THE ROLE OF THE CYTOKINE DISBALANCE IN THE DEVELOPMENT OF THE IMMUNE SUPPRESSION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

N. Kravchun, I. Chernyavska, I. Karachentsev
Department of Pharmacotherapy of Endocrine Diseases, V. Danilevsky Institute for endocrine pathology problems National Academy of Medical sciences of Ukraine, Ukraine

Objective: To establish the correlation between the concentrations of proinflammatory cytokines and the activation T-cell in patients with T2DM. Materials and methods: 58 patients with T2DM and abdominal obesity (IBM – 33.57± 0.9), with dislipidemia, were examined for cytokine profile e.g. The levels of leptin, IL-6 and the subpopulation of lymphocytes. A calculation of the immunoregulatory index was made and correlating analysis was carried out. Results: Increase of leptin concentration (35.9 pg/ml [22.0;44.2]), IL-6 (22.8 pg/ml [14.2;32]) and the immunoregulatory index (3.8 [2.2;4.0]), as well as the reduction of the CD8+ - lymphocytes (13 % [8;16]) were evident. There was a positive correlation between IBM and the levels of leptin (r = 0.89, p<0.001), and IL-6 (r = 0.92, p<0.001). There was negative correlation between the level of leptin and CD8+ cells count (r = -0.79, p<0.05) and positive with CD4+ (r = 0.88, p<0.05). Conclusions: The established positive correlations between IBM and the levels of IL-6 and leptin is evidence of the role of obesity in the development of proinflammatory state. The negative correlation between leptin levels IL-6 and of CD8+ - cells count confirmed the interrelation of increase in proinflammatory cytokines and the immune suppression in T2DM.