Activation of Indices of cell-mediated immunity in bipolar mania.

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Abstract

BACKGROUND: Evidence supports that macrophages as well as lymphocytes and their products may be involved in the pathophysiology of psychiatric disorders. Whether patients with bipolar disorder have activation or reduction of immunity during a manic episode remains unclear. METHODS: The purpose of this case-control study was to investigate the lymphocyte proliferation to phytohemagglutinin (PHA), concanavalin A, and pokeweed mitogen, and plasma levels of soluble interleukin-2 receptor (sIL-2R) and sIL-6R in patients with bipolar mania (DSM-III-R). The subjects were 23 physically healthy patients with Young Mania Rating Scale (YMRS) scores > or = 26 as well as aged < or = 45 years and 23 age- and gender-matched normal control subjects. The above immune variables were measured in acute mania and consequent remission (YMRS scores < or = 12) among bipolar patients. RESULTS: The lymphocyte proliferation to PHA and the plasma sIL-2R levels, but not sIL-6R, of bipolar patients were significantly higher in acute mania than in consequent remission. These elevations were not due to differences in medication status. Only in acute mania were the plasma sIL-2R levels of patients significantly higher than control subjects. A positive correlation between the changes of manic severity and plasma sIL-2R levels was observed. Remitted bipolar patients and normal control subjects did not differ in any of these measures. CONCLUSIONS: Cell-mediated immunity activation in bipolar mania was demonstrated and may be through a specifically state-dependent immune response.