

Studying the Possible Effect of Silymarin as a Natural Extract against Lead- Induced Liver Damage in Rats

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This study was conducted to investigate the possible ameliorative effects of silymarin against adverse effects and hepatotoxicity induced by lead toxicity in rats. Given of rats a daily dose of lead acetate (4mg/kg B.WT/ day/8 weeks) caused oxidative liver injury evidenced by an increase in serum levels of hepatic markers enzymes (transaminases and gamma glutamyl transferase), inflammatory factors (tumor necrotic factor-alpha (TNF- α) and interleukin-6 (IL-6)) and level of hepatic malondialdehyde (MDA) with marked sever damage in the histopathology of liver tissues compared to control rats. Also, lead significantly reduced the level of total antioxidant capacity (TAC), glutathione content (GSH) and the activity of superoxide dismutase activity (SOD) and catalase (CAT). While, treatment of rats with lead along with silymarin (50mg/kg/day/8weeks) induced significant decrease in the activity of liver enzymes, level of TNF- α and IL-6 with enhancing of antioxidant status and reduction of lipid peroxidation as well as silymarin treatment significantly reduced sever damage and necrosis of liver tissues induced by lead. The results concluded that silymarin ameliorate the toxic effects of lead to a major extent, suggesting the probability of using silymarin as a powerful natural extract that can protect against liver injury.

Keywords: Lead toxicity, Silymarin, Lipid peroxidation, Liver injury.