



University of Zabol
Graduat School
Faculty of Veterinary Medicine
Department of Pathobiology

The Thesis Submitted for the Degree of Doctor of Professionals

(in the Field of veterinary medicine)

Title:

The effect of caffeine nanoemulsion on tissue damage in rabbits fed high fat and fructose diets

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Abstract

The study of compounds of plant origin is a very interesting branch in the medical sciences. Many of these compounds have preventive effects and can be used in some communities with a high probability of controlling certain diseases. Liver tissue is prone to a wide range of serious effects caused by excessive consumption of alcohol, drugs and infections such as viral hepatitis, cancer and other diseases, so the first step in diagnosing liver damage is to perform tests to Measure the level of liver enzymes. Therefore, this study was performed to investigate the effect of caffeine nanoemulsion on tissue damage in rabbits fed high fat and fructose diets. In this experiment, 18 rabbits were randomly divided into three groups including 1-control group (normal feeding), 2-hyperlipidemic group (fed with high-fat and high-fat diet), 3-group fed high-sugar diet and treated with caffeine nanoemulsion. . The rabbits received a hyperlipidemic diet for three months, and at the end of the experiment, the rabbits were anesthetized and easily anesthetized with high doses of ketamine and xylazine. At the end of the experiment, the results showed that serum levels of ALT, MDA and AST in the caffeine-treated group decreased compared to other groups, serum ALP levels were negative in all groups. In the study of tissue samples in the group receiving a diet rich in fat and high fructose, vacuolation of cells, especially in liver tissue and ducts of afferent and renal tubules was seen. In the group treated with caffeine, cellular order was better and more Less seen. The results of this study showed that caffeine can reduce the serum level of liver enzymes and reduce necrosis.

Keywords: Caffeine, Liver enzymes, Histopathology