عنوان مقاله:

Nephroprotective effect of silymarin against diclofenac-induced renal damage and oxidative stress in male rats

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خلاصه مقاله:

Introduction: Diclofenac (DIC), a phenylacetic acid compound which belongs to nonsteroidal anti-inflammatory drugs (NSAIDs), is generally used for the treatment of various diseases such as rheumatoid arthritis, ankylosing spondylitis, acute muscle pain conditions and osteoarthritis. Overdose of DIC can lead to renal injuries in both experimental animal and human. Our research was done to assess the protective role of silymarin on renal damage induced by DIC in rats. Methods: Thirty-two Wistar rats were assigned to four groups (n=۸/group). Group ۱ was control group; animals in group ۲ were administrated DIC; Groups ۳ and ۴ administrated DIC plus silymarin with doses of ۱۰۰ mg/kg and ۲۰۰ mg/kg, orally (p.o), respectively. Various biochemical, molecular, and histological parameters were evaluated in serum and tissue homogenate. Results: In the second group, the levels of kidney catalase (CAT), vitamin C and superoxide dismutase (SOD) remarkably reduced (P < ۰.۰۵) relative to the control group. Also, urea, creatinine (Cr), malondialdehyde (MDA), serum tumor necrosis factor-α (TNF-α) and gene expression of TNF-α in this group were noticeably elevated (P < ۰.۰۵) relative to the control group. Treatment with silymarin caused a remarkable elevation (P < ۰.۰۵) in vitamin C, SOD, CAT and a remarkable reduction (P < ۰.۰۵) in the content of MDA, urea, Cr, TNF-α gene expression and serum TNF-α in comparison with second group. Histological injuries were also ameliorated by silymarin administration. Conclusion: The results confirm that silymarin has an ameliorative role against renal damage and oxidative stress induced by DIC in male rats.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا: