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Comparison of systemic and local cytokine profile on the background of development and healing of experimental ulcer

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Cytokines play an important role in the development and course of diseases of different systems, including the digestive system. Lymphocytes of regional lymph nodes are the main sources of cytokines which are involved in inflammation. We compared systemic and local cytokine profile of rats with acetate ulcer (AU). Blood was collected from the jugular vein of the rats on the day 4 and 7 after acetate-induced ulceration. Max. AU – after 3 days, 10 days formed scar. *In. gastricus caudalis* of rats were used as the source of T-lymphocytes. Cytokine's levels were determined in the serum and in the supernatant of mitogen-activated mononuclear cells by flow cytometry. The max. concentration of IL-1 α and MCP-1 in the serum of rats without ulcers (IR) was 61.9 \pm 15.1 pg/ml and 537.2 \pm 82.2 pg/ml resp. Other cytokines were <10 pg. The AU formation induced a significant increase of IL-1 α and MCP-1 in the serum in 2.2 and 13.5 times. The level of the other cytokines did not change. The max. of IL-1 α , MCP-1, IL-17 α , IFN γ , IL-4, TNF α in the supernatant of lymph node cells were equal to 273.0 \pm 24.6, 62.7 \pm 8.7, 2852.8 \pm 146.5, 1115.9 \pm 168.8, 598.9 \pm 33.8, 87.5 \pm 18.1 pg/ml, resp. AU formation was accompanied by an acute shortage of all local cytokines. This continued on the day 7, expressly were low IL-1 α and MCP-1, alone IL-17 α reverted to normal. So, despite that the development and healing of AU were accompanied by high content in serum of basic proinflammatory cytokines, contrary local immunity is suffer from their deficiency. At help comes IL-17 α .

Biography

Bakaeva Zanda Valerievna has completed PhD and postdoctoral studies from Department of Human and Animal Physiology, Faculty of Biology, Lomonosov Moscow State University. She is the senior researcher of Laboratory of Neurobiology, Scientific Center of Children's Health of the Russian Federation Ministry of Health. She has published more than 25 papers in reputed journals. She is the docent at the Department of Physiology People's Friendship University of Russia.

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