

Effect of ethanol extract of *Telfairia occidentalis* leaf on some biochemical parameters of 2,4-dinitrophenyl hydrazine induced oxidative stress in albino rats

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Abstract. In this study, we attempt to verify the claim that the leaf-extract of *Telfairia occidentalis* can remedy oxidative damage condition as well as assess its phytochemical content. Fifteen male albino rats weighing 180 g to 240 g were randomly divided into three groups of five rats each. Group A was designated the control group while group B and C were both induced with 40 mg/kg body weight 2,4-dinitrophenyl hydrazine. Group C was subsequently treated with 200 mg/kg body weight of ethanol extract of *T. occidentalis* leaf for 21 days. At the end of the treatment, the animals were sacrificed, and serum of the samples were subjected to relevant tests. Result shows that the plant leaf contained saponin, tannins, alkaloids, flavonoids and phenols whereas, terpenes, steroids and anthraquinones were not detected. The serum enzymes alanine aminotransferase (ALT) and alkaline phosphatase (ALP) were significantly elevated from 17.43 u/L and 28.40 u/L to 21.60 u/L and 34.27 u/L respectively. These were significantly lowered in the group C to 18.37 u/L and 29.23 u/L respectively for ALT and ALP. Also, a significant lowering of superoxide dismutase (SOD) activity was observed in the treated group (54.33 u/mg) from 79.40 u/mg recorded in the intoxicated group. Similarly, a significant decrease in malondialdehyde was observed in the treated group (25.80 u/mg) relative to the intoxicated group (35.87 u/mg). Moreover, catalase activity in the treated group (7.43 u/mg) was significantly lower compared with the intoxicated group. Our observation confirmed that ethanolic leaf extract of *T. occidentalis* reversed the oxidative damage condition in albino rats. The result confirms the ethnomedicinal use of the plant in the management of oxidative stress related diseases.

Keywords: ethnomedicine, phytochemicals, malondialdehyde, oxidative stress, antioxidant.

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