

# **Memory Dysfunction and Interleukin 6 (IL-6) in Patients with Bipolar Disorder during Euthymic Periods**

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## **ABSTRACT**

**Background:** There is evidence supporting a pathophysiological role for immuno-inflammatory mediators in bipolar disorder. IL-6 was assumed to play a role in pathophysiology as well as memory deficits in bipolar disorder during euthymia.

**Aim of the study:** To assess the level of serum interleukin-6 in patients with bipolar disorder during euthymia and its relation to memory dysfunction.

**Subject & Methods:** Forty patients with bipolar disorder during euthymia and 40 healthy control subjects matched in age, gender and educational level to the patients' group were assessed and compared as regards the level of serum IL-6 and memory functions.

**Results:** The mean level of serum IL-6 of patients with bipolar disorder was significantly higher than that of healthy control group. Patients showed poorer performance in verbal memory. There was a statistically significant negative correlation between the level of serum IL-6 and, information and orientation, mental control, figural memory, visual paired association, visual memory span, digit span and verbal memory and also a statistically significant positive correlation between the level of serum IL-6 and the age, number of episodes and duration of illness in the patient's group.

**Conclusion:** The level of serum IL-6 in patients with bipolar disorder during euthymia is higher than that of healthy controls reflecting a possible underlying immune pathophysiology. These patients also show deficits in verbal memory function. This study also supports the presence

of a relation between serum IL-6 level and verbal memory deficits in bipolar disorder during euthymia.

**Key words:** serum IL-6; bipolar disorder; memory functions; euthymia.