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## Depression is not related to the serum levels of inflammatory markers in multiple sclerosis patients

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Multiple sclerosis (MS) is a chronic inflammatory and demyelinating disease which may lead to mental problem and decreased quality of life in affected patients. Depression is a common complaint in MS patients, which may be related to the released inflammatory cytokines. This study was performed to assess pro-inflammatory and anti-inflammatory cytokine levels in depressed and non-depressed MS patients. Forty eight patients with a definite diagnosis of relapsing –remitting MS were studied. Patients underwent the Beck depression inventory (BDI) questionnaire and were categorized in two groups of depressed and non-depressed patients. Anthropometric features of the patients were measured and fasting blood samples were collected to determine serum TNF- $\alpha$ , IL-4, IL-6, TGF- $\beta$ , INF- $\gamma$  and MMP-9 levels, as well as total antioxidant capacity (TAC). After the analysis of the findings, there were not significant differences in the levels of inflammatory cytokines in depressed and non-depressed MS patients. The mean total antioxidant capacity (TAC) was also in the same range in both study groups. The findings of the present study indicated that there is no statistically significant differences in the levels of inflammatory and antioxidant biomarkers in depressed and non-depressed MS patients. So the depression in the remission period of MS patients can't be related to the inflammatory cytokines.

### Biography

Fatemeh Seifar is a medical student at Tabriz University of medical sciences. She has started working on research projects since the first year of her education. She has published various papers in reputed journals during her education and still working on the projects related to neurological diseases. She is the head of research at Student neuroscience committee of neuroscience research center in Tabriz University of medical sciences.

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