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Effect of sitagliptin on serum lipid profile in male rabbits exposed to 1% Hydrogen peroxide-fructose

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This study was designed to evaluate the hypolipidemic effect of sitagliptin in Hydrogen peroxide (H_2O_2)/fructose exposed male rabbits. Twenty one (21) adult male rabbits were randomly and equally divided into three groups (T_1 , T_2 and T_3) and were treated for 45 days as follows: Group T_1 (Control group), rabbits in groups T_2 and T_3 were given 40% fructose -1% H_2O_2 in drinking water. In addition to fructose and H_2O_2 , 1.5 mg/kg B.W of sitagliptin were administered orally to rabbits in group (T_3). Fasting (8-12 hrs) blood samples were collected by heart puncture technique at 0, 45 days of the experiment for measuring total cholesterol (TC), Triacylglycerol (TAG) and high density lipoprotein-cholesterol (HDL-C), low density lipoprotein-cholesterol (LDL-C) and very low density lipoprotein-cholesterol (VLDL-C) concentration. In addition, body weight and waist circumference was measured weekly as marker for central obesity. The results revealed that exposure of rabbits to 40% fructose -1% H_2O_2 in drinking water (T_2 group) caused a case of dyslipidemia manifested by a significant elevation in serum (TC), (TAG), (LDL-C) and (VLDL-C) concentration in addition to depression (HDL-C) concentration and a significant elevation in body weight and waist circumference. Hypolipidemic effect of sitagliptin, was clarified in group (T_3), and manifested by restoring of previous parameters leading to correction in the case of dyslipidemia, body weight and central obesity. In conclusion, the results of this study confirm the ameliorative role of Sitagliptin against deleterious effect of fructose/ H_2O_2 in adult male rabbits.

Biography

Nadine Al-Jumaa is a veterinarian working as a supervisor and a mentor at the Major Iraqi Poultry Projects Department- the Ministry of Agriculture of Iraq. She has completed her master's degree in Veterinary Physiology and Biochemistry from College of Veterinary Medicine-University of Baghdad in 2015. She has completed the bachelor degree in Veterinary Medicine and Surgery in 2009 from College of Veterinary Medicine- University of Baghdad too. Her Masters project was about anti-diabetic medicine, and she is willing to do more researches related with the humans-animals health in the future.

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