing the resident macrophages, and inducing a phenotype change. This role has been attributed to the apoptosis inhibitor protein secreted by macrophages (AIM). This AIM is produced in the tissue macrophages and was initially

associated with the survival of the macrophages against diverse apoptosis-inducing stimuli. In a situation of obesity, the elevated AIM concentration induces lipolysis, which promotes the release of saturated fatty acids from the adipocytes. Such process promotes the production of chemokines through the activation of the Toll-like receptor 4 (TLR4) pathway, that results in an increased infiltration of Type M1 macrophages in the adipose tissue. AIM forms immune complexes with IgM-type antibodies; such complexes are retained in the dendritic follicular cells and facilitate the presentation of autoantigens to the follicular B lymphocytes, leading to a higher production of IgG-type autoantibodies. This could be an explanation for the increased activity of autoimmune diseases such as lupus.<sup>4</sup>

However, the BMI increase could be explained as a consequence of the use of steroids, and not as a trigger of the disease; this association however has not been proven.

The way in which the exposure to steroids was evaluated was based on the time of utilization rather than the dose, and this could be the reason why an association could not be established between BMI and steroids. It has been suggested that the secondary effect of weight gain is more related to the dose of steroids, rather than to the time of use, and this could be an even more significant issue in the findings of this study.<sup>5</sup>

The instrument used to assess the quality of the diet is quite interesting and led to the finding that patients with SLE take hypercaloric diets and utilize food fiber poorly. These findings are extremely valuable for any practitioner dealing with SLE patients.

Although the results indicate that these patients have a low calcium and iron intake, no mention was made of whether

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such low intake lead to a genuine deficiency; however, this is a warning sign because we know that patients with SLE have a higher risk of developing osteoporosis and anemia,<sup>6</sup> and these nutritional deficits may contribute to worsen the progression of these associated complications.

Studies like this that assess other non-pharmacological aspects of the management of patients with SLE, provide us with data-based tools for a more holistic approach to the treatment of this disease.

It is yet to be proven whether any interventions addressing each one of this factors, such as weight control, a balanced diet, and calcium and iron supplementation, improve the evolution and outcome in these patients.

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