

عنوان مقاله:

Reno-protective effect of Rheum turkestanicum against gentamicin-induced nephrotoxicity

محل انتشار:

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خلاصه مقاله:

Objective(s): Gentamicin belongs to the family of aminoglycoside antibiotics and is a preferred drug in developing countries because of its low cost, availability, and potent effects against bacterial. However, gentamicin can induce nephrotoxicity. In this research, hydroalcoholic extract of Rheum turkestanicum was used against gentamicin-induced nephrotoxicity. Rheum turkestanicum is used against gentamicin-induced nephrotoxicity and in this study its effect against gentamicin-induced nephrotoxicity in rats has been investigated. **Materials and Methods:** The rats were placed into one of these groups: saline group, gentamicin group that received gentamicin 80 mg/kg/day for six days, and two treatment groups that received R. turkestanicum intraperitoneally at doses of 100 and 200 mg/kg body weight, respectively, 1 hr before gentamicin injections. Urine samples were collected at 24 hr to measure glucose and protein concentration. Blood samples were collected to determine serum urea and creatinine. One kidney was homogenized to measure malondialdehyde and thiol, and the other kidney was kept for pathological studies. **Results:** Gentamicin increased the level of urinary glucose and protein, and increased malondialdehyde while it decreased thiol in kidney tissue, and increased the concentration of urea and creatinine in the serum. Histopathological pathology revealed renal damage following gentamicin usage; however, the extract was able to improve gentamicin toxicity. **Conclusion:** R. turkestanicum has positive effects in the attenuation of gentamicin-induced nephrotoxicity.

کلمات کلیدی:

Rheum turkestanicum, Gentamicin, Reactive Oxygen Species, Malondialdehyde, Oxidative stress

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