

Glutathione as an Antioxidant Defense System in Schizophrenia and Bipolar 1 Disorder

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Introduction: There is strong evidence that oxygen free radicals may play an important role in the pathophysiology of major mental illnesses such as schizophrenia and bipolar disorders. **Aim of the study:** To detect the difference in the level of total glutathione mainly in serum sample of schizophrenic patients compared to bipolar patients and healthy control. **Subject and methods:** A case-control cross sectional study, the sample included thirty schizophrenic patients, 30 patients with bipolar I disorder (manic, depressive, mixed episode) compared to 30 healthy controls well matched for age, sex, educational level and marital state. **Psychometric procedure:** Young Mania Rating Scale, Hamilton Depression Rating scale, Positive and Negative Syndrome Scale, Serum sample for level of glutathione. **Results:** there are statistically significant differences between the level of glutathione in group of schizophrenia, and group of bipolar1 disorder in comparison to control group, but no significant differences between two patients groups. There is positive significant correlation between smoking and glutathione in control group. There is significant negative correlation between glutathione and both of negative symptoms and number of hospital admissions in schizophrenia. There is significant negative correlation between glutathione and duration of illness, significant negative correlation between glutathione and aging, significant positive correlation between glutathione and (manic-mixed episode) in bipolar group.

Conclusion: Decrease plasma level of glutathione in both schizophrenic and bipolar patients that indicates the role of total glutathione in pathophysiology of these disorders and it is considered as indirect bio markers for the oxidative stress theory in these patients.