The Effect of unripe fruit powder of Momordica charantia on serum malondialdehyde in rats fed a high-fat diet

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Abstract

Background & Aim: Momordica charantia (Karela) is a well-known medicinal plant with nutritional applications in southeast of Iran. This study was conducted to investigate the effect of fruit powder of Karela on serum malondialdehyde levels in rats fed a high-fat diet.

***Methods*:** In this experimental study, 40 male rats randomly divided into 4 groups of 10. Rats in the first group received normal diet and served as negative control group. Also, rats in the second group were treated only with high-fat diet and served as positive control group. The third group received high-fat diet containing 4% of Momordica charantia powder and finally the fourth group received high-fat diet containing 8% of Momordica charantia powder for 30 days. At the end of the study, blood samples were taken from the rats' hearts and serum levels of cholesterol,triglyceride and malondialdehyde (MDA) were determined using commercial kits.

***Results*:** Serum levels of malondialdehyde had a significant difference in positive control group compared to negative control group ($P<0.05$). Serum levels of malondialdehyde in Karela-treated groups had a significant reduction compared to the positive control group. Fruit powder of Karela significantly decreased serum levels of cholesterol, trigelyceride and malondialdehyde in rats compared to the positive control group ($p<0.05$). No significant difference was observed in serum levels of cholesterol,triglyceride and malondialdehyde (MDA) between groups treated with high-fat diet containing 4% and 8% of Fruit powder of Karela ($p>0.05$) .

Conclusion: Having a diet containing unripe fruit powder of Momordica charantia can decrease lipid peroxidation and oxidative damage.

Key words: Karela, malondialdehyde, rat, cholesterol