

عنوان مقاله:

Protective effects of probiotic mixture (Lactobacillus casei, Lactobacillus rhamnosus and Lactobacillus heloticus) on Doxorubicin--induced Hepatotoxicity in Rat Liver

محل انتشار:

بیست و چهارمین کنگره بین المللی میکروبی شناسی ایران (سال: 1402)

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خلاصه مقاله:

**BACKGROUND AND OBJECTIVES**Doxorubicin (DOX), a common antibiotic used to treat a variety of tumors, but its side effects limit its clinical use. Therefore, finding effective protective agents to combat DOX-induced organ damage is a necessity. The purpose of this study is to determine the protective role of probiotic mixture (Lactobacillus casei, Lactobacillus rhamnosus and Lactobacillus heloticus) on Doxorubicin-induced Hepatotoxicity in Rat Liver.  
**MATERIALS AND METHODS**In this experimental study, 24 male Wistar rats were divided into three groups: control, recipient of DOX (20 mg/kg), recipient of DOX+ and recipient of probiotic mixture (10<sup>9</sup> CFU/MI). Hepatotoxicity was induced as a single dose by intraperitoneal injection of DOX and probiotic mixture by gavage method for 30 days. After the treatment period, in order to measure serum liver damage markers (ALT, AST, total and direct bilirubin), NO and MDA levels, blood was taken from the heart area of the animals. Data analysis was done in different groups with SPSS software and one-way variance statistical test. and  $P < 0.05$  was considered significant.  
**RESULTS AND DISCUSSION:** The results of the study showed that the level of liver serum markers (ALT, AST, total and direct bilirubin), NO and MDA in the group receiving DOX showed a significant increase compared to the control ( $P < 0.001$ ). In the group receiving the probiotic mixture, serum levels of ALT, AST, total and direct bilirubin, NO and MDA levels were significantly reduced compared to the group receiving with DOX ( $P < 0.05$ ).  
**CONCLUSION**The results suggest that liver protection caused by the consumption of probiotic mixture in rats receiving DOX is probably related to the inhibition of oxidative and antioxidant stress

کلمات کلیدی:

Probiotic, Doxorubicin, liver serum markers, NO, MDA, Rat

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