Cairo University
Faculty of Veterinary Medicine
Department of Pharmacology

Possible Hepatoprotective Mechanisms of Ellagic acid and Quercetin in Experimentally Induced Hepatotoxicity in Rats

Thesis Presented
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Supervision sheet

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ABSTRACT

This study was designed to investigate the hepatoprotective and antioxidant mechanisms of ellagic acid,quercetin and silymarin against thioacetamide (TAA)-induced hepatotoxicity in rats. Rats were pretreated with ellagic acid,quercetin (50 &100 mg/kg b.wt, orally) and silymarin (50 mg/kg b.wt, orally) for three weeks prior to the injection of TAA. Then rats received two injections of TAA (300mg/kg b.wt, i.p) on the last two days of experimental period (three weeks). The obtained results showe` d that TAA caused markd liver damage manifested by increased activities of serum transaminases, ALP and total bilirubin; increased liver MDA and NO contents parallel to decreased GSH content; increased hepatic content of TNF-α, NF-κB and DNA fragmentation. Pretreatment with ellagic acid,quercetin and silymarin limited the toxic effect of TAA. This study concluded that ellagic acid and quercetin have the capacity to protect against experimentally induced hepatotoxicity in rats through attenuation of oxidative stress, antioxidant potential, alleviation of inflammation and inhibition of hepatocellular apoptosis.

Key words: (Hepatotoxicity, Thioacetamide (TAA), Ellagic acid, Quercetin, silymarin, Rats).

Dedicated to

My parents

My husband

My daughter

Who

Shared the responsibility of bringing me up to be grateful

and

To all those who taught me

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