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### The Effect of CaNa2-EDTA on Metabolism of Zinc and Carbohydrate as well as Some Biochemical Factors in Experimental Diabetes

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#### Abstract:

Background: To investigate the effect of CaNa2-EDTA and experimental diabetes (IDDM) on zinc and carbohydrate metabolism and the activities of GOT, GPT and alkaline phosphatase. Methods: Forty male normal albino (Wistar) rats of 8 weeks of age were fed with a basal diet. Twenty rats were then intraperitoneally injected with alloxan to induce diabetes. Then after one week ten rats from each group (n= 20) were administrated intraperitoneally with CaNa2-EDTA for further three weeks. Body weight gain and food intake were recorded regularly. On day 21 animals were killed and blood glucose, serum and tissues zinc concentrations, liver glycogen contents, serum transaminase enzymes (GOT, GPT), and serum alkaline phosphatase activities were determined. Results: The administration of CaNa2-EDTA significantly altered body weight gain, food intake and serum zinc concentration of either diabetic or non-diabetic animals. Both diabetic and non-diabetic rats given CaNa2-EDTA had higher blood glucose than their controls. Liver glycogen was also found to be higher in CaNa2-EDTA non-diabetic rats than their controls. CaNa2-EDTA also led to increasing of GOT and GPT, and decreasing serum alkaline phosphatase. Conclusion: To conclude, the present study demonstrates that CaNa2-EDTA had an effect on the previous parameters. Therefore it was appeared that CaNa2-EDTA resulted in the development of severe diabetes.

#### Keywords:

CaNa2-EDTA , Alkaline phosphatase

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