عنوان مقاله:

Protective and anti-inflammatory effects of silymarin on paraquat-induced nephrotoxicity in rats

محل انتشار:

Journal of Herbmed Pharmacology, دوره 8, شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Introduction: Paraquat is a quaternary nitrogen herbicide which induces kidney toxicity due to producing oxidative stress. We have investigated the potential protective effects of silymarin on paraquat-induced renal toxicity. Methods: Twenty-four male rats were divided into three groups, group ۱, control group; group ۲, rats that received paraquat only (۲۵ mg/kg b.w./day, po); animals in group ۳, was treated with paraquat (۲۵ mg/kg b.w./day, po) and silymarin (۵۰ mg/kg b.w./day, po). Then, the serum and tissue parameters of the oxidative stress and renal histopathological changes were examined. Results: In group ۲ which received paraquat only, a remarkable increase (P<۰.۰۵) was observed in serum creatinine, urea, malondialdehyde (MDA), protein carbonyl, and tumor necrosis factor alpha (TNF-α). Also, there was a significant decrease in renal superoxide dismutase, catalase (CAT), ferric reducing ability of plasma (FRAP) and vitamin C in the second group. Oral administration of silymarin significantly decreased serum urea, creatinine, protein carbonyl, MDA, and TNF-α as well as renal histopathological changes. Conclusion: The present study suggests that silymarin has anti-inflammatory and nephroprotective effects against nephrotoxicity caused by paraquat.

کلمات کلیدی: