

عنوان مقاله:

The Protective Effect of Silymarin on Lipopolysaccharide-Induced Liver Toxicity in Male Wistar Rat

محل انتشار:

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خلاصه مقاله:

Background and Aims: Lipopolysaccharide (LPS) triggers production of reactive oxygen species and inflammatory cytokines. Nowadays Silybum marianum has been shown to treat liver and gall bladder disorders, especially to protect the liver against poisoning from various toxins. Therefore, we decided to evaluate the protective effect of silymarin on LPS-induced liver toxicity in male Wistar rat. **Materials and Methods:** Totally, ۴۰ male Wistar rats were divided into ۴ groups ($n=10$ in each): The animals were treated with silymarin for two weeks before the biochemical tests. Apoptosis was assessed by evaluating the amount of proteins in liver tissues by western blotting. **Results:** LPS induced hepatotoxicity as evidenced by histopathological damages and biochemical abnormalities. Data showed that malondialdehyde level significantly increases in the liver of LPS-treated rats. Destructive effects of LPS on histopathological and biochemical parameters were improved. LPS also increased expression of Bax/Bcl γ ratio and activation of caspase ۳, caspase ۸ and caspase ۹. Western blot analysis showed silymarin treatment inhibiting apoptosis stimulated by LPS in the liver ($p<0.001$). **Conclusions:** The results of this research demonstrated that silymarin can exert protective effects against toxic effects of LPS in rat liver. Anti-inflammatory drug can play a protective role in attenuating the liver inflammation induced by LPS injection.

کلمات کلیدی:

Apoptosis, Liver inflammation, LPS, Oxidative stress, Silymarin

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