

Evaluation of *Malva sylvestris* L. Effect on Sodium Fluoride-Induced Nephrotoxicity in Rat

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Abstract : Background: *Malva Sylvestris* L. has antioxidant property and is widely used in the traditional medicine to treat gastrointestinal, respiratory, skin and urological disorders. Objective: In this study the protective effect of *Malva Sylvestris* against sodium fluoride-induced nephrotoxicity in rat were evaluated. Methods: The *Malva Sylvestris* flower extract was prepared and injected intraperitoneally at the doses of 100, 200, 400 mg/kg/day to group of rats (10 in each group) for 1 week and subsequently 600 ppm sodium fluoride was added 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 histopathologies of the rats' kidneys were also studied. Results: Sodium fluoride administration increased levels of BUN, creatinine glutathione, catalase activity and decreased malondialdehyde indicating induction of nephrotoxicity in rats. *Malva Sylvestris* extract pretreatment significantly decreased the BUN and creatinine levels ($P<0.05$). Moreover, the levels of catalase and glutathione were increased by *Malva*, and this increase were also statistically significant ($P<0.05$). All three doses of *Malva* extract decreased the malondialdehyde level, but it was significant only for the doses of 200 and 400 mg/kg/day ($P<0.05$). Histopathological findings also showed protective effect of *Malva* against renal damage induced by sodium fluoride. Conclusion: The results suggest that *Malva Sylvestris* has protective effect against sodium fluoride-induced nephrotoxicity maybe mediated by its antioxidant property.

Keywords : malva sylvestris, nephrotoxicity, sodium fluoride, rat

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