Impact of 20-OH ecdysone on streptozotocin induced pancteatic oxidative stress in gerbils.

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Diabetes mellitus a chronic metabolic disorder characterized by impairment in carbohydrate, fat and protein metabolism with defects in insulin secretion, insulin action or both. Oxidative stress has been reported to play an important role in the etiology of diabetes. The aim of the present work was to examine the mpact of 20-OH ecdysone on hyperglycaemia mediated oxidative stress in a streptozotocin-treated gerbil. Diabetic gerbils exhibited increased blood glucose with significant decrease in plasma insulin levels. The activities of antioxidant enzymes superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), glutathione-S-transferase (GST) and MAD were increased in pancreas of diabetic groups as compared to control animals. Treatment with 20-OH ecdysone improved metabolic parameters studied in diabetic gerbils. These results indicate that streptozotocin induced diabetes in gerbils and 20-OH ecdysone exerts a beneficial effects on glucose homeostasis and pancreas.

Key words: streptozotocin, diabetes, oxidative stress, 20-OH ecdysone.