

EFFECT OF CHOLECALCIFEROL SUPPLEMENTATION ON HEPATIC STEATOSIS AND GLUCOSE IN OBESE ANIMALS

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Our proposal in this study is that with vitamin D supplementation in obese animals, there will be reductions in hepatic steatosis and control of blood glucose levels. Male wistar rats were used (CEUA nº 5866200720). After 21 days of age, they were acclimatized until they were 30 days old, from this date on, the obesity induction protocol was initiated, by means of the cafeteria diet. The animals were divided into 2 groups: rats fed a normal diet [control group (CTL n= 24)] another with a hypercaloric diet [obesity induction group (WD n=24)]. After 90 days old, they were subdivided into two other groups: CTL-VD (n=12) and WD-VD (n=12) animals in which, were supplemented with vitamin D3 (5.600UI/week, 90 to 130 days old, by gavage). At 131 days old, WD rats exhibited a significantly higher adiposity index than CTL and WD-VD rats. The WD-VD rats had a significantly lower adiposity index than WD rats. The hepatic steatosis was confirmed by biochemical measurements of the total liver lipid content increased in WD rats 5% of the liver weight. Vit D3 supplementation decreased BW gain, and reduction of the total lipid total liver in WD-VD rats. The glycemic curve was performed and the WD animals showed higher values in the first 15 minutes than the CTL animals. The WD-VD animals presented normal values of the area under the curve, in relation to the WD. Vit D supplementation showed that there is a relationship between increased adipose tissue and circulating vitamin D levels. Supplementation of VD3 attenuated hepatic steatosis.

Keywords: Cafeteria Diet, Lipidogram, Steatosis

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