

Physiological appraisal of glipizide in rabbits

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Abstract

Forty adult male rabbits were adopted to evaluate the sequelae of the use of Glipizide. The results have revealed that streptozotocin causes significant declination in red blood cell count RBC, hemoglobin HB, packed cells volume PCV, alanine aminotransferase ALT, alkaline phosphatase ALP, glutathione GSH, triacylglycerols TAGs, and high-density lipoprotein HDL besides a significant elevation in total white blood cells count WBC, erythrocyte sedimentation rate ESR, malondialdehyde MDA, and low-density lipoprotein LDL. Glipizide alone causes significant declination in RBC, Alanine aminotransferase AST, GSH, TAGs, and VLDL besides a significant elevation in WBC, ESR, total cholesterol TC, and LDL. Considering the use of Glipizide plus streptozotocin, it causes a significant declination in RBC, HB, PCV, GSH, and HDL besides a significant elevation in WBC, ESR, LDL, TAGs, and VLDL.

Keywords: Glipizide, Streptozotocin, Diabetes, Rabbits

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Introduction

The incidence of diabetes in the modern world is horrible in fact; making a jump like records throughout the years, for instance, it was recorded as about one hundred millions of people inflicted with diabetes in 1980 and this number was drastically elevated to about four hundred and twenty-two million in 2014; taking into our minds all the correlated dysfunctions and diseases which are caused by or related to diabetes such as blindness, limbs amputations, renal failures, and cardiac attacks [1]. Diabetes mellitus, of its two types; type one and type two, has been proven and documented to be correlated with oxidative stress, and this relation is very hard coming as concomitant with alterations in the metabolic pathways of glucose, damage, and alterations in the beta cells of the pancreas, change in the lipid peroxidation status and the antioxidant milieu systems of the body [2-4]. Many