AB0545

IS LUPUS MORE PREVALENT IN WORLD'S MOST STRESSED COUNTRIES?

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Background: A number of studies have implicated psychological stress as a trigger for autoimmune diseases. In a questionnaire study involving 120 lupus patients emotional stress was selected in over 75% cases as a trigger for their disease¹. The role of stress as a trigger in lupus however is controversial. Here we study whether there is an association between the prevalence of lupus in various countries and their reported stress measures.

Methods: We undertook a literature review of the reported prevalence of lupus in various countries across the world. We then recorded the reported stress index in those countries from Bloomberg's study², which utilised seven equally weighted variables: homicide rates, GDP per capita income inequality, corruption perception, unemployment, urban air pollution and life expectancy to rank 74 countries according to stress levels. Pearson's correlation was used to measure association between national stress indices and lupus prevalence

Results: Results are presented in graph 1. Prevalence data was only available in the literature for limited countries. Of the countries studied no correlation was found between national stress indices and lupus prevalence ($r = -0.028$ (p-value 0.449))

Abstract AB0545 – Figure 1

Conclusions: We found no association between a country's prevalence of lupus and the measured stressfulness of its living environment.

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AB0546

CRYGLOBULINEMIA IN SYSTEMIC LUPUS ERYTHEMATOSUS: CLINICAL AND IMMUNOLOGICAL FEATURES

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Background: Systemic lupus erythematosus (SLE), as the prototype of systemic autoimmune diseases, has a wide array of clinical manifestations. An association between cryoglobulinemia and certain clinical and immunological features of SLE has been proposed, and there are various pathophysiologic pathways that could be involved in this relationship. Although the presence of cryoglobulinemia in SLE patients may be related to specific disease features and could even have prognostic value, this association has not been addressed thoroughly.

Objectives: To describe clinical and immunological characteristics in SLE patients with cryoglobulinemia.

Methods: We performed a retrospective, case-control study, in which we included all patients with a cryoglobulin determination between January 2005 and December 2016 in a third level referral centre in Mexico City. Patients with SLE and a positive cryoglobulin test (cryocrit $\geq 1\%$) were included in the case group, whereas SLE patients with a negative cryoglobulin determination were considered controls. We studied demographic, clinical and immunological

characteristics at the time of the positive cryoglobulin result, as well as three months earlier, and 6 and 12 months later.

Results: Thirty-six SLE patients had a cryoglobulin determination throughout the study period. Ten patients had cryoglobulin levels $\geq 1\%$ and were included in the case group, whereas 26 patients with a negative determination were included as controls. Mean age was 37.7 ± 18.3 in cases and 41.7 ± 19.3 in controls. 70% of cases and 88.5% of controls were women.

Among subjects with cryoglobulinemia, the cryocrit was 1% in 9 patients, and 3% in one. Regarding clinical and immunological characteristics, a positive lupus anticoagulant and a history of vasculitis were more frequent in patients with serum cryoglobulins ($p=0.004$ and 0.04 , respectively).

At the time of the cryoglobulin measurement, patients in the case group had lower levels of C3 and C4 ($p=0.026$ and $p=0.003$, respectively), and serum albumin ($p=0.028$). They also had a higher prevalence of serositis ($p=0.021$) and peripheral oedema ($p=0.034$), as well as a higher SLICC Damage Index score ($p=0.014$) than controls.

Regarding follow-up, patients in the case group had a higher SLEDAI score after six and twelve months ($p=0.009$ and 0.034 , respectively). Also, after 12 months they had a higher prevalence of renal activity ($p=0.004$) and lower C4 levels ($p=0.001$). Among patients with renal activity, 20% of cases and 55% of controls had achieved complete remission after 12 months.

Conclusions: Serum cryoglobulins in SLE patients were associated with positive lupus anticoagulant and hypocomplementemia. Cryoglobulinemia was also associated with specific disease manifestations, such as serositis and vasculitis, and with damage accrual. At follow-up, patients with cryoglobulinemia had a higher prevalence of renal activity, as well as an increased disease activity overall. Whether cryoglobulins could be used as a biomarker for renal activity or worse renal prognosis remains to be determined, and larger prospective studies will be needed to address this possibility.

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AB0547

LYMPHADENOPATHY IN SYSTEMIC LUPUS ERYTHEMATOSUS: CLINICAL RELEVANCE AND HISTOLOGICAL SUBTYPES

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Background: Some patients with Systemic Lupus Erythematosus (SLE) have lymphadenopathy (LAP) at diagnosis or at follow-up. The prevalence of LAP in SLE was 59% in the oldest series,¹ 12% in the 1993 EUROLUPUS series² and in the last two decades its prevalence was not mentioned. However, the presence of LAP and their histological type may have clinical relevance.³

Objectives: To study the prevalence and histologic characteristics of LAP in a cohort of patients with definite SLE and evaluate its relationship with clinical manifestations.

Methods: All patients diagnosed with SLE according to the 1997-ACR criteria at the Autoimmunity Units of three different hospitals since 2005 were followed looking for lymph node enlargement at every consult. The moment when LAP was detected, the concomitant clinical symptoms, SLE manifestations and laboratory variables were recorded. The group of patients with and without LAP were compared. A tissue sample was obtained when indicated. All patients agree to participate in the study.

Results: 103 patients with definite SLE were included in the study. Valuable LAP (>10 mm) was found in 28 patients (27%). The gender and age of SLE patients with and without LAP was similar (80% vs 78% females, and 34 ± 15 vs. 40 ± 28 years respectively). LAP was detected at the time of SLE diagnosis in 54% of patients. Fever was significantly more frequent in patients with LAP (60% vs 5%, $p<0.01$) like dermatopathy (86% vs. 60%; $p<0.05$) and serositis (45% vs 16% $p<0.01$). High titers of anti-dsDNA antibodies (71% vs. 42%; $p<0.05$) and hypocomplementemia (89% vs. 60%; $p<0.05$) were also more frequent in patients with LAP. A total of 28 tissue samples were obtained in 17 patients (FNA 6, Ultrasound-guided biopsy 6 and surgical excision in 17). The histopathological study showed: Reactive lymphadenitis 20, histiocytic necrotizing lymphadenitis in 6 and Non-Hodgkin Lymphoma in 2 (B-cell lymphoma on methotrexate treatment, and a Burkitt lymphoma). All 6 patients with SLE and histiocytic necrotizing lymphadenitis have cutaneous involvement but none of them developed lupus nephritis.

Conclusions: Patients con SLE and lymphadenopathy had significantly more fever, cutaneous lesions and serositis. High levels of anti-dsDNA antibodies and hypocomplementemia were more frequent in these patients. In some occasions malignancy could be the cause of lymphadenopathy.