

Assessment of the Immune System Activity in Iranian Patients with Major Depression Disorder (MDD)

Reza Farid Hosseini^{1*}, Farahzad Jabbari Azad¹, Ali Talaei¹, Sara Miri¹, Naghme Mokhber¹, Farhad Farid Hosseini², Habibollah Esmaeili¹, Mahmoud Mahmoudi¹, Hoshang Rafatpanah¹, Mohammadreza Mohammadi²

¹Bu-Ali Immunology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran, ²Rozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran

ABSTRACT

Background: Major Depression Disorder (MDD) is a common disorder with prevalence of 15% among men and up to 25% among women. In recent years the association of immune system alterations and MDD has been investigated. Assessments of immunologic and inflammatory responses in these patients enhance our knowledge of the etiology and pathogenesis of this disease. **Objective:** To investigate the changes in immunoglobulin and cytokine serum levels and lymphocyte subsets in patients with MDD. **Methods:** We studied 37 adult patients with MDD, diagnosed based on DSM-IV diagnostic criteria, and 15 healthy controls matched with the patients. Plasma concentration of interleukin-4 (IL-4), IL-10, TNF α , and IFN γ were measured by ELISA and serum immunoglobulins by SRID. Total number of NK cells (CD16 and CD56), B cells (CD19), and T cells (CD8, CD4, and CD3) were determined by flow cytometry. **Results:** We found no significant differences in plasma concentration of IL-4, IL-10, TNF- α , IFN- γ , and immunoglobulins as well as total number of NK cells, B cells, and T cells between major depressed patients and healthy control subjects. **Conclusion:** We conclude that in our patients, there were no significant differences in immune system activity between MDD patients and controls.

Keywords: Major Depression, Cytokines, Immunoglobulin

*Corresponding author: Dr. Reza Farid Hosseini, Department of Immunology and Allergy, Ghaem Medical Center, Mashhad, Iran. Fax: (+) 98 511 8409612, e-mail: rfaridh@yahoo.com