

عنوان مقاله:

The study of the expression of Bax and Bcl-2 genes in the liver and kidneys of rats after chronic administration of different doses of iron oxide nanoparticles

محل انتشار:

اولین کنگره پزشکی شخصی (سال: 1395)

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خلاصه مقاله:

With the arrival of nanotechnology in the medical field and increasing the use of these compounds in the treatment and diagnosis of a wide range of diseases, understanding the behavior of nanoparticles in different organs interact with living organisms is critical. Iron oxide nanoparticles are used extensively in the area of diagnosis and treatment of many diseases used. Many studies, including iron nanoparticles oxide nanoparticles on healthy, low-power-induced toxicity introduce Tissue body, but a careful examination of the molecular toxicity of these nanoparticles on the liver and head as the most important organ of interacting with iron oxide nanoparticles are required. In this study, 40 male rats Wistar divided into 4 groups of study as control group, animals treated with 10 mg / kg particles of iron oxide for a week, the animals treated with 20 mg / kg of iron nanoparticles oxide for a week and the animals treated with 40 mg / kg of iron oxide nanoparticles were used for a week. The liver and kidneys of animals at day 7 after initiation of injection were extracted under sterile conditions and then the expression of Bax and Bcl-2 genes using real time-PCR in the tissues were measured. More than a dose of 5 mg (PV <0.05), respectively. Bax gene expression also increased at all doses 20 and 40 mg (P-V <0.01) significantly more of the dose of 5 mg (P-V <0.05), respectively. The results of this study suggest that the chronic use of high doses of iron oxide nanoparticles can induce cell death .process in the liver and all living beings possess

کلمات کلیدی:

Chronic, iron oxide nanoparticles, Bax and Bcl-2, hepatic and renal toxicity, rat

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