

Imipramine Ameliorate Altered Biochemical Parameter and Oxidative Damage in Depression

Authors : D. S. Mohale, A.V. Chandewar

Abstract : Study was undertaken to investigate the effect of imipramine on various biochemical parameters and oxidative stress markers in short and long term depression on rats. Rats were subjected for short (21 days) and long term (84 days) social isolation for and checked for depression on force swim test and tail suspension method. Various markers of oxidative stress like lipid peroxidation (LPO), reduced glutathione (GSH), Superoxide dismutase (SOD), catalase (CAT) and biochemical parameters like Serum glutamate oxaloacetate transaminase (SGOT), Serum glutamate pyruvate transaminase (SGPT), and blood glucose were determined in depressed, control, imipramine and Vitamin E treated group. The rats displayed an increase in depression on force swim test and tail suspension method relative to control. There was significant increase in the level of LPO and decrease in the levels of GSH, SOD and CAT after short and long term depression. Increased oxidative stress in depression which may leads to alteration of biochemical parameters. Treatment with imipramine an tricyclic antidepressant significantly decreases in level of LPO, SGOT, SGPT and increase in the levels of GSH, SOD and CAT in long term depression.

Keywords : depression, oxidative stress, lipid peroxidation, reduced glutathione

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