AUTOIMMUNE CONNECTIVE TISSUE DISEASES

CHEMOKINE PROFILE IN CUTANEOUS LUPUS ERYTHEMATOSUS

Silvia Méndez-flores [(1)] - Gabriela Hernández-molina [(1)] - Janette Furuzawa-carballeda [(1)]

Instituto Nacional De Ciencias Médicas Y Nutrición, Instituto Nacional De Ciencias Médicas Y Nutrición, Mexico City, Mexico [(1)]

Introduction: There is increasing evidence that chemokines have a key role in the pathophysiology of cutaneous lupus erythematosus (CLE).

Objective: To compare the expression of chemokines and their receptors in skin biopsies of discoid lupus (SLE/DLE), and subacute lupus (SLE/SCLE) and correlate it with tissue and circulating effector CD4 T cell/regulatory cell subpopulations.

Materials and Methods: This was a cross-sectional study. It included skin biopsies and peripheral blood of 9 active SLE/DLE and 9 SLE/SCLE patients, and as controls 5 SLE patients without cutaneous lesions and 10 healthy donors (HD). The clinical skin activity was measured by CLASI score. To determine the CXCL-10/CXCR3−, CCL2/CCR2−, CCL17/CCR4−, CCL20/CCR6−, CCL27/CCR10−, CXCL8/CXCR1−, CXCL13+/CXCR5−expressing cells, IL-22−, CD4+/IL-17A+−, CD4+/IL-4+−, and CD4+/IFN-y+−producing T cells, CD123+/IDO+ pDCs, CD25+/Foxp3+ Tregs, and CD20+/IL-10+−producing B cells, a double immunostaining procedure was performed. Also, intracellular IL-22, IL-17, IL-4, IFN-y, and Foxp3 in CD4 T cells, IL-10 in B cells, and IDO in pDCs were analyzed by flow cytometry in peripheral blood.

Results: In the tissue, the expression of CXCL10 and CXCR5, CCL20 was higher in SLE/DLE versus SLE/SCLE patient group (P <0.05). Also, the percentage of Th22, Th17, Th1, Treg and pDCreg cells was increased in SLE/DLE versus SLE/SCLE patient group (P<0.05). The number of circulating Th22, Th17, Th1, Breg and pDCreg cells was higher in the group of patients with SLE/DLE versus SLE/SCLE (P<0.05). In tissue, we found a positive correlation between CXCR3 and Th17; CCR2 and Th1; CCR10 and pDCregs in SLE/DLE patients. A positive correlation was also observed among CXCL13 and Bregs in SLE/SLCE patients.

Conclusion: The immune response is more vigorous in patients with SLE/DLE versus SLE/SCLE. However, the correlation between chemokines/receptors expression and subpopulations of effector/regulatory T, B and pDC cells showed a differential response

among these cutaneous pathologies.