عنوان مقاله:

The investigation of the effect of fraxin on hepatotoxicity induced by cisplatin in rats

محل انتشار:

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خلاصه مقاله:

Objective(s): This study was designed to assess the effect of fraxin which has various biological properties against liver injury induced by cisplatin.Materials and Methods: In our study, 24 Wistar albino rats were randomly assigned to control, fraxin, cisplatin, and fraxin+cisplatin groups. Cisplatin 12 mg/kg IP and fraxin 40 mg/kg orally were applied. When the experiment ended, the rats were sacrificed and the liver tissues were taken rapidly. Liver tissue specimens were maintained under appropriate conditions. Later, biochemical, histopathological, and immunohistochemical evaluations were performed.Results: According to our biochemical findings, oxidant parameters increased while antioxidant parameters decreased in cisplatin group compared with control group. Antioxidant parameters increased but oxidant parameters decreased in fraxin + cisplatin group compared with the cisplatin group. Immunohistochemical evaluations showed that the expressions of TNF-α and Caspase-3 were negative in control and fraxin groups, whereas severe levels were found in the cisplatin group. However, it was determined that the expressions of TNF-α and Caspase-3 were in mild levels in fraxin + cisplatin treatment group. In addition, it was observed that the increase of pathological markers such as coagulation necrosis, hydropic degeneration, dilatation in sinusoid, and hyperemia in the cisplatin group were compatible with our biochemical and immunohistochemical findings. Conclusion: Biochemical, immunohistochemical, and histopathological results revealed that fraxin was effective in relieving cisplatin-induced liver damage.

کلمات کلیدی:

Apoptosis, Cisplatin, Fraxin, Hepatotoxicity, Oxidative stress