Journal of Pharmaceutics and Drug Research

JPDR, 6(S1): 02
www.scitcentral.com

ISSN: 2640-6152

Abstract: Open Access

Efficacy of Vincamine on Alloksan Induced Diabetic Rats on Renal Size and Serum Levels

Rabia Edibe Parlar Köprülü[1*] and Mehmet Evren Okur[2]

[1]*İstanbul Medipol University, Faculty of Pharmacy, Department of Medical Pharmacology, Istanbul, Turkey*

[2]*University of Health Sciences, Faculty of Pharmacy, Department of Pharmacology, İstanbul, Turkey.*

Published April 27, 2023

ABSTRACT

Diabetes mellitus (DM) is often linked to problems of various organ systems, including retinopathy, neuropathy, and nephropathy. In addition, patients have changes in kidney functions such as urea and creatinine levels. Vincamine (VK), a monoterpenoid indole alkaloid, has hypoglycemic and antioxidant effects. This study evaluated the effect of vincamine on renal dysfunction in alloxan-induced male rats by measuring fasting blood glucose, serum urea and creatinine levels. Rats were randomly randomized into the following groups: untreated-healthy, untreated-diabetes, vincamine-treated (20mg/kg) diabetics, vincamine-treated (40mg/kg) diabetics, on day 14, rats were sacrificed and blood for analysis gathered. Kidneys removed from animals were examined for weight and noted. Compared with the untreated diabetic group, the 40 mg/kg vincamine dose resulted in a significant reduction in FBC. Compared to the untreated diabetic group, rats treated with vincamine were found to have lower plasma creatinine levels and lower urea levels. In the vincamine 20mg/kg group, kidney weights were higher than in the vincamine 40mg/kg group. As a result, vincamine may have a potential preventive effect against diabetes-related kidney problems, which would be attributed to its antioxidant activity.

Keywords: Diabetes mellitus, Renal size, Streptozosin, Creatinine, Urea

Corresponding author: Rabia Edibe Parlar Köprülü, İstanbul Medipol University, Faculty of Pharmacy, Department of Medical Pharmacology, Istanbul, Turkey, E-mail: rabiaedibeparlar@gmail.com

Citation: Köprülü REP & Okur ME. (2023) Efficacy of Vincamine on Alloksan Induced Diabetic Rats on Renal Size and Serum Levels. J Pharm Drug Res, 6(S1): 02.