1.Protective action of peanut oil in rats exposed to gamma-rays

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Abstract

The present study aims to clarify the role of peanut oil as a radioprotector in male albino rats against oxidative stress and bone injury induced by A-radiation. Rats were Subjected to a dose of 5Gy, over an exposure time of 133sec, at a dose rate 3.759rad/sec. Prior to irradiation, rats received peanut oil subcutaneously, (0.75mL/kg) over a one month period, oil three days/ week. Serum and bone mineral contents were estimated, and serum protein, cholesterol and creatinine concentrations were determined. We also investigated some enzyme activities as well as hormonal calcium control. It seems that the deleterious effects of exposure to (a) over tilde - radiation on most estimated parameters affecting Ca metabolism can be controlled to some extent by peanut Oil administration prior to irradiation.

Keywords: radiation; peanut oil; calcium metabolism

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2. Efficacy of royal jelly against the oxidative stress of fumonisin in rats

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Abstract

Fumonisins (FB) are mycotoxins produced by Fusarium verticillio ides, frequently associated with corn. It produces toxicity, including teratogenicity, equine leukoencephalomalacia, porcine pulmonary edema, hepatic or renal damage in most animal species and perturb sphingolipid metabolism. The aim of the present study was to evaluate the protective effects of royal jelly (RJ) against FB toxicity. Sixty male Sprague-Dawley rats were divided into six treatment groups including the control group; group fed FB-contaminated diet (200mg/kg diet) and the groups treated orally with RJ (100 or 150 mg/kg body weight) with or without FB for 3 weeks. FB alone decreased body weight gain, feed intake, GPX and SOD. Whereas it increased in ALT, AST, triglycerides, cholesterol, HDL, LDL, createnine and uric acid levels. Animals received FB showed severe histological and histochemical changes in liver and kidney tissues. Cotreatment with 1713 plus RJ resulted in a significant improvement in all the tested parameters and the histological and histochemical pictures of the liver and kidney. These improvements were pronounced in animals fed F13-contaminated diet plus the high dose of RJ. It could be concluded that RJ have a protective effects against FB toxicity and this protection was dose dependent.

Keywords: fumonisin; mycotoxins; royal jelly; oxidative stress; lipid peroxidation; protection

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