



Hematological and Histopathological Adverse Effects of kmno4 on mice

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Abstract

Potassium

permanganate

(kmno4) is a salt of potassium that use as a general skin antiseptic and for disinfecting and cleaning wounds.

However, Kmno4 can irritate mucous membrane and is poisonous if enter the body. This study designed to determine the toxicity of kmno4 in Swiss albino mice administered orally with Potassium permanganate. Thirty Swiss albino mice were divided equally into 3 groups. The first and second groups were administered kmno4 for 30 days with 0.025 mg /Kg/BW and 0.5 mg /Kg/BW respectively. The third group was administered normal saline orally and acted as a control. Blood samples were collected from treated mice for hematological investigation. Lung, kidney and liver were also collected for histopathological study. Echinocyte, Anisocytosis, Hypochromic, Poikilocytosis and Heinz bodies were the prominent hematological changes in the kmno4 treated groups. Moreover, erythrocytes seen as cue like stacks of coins with rouleaux appearance. Different histopathological changes were seen in kidney such as congested blood vessels and aggregation of mononuclear cells. In addition to the thickening of the alveolar walls and cellular infiltration. Coagulative necrosis was also appeared in the liver. In conclusion, this study approved the hematological and histological toxicity of kmno4 in the treated mice in compare to the control group. The author recommends another future studies on kmno4, since potassium permanganate is still used in daily clinical application in Iraq.

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