

THE ROLE OF AGE AND GENDER IN PREDICTING SERUM LEVELS OF IL-6 AND TNF- α IN PATIENTS WITH SCHIZOPHRENIA AND MAJOR DEPRESSION

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Introduction: Growing evidence in the field of psychoneuroimmunology indicates an interconnection between psychiatric disorders, in particular schizophrenia and mood disorders, and cytokine alternations. Gender and aging are commonly reported to affect cytokine levels, but contrasting conclusions still represent a topic for debate.

Objectives and aims: Our aim was to investigate the role of age and gender in the serum levels of Interleukin-6 (IL-6) and Tumor Necrosis Factor-alpha (TNF- α), in patients with schizophrenia (SCH) and major depression (MDD).

Method: We measured serum levels of IL-6 and TNF- α in acute exacerbation of illness, in 37 patients with MDD, and compared them to 43 patients with SCH. The serum levels were measured by the enzyme-linked immunosorbent assay (ELISA). All patients fulfilled the ICD-10 criteria.

Results: The significant interaction between gender and psychiatric disorders on serum cytokine levels, and the association between IL-6 and TNF- α and age, in both groups of patients, were not detected. However, when applied the linear regression model with the serum cytokine levels as dependant variable, and age, gender, and psychiatric disorder as independent variables, the significant predictive effect of age on levels of both investigated cytokines was detected. The patients over 35 years of age had higher levels of IL-6 and even significantly lower levels of TNF- α , regardless of the diagnosis.

Conclusion: The results suggest that the aging process could be a relevant factor influencing the immune status of patients with SCH and MDD. Further prospective studies are essential to further investigate biological mechanisms that underlie these multidimensional interconnections.