

عنوان مقاله:

Investigation of the Gasoil Inductive Effects on Blood Parameters of White Albino NMRI Mice

محل انتشار:

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خلاصه مقاله:

Background & Aims of the Study: Gasoil is one of most-used oil products applied as diesel fuel, for instance, which, since it consists of aromatic compounds, is among the most important environmental pollutants. Considering its harmful effects on living organisms and human beings, the purpose of the present study was to investigate the effects of gasoil ingestion on blood factors of white Albino NMRI mice. **Materials & Methods:** 40 adult mice, with an average weight of 28 grams, were placed in four groups. Adult male mice were placed in two groups, including a control group and a treatment group and adult female mice were divided into two groups of control and treatment. For 14 days, the treatment groups were fed once per day with 0.2cc of pure gasoil solution with a ratio of 6.6 mg/kg of the mice's weight. After anesthesia and blood sample collection, blood parameters, including the number of white and red blood cells, hematocrit and hemoglobin were respectively measured using Neubauer slide, capillary tube, and Sally method. Then, the analyses performed using SPSS19 software. **Results:** Variations observed in the blood parameters of male and female mice placed in the treatment groups compared with the control group indicated a significant increase in hematocrit (8%, 10%), a significant decrease in hemoglobin (6%, 10%), and no significant increase in the average number of RBCs (6%, 6%). The level of blood leukocytes consisting of lymphocytes and neutrophils indicated a decrease, while the level of blood leukocytes consisting of degenerated lymphocytes indicated a significant increase ($P < 0.05$). **Conclusions:** Due to the increased use of gasoil and generalization of the results of the present research to human beings in terms of leukocyte reduction and weakening of the immune system, hemoglobin reduction and tissue oxygenation disorder, in addition to environmental damages, this substance imposes irrecoverable damages on human health. Hence, necessary measures should be taken by authorities for replacing, reducing its effects and raising public awareness of the methods of dealing with its effects.

کلمات کلیدی:

Gasoil, Blood Parameters, White Albino NMRI Mice

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