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Title: Main features of cytokine profile in serum and bronchoalveolar lavage fluid in patients with recurrent sarcoidosis

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Body: Introduction: It is well known that the leading element of the pathogenesis of sarcoidosis is a disorder of immune regulation. In this regard, it's very important to study the lymphocyte mediated immunity in patients with recurrent sarcoidosis, depending on the activity of the inflammatory process. Objective: Determination of cytokine profile in bronchoalveolar lavage fluid in patients with recurrent sarcoidosis. Materials and Methods: The study involved 60 patients - 41 women and 19 men. All patients were divided into 2 groups based on the level of C-reactive protein. The group of patients with high CRP included 24 people, the other group with normal CRP level included 36. The method of study of the cytokine profile in bronchoalveolar lavage fluid and serum was an immunofluorescence analysis for multiplex detection of cytokines in biological fluids. Results: When compared, the cytokine profile in bronchoalveolar lavage fluid in patients with high CRP showed a significant increase of TNF-beta, IL-12, IFN-gamma and especially IL-4 and IL-5. While, the cytokine profile in bronchoalveolar lavage fluid in the group with normal CPR showed the high levels of TNF-alpha and beta, IL-12, IFN-gamma, IL-2, -4 and -5. The elevation of IL-4 and -5 in the bronchoalveolar lavage fluid in the group with high CPR was much more significant, whereas the elevation of TNF-beta and IFN-gamma was lower. Conclusion: Our study showed, that there is an activated T-helper 2 immune response in bronchoalveolar lavage fluid in in patients with high CPR.