

Protective Effect of *Malva sylvestris* L. against Sodium Fluoride-Induced Nephrotoxicity in Rat

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Abstract : Background: *Malva sylvestris* L. is widely used in the traditional medicine of Iran and other countries to treat gastrointestinal, respiratory, skin and urological Disorders. Moreover, it has antioxidant property. Objective: In this study the protective effect of *Malva sylvestris* against sodium fluoride-induced nephrotoxicity in rats were evaluated. Methods: The *Malva sylvestris* flower extract was injected intraperitoneally at the doses of 100, 200, 400 mg/kg/day to groups of rats (10 in each group) for 1 week and subsequently 600 ppm sodium fluoride was added daily to the rats drinking water for 1 additional week. After these steps, the rats' serum levels of urea, creatinine, reduced glutathione, catalase and malondialdehyde were determined. The histopathology of the rats' kidney was also studied. Results: *Malva sylvestris* extract with doses of 400 mg/kg/day significantly decreased the urea and creatinine levels ($P<0.05$). Moreover, the levels of catalase and glutathione were increased by this dose, but only the catalase increase was statistically significant ($P<0.05$). All three extract doses of *Malva* decreased the malondialdehyde level, but it was significant only for the dose 400 mg/kg/day ($P<0.05$). Histopathological findings also showed a protective effect of *Malva* against renal damage induced by sodium fluoride. Conclusion: The results suggest that *Malva sylvestris* has a protective effect against sodium fluoride-induced nephrotoxicity through its antioxidant property.

Keywords : *Malva sylvestris*, nephrotoxicity, sodium fluoride, rat

Conference Title : ICBB 2016 : International Conference on Biochemistry and Biotechnology

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 11-12, 2016