CIRCULATING CD4+ T CELLS LEVELS IN ACTIVE AND NON ACTIVE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Dear Editor,

We read with great interest the article written by Ferreira et al[1] recently published in your journal. Considering the comments made in discussion by the authors, we highlight some differences obtained in our work. The objectives of the present study were to quantify the levels of circulating CD4+ T cells in systemic lupus erythematosus (SLE) patients and further correlate their levels with the degree of disease activity. A prospective study was performed in the Unit of Systemic Autoimmune Disease, Hospital de Clínicas, School of Medicine, Uruguay. Thirty consecutive (hospitalized and ambulatory) patients with SLE were included. All patients fulfilled four or more of the revised classification criteria for SLE of ACR.[2] Disease activity was scored based on the SLE disease activity index (SLEDAI),[3] with one group comprising patients with non active disease (SLEDAI < 5; n = 16) and another group with active disease (SLEDAI ≥ 5; n = 14) with or without immunosuppressive treatment. Peripheral blood samples were drawn for simultaneous measurements of total white blood cells and CD4+ T cells (theses by flow cytometry). In all cases informed consent was obtained according to local approved ethical rules. Comparison between the different groups was performed using Mann-Whitney U test and correlations between absolute number of CD4+ T cells and SLEDAI scores were assessed by nonparametric Spearman correlation. A $p < 0.05$ was considered statistically significant.

29 out of the 30 patients were female. The mean age was 38.5 ± 15 years and duration of disease was 8.5 ± 10 years in the total of SLE patients included. 16 patients (53%) had non active disease (SLEDAI 1.0 ± 1) and 14 patients (47%) had active disease (SLEDAI 13 ± 6). No significant differences of age, disease duration, percentage and total number of lymphocyte among the groups were detected. A decrease in the concentrations of complement C3 and treatment with high doses of prednisone were found in SLE active group (Table I). The absolute number of CD4+ T lymphocyte (cell/µl) and the percentage in the non active and active SLE patients was 508 ± 153 and 471 ± 288 and 39.7 ± 8.5% and 36.5 ± 11.0% respectively. The active patients seemed to have lower mean levels of CD4+ T cells than inactive patients, however the difference was not statistically significant. No significant correlation between absolute cell numbers of CD4+ T cells and SLEDAI score in the active SLE patients was detected (Spearman r = -0.347). There were no opportunistic infections and only in 3 patients (with active disease) bacterial infection was confirmed.

Lymphopenia correlates with disease flares that may contribute to the development of susceptibility to infections,[4,5] however, CD4+ T cells abnormalities were not generalized to all SLE patients.[6,7]

In the context of a retrospective study. the results of Ferreira et al,[1] could be influenced by the inclusion of patients with severe immunosupression. In our case, the prospective inclusion of consecutively patients could better reflect the status of CD4+ T cell deficits in SLE. Although the sample size is small, our series included only one male patient, better reflecting the gender distribution observed in the SLE in this age range. We have not found significant differences between CD4+ T cell number and either non active or active SLE patients. This result, could be explained at least in part, by changes induced by high doses of prednisone in patients with active disease. Our results do

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Table I. Clinical features of SLE patients

	Total SLE	Non active SLE	Active SLE	p value
Total (n)	30	16	14	–
Age (years)	38.5 ± 15	38.3 ± 12	38.7 ± 18	0.471
SLE duration (years)	8.5 ± 10	7.8 ± 8	9.3 ± 12	0.359
SLEDAI	–	1 ± 1.4	13 ± 6.0	0.001
Complement C3	–	123 ± 26.8	65.1 ± 17.7	0.001
Prednisone dose (mg/day)	–	6.7 ± 11.4	44.3 ± 17.4	0.001
Total Lymphocytes	1572 ± 1033	1502 ± 791	1646 ± 1270	0.357
Absolute CD4+ T cell (n°/ µl)	492 ± 218	508 ± 153	471 ± 288	0.340
% CD4+ T cell	38.3 ± 9.6	39.7 ± 8.5	36.5 ± 11.0	0.195

not support the view that CD4+ T cell counts could constitute a marker of disease activity.

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