

LIPID PROFILE AND CARDIO-PROTECTIVE EFFECTS OF AQUEOUS EXTRACT OF *MORINGA OLEIFERA* (LAM) LEAF ON BROMATE- INDUCED CARDIOTOXICITY ON WISTAR ALBINO RATS

*Oseni, O. A., Ogunmoyole, T. & Idowu, K. A.

Department of Medical Biochemistry, College of Medicine, Ekiti-State University, Ado-Ekiti, NIGERIA

ABSTRACT

Objective: The present study sought to investigate the lipid profile, cardiotoxicity effect of potassium bromate in dosage of 30mg/kg body weight and the cardio protective effects of 20% and 40% aqueous extract of *Moringa oleifera* leaf on wistar albino rats.

Materials and methods: The rats weighing between 120g and 150g were divided into four groups of five rats each. Group I rats were orally administered with distilled water and rat feed while group II animals were given 30mg/kg/body weight of potassium bromate per day. Similarly group III rats were administered simultaneously with 30mg/kg/body weight of potassium bromate and 20% aqueous extract of *Moringa oleifera* per day, as group IV rats were administered simultaneously with 30mg/kg/body weight of potassium bromate and 40% aqueous extract of *Moringa oleifera* leaf per day. After the expiration of the experiment, the weight of the rats were taken with standard weighing balance, the animals were later sacrificed under chloroform anesthesia and the cardiac tissues were obtained for the determination of the heart's triglyceride (TG), total cholesterol (TC), high density cholesterol (HDL-c), biomarker enzymes (AST, ALT and ALP) and some antioxidant enzymes.

Results: The results showed that potassium bromate significantly and progressively lowered the cardiac tissues SOD, HDL-CHOL and TC, while significantly causing elevation in TRG, ALP, AST, CAT concentrations when compared to the control rats group. The 20% and 40% extracts also significantly lowered the TRG, ALP, AST, CAT on dose-dependent basis.

Conclusion: These results showed the cardioprotective and antioxidants effects of the plant extracts which supports the folkloric use of aqueous extract of the plant in the management of suspected patients with cardiac failure.

Keyword: Cardio-toxicity, cardio-protection, *Moringa oleifera*, antioxidant, enzymes.