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Cytokines profile and the phenotyping of lymphocyte subsets in chronic pain patients

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The relationship between chronic pain and immune system is not yet understood. Besides that, the studies conducted in humans are controversial and bring limited data.

Objective: This research aims to study the immunological profile of patients with chronic pain at Pain Clinic of the Bahia Federal University who had a poor response to medical treatment and waiting for another therapeutic possibility.

Methods: An observational study of the epidemiological survey type was conducted comparing the immunological profile of 20 patients with chronic pain (neuropathic and fibromyalgia) and 10 healthy individuals. Social-demographic characteristics of the groups were evaluated, and the phenotyping of lymphocyte subsets and serum levels of inflammatory cytokines IL-1 β , IL-4, IL-6, IL-10, IFN- γ and TNF- α in peripheral blood.

Results: Patients with chronic pain had higher mean age, predominantly women and individuals away from work. Regarding cytokines, high levels of IFN- γ , IL-1 β , IL-4 and TNF- α besides reduced levels of IL-6 and IL-10 were found in the group with chronic pain. As for the phenotyping of lymphocytes, were found reduced CD8 and elevated NK cells and B lymphocytes in the group with chronic pain. There was a slight elevation in CD4 count and elevated CD4/CD8 ratio in the group with chronic pain.

Conclusion: Despite the small groups and the non-randomic selected size of the study, it was possible to observe differences between the immunological profiles of patients with chronic pain compared to subjects without pain, as described in the literature.

Biography

Durval Campos Kraychete Graduated in Medicine from Bahia Federal University (1986), did his Master's in Anesthesiology Department, São Paulo Federal University (1993) and PhD at Clinical Medicine Bahia Federal University (2004). He has been coordinating the Pain Clinic since 1996, focusing on clinical research. He has published papers in national journals and has been serving as an Editorial Board Member of Brazilian Journal of Anesthesiology; Brazilian Journal of Rheumatology, and Revista Dor-Pesquisa Clínica e terapêutica (Official Journal of the Brazilian Pain Society). Currently, he is the Vice-President of Brazilian Pain Society.

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