(ملخص البحث الثامن)

The Scientific Journal Of Specific Education And Applied Science. (SJSEA: (Accepted)vol(6) no: (15) Jan 2023

Effect Of Cholecalciferol As An Antioxidant On Hypercholesterolemic Rats.

Zeinab A. Ismail
B.SC. Home Economics Department. Faculty of Specific Education Fayoum - Univ.

Mona A. Abd Elbaset , Dalia R. Hassan *
*Assoc. Prof. of Nutrition and Food Science, Home Economics Department Faculty of Specific Education. Fayoum - Univ.

Abstract :

In recent years, much evidence showed that vitamin D_3 deficiency could be related to several chronic diseases such as diabetes and cardiovascular disease. So, the goal of the study is to assess the effect of cholecalciferol on hypercholesterolemic rats at different levels of vitamin D_3**. Methods**: Fifty six albino rats were in corporate as follows: G (1) (eight rats) was fed a basal diet, like a negative group. The second main group (48 rats) will be received for 8 weeks (a diet containing 10% sucrose, 0.25%bile salts and 1% cholesterol) to induce hypercholesterolemia in rats. For 8 weeks and divided into six subgroups (8rats each): the first group administrated hypercholesterolemic diet as a positive control group from,(2^{nd} : 7^{th}) groups administrated on hypercholesterolemic diet and vitamin D_3 with different levels (0.5, 0.1, 1.5, 2, 2.5 mg /kg diet) . Results: The group of hypercholesterolemic recorded a highly remarkable increase in serum CHO,TG,LDL,VLDL,HBA1c , tissue malondialdehyde (MDA) and a decrease in serum HDL,Vit D_3 and in tissue SOD and GSH when compared with (-ve)group.But administered with vitamin D_3 at different levels ,there were improvements in all lipid parameters , antioxidant enzymes and the best improvement was found in vit D_3 at level 2 mg when compared with the (+ve)group. The pathological examination of the liver confirmed these results.**Conclusion:** concluded that VitD_3 at different levels showed an excellent effect on lipid profile but not exceeded that level and need more studies to discover therapeutic effects of vitamin at different levels.

Key words: cholecalciferol - hypercholesterolemia - oxidative stress, HDL - MDA-glycosylated hemoglobin.