

P160. INVESTIGATION OF POSSIBLE TOXIXOLOGICAL EFFECTS OF STEVIA IN LIVER TISSUE OF RATS

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Nowadays according to the increased prevalence of metabolic disorders such as diabetes and obesity, there is an increasing trend of consumption of non-caloric foods and drinks. As a result of this situation there is a widely use of the extracts of a natural plant, Stevia rebaudiana, or its compounds as a sweetener. In this study, it was aimed to investigate possible toxixological effects of stevia and its oxidative compounds on an oxidant parameter in liver tissue from rats.

For this aim, 26 adult Wistar type albino rat were used in the study. The animals were divided into two groups as the control group (n=10) and the study group (n=16) randomly. While the control group (Group 1) was fed only by standard rat diet, the study group (Group 2) was fed by standard rat diet with a sweetener including 22 mg stevia extract per day aurogastricly for one month. At the end of the study, rats were sacrificed and the liver tissues were surgically removed to analyze an oxidant parameter which is Malondialdehyde-MDA levels. And also histopathological examination and tissue DNA extraction were done.

According to the results of the study in liver tissues, MDA levels of the study group which were fed by stevia extract were found significantly higher than that in the control group (p=0,021). The tissues of the group 2 displayed some histopathological changes such as remarkable dilatation of sinusoids. There were no histopathological changes in the structure of hepatocytes and also we did not observe any apoptotic or necrotic cell and histopathological changes in the portal area, except the cellular infiltration in a few focal portal areas. There was no difference between groups according to DNA extraction findings.

According the data of MDA levels and histopathological findings, it was thought that the consumption of high dose of stevia as a sweetener may cause oxidant effects on liver tissues.

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