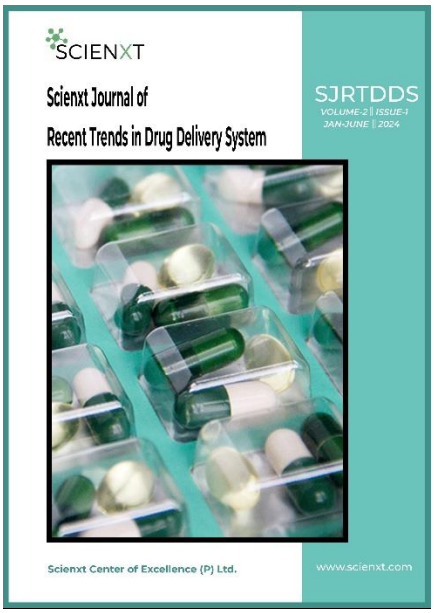


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# *Preventive effect of the whole plant aqueous extract of eleusine indica(Linn)gaertn. extract (Poaceae) against mercuric chloride-induced hepato- nephrotoxicity in rat*

**[1]Tchoupou Tchinda Huguette, [2] Ngueguim Tsofack Florence, [3]Gounoue [4]Kamkumo RacelineDimo Theophile***

[1]Department of Animal Biology and Physiology, Laboratory of Animal Physiology, University ofYaoundé 1, P.O. Box 812, Yaoundé, Cameroon

**Abstract:**

The entire plant of *Eleusine indica* is used in Cameroonian folk medicine to treat several diseases including renal and hepatic disorders. The aim of this study was to evaluate the preventive effects of *Eleusine indica* aqueous extract against mercuric chloride induced- hepatic and renal damages in rats. Animals were divided into a normal control group, receiving 0.9 % NaCl subcutaneously (s.c) at the dose of 10 mL/kg, a negative control group receiving $HgCl_2$ (0.02 mg/kg, s.c) and three others groups receiving per os the verapamil (0.5 mg/kg) or the plant extract (100 or 200 mg/kg) simultaneously with $HgCl_2$. After 30 days of treatment, animals were sacrificed. The blood was collected for the assessment of the serum activities of ALT, AST and ALP, serum levels of total bilirubin, total proteins, albumin, lipid profile parameters, creatinine, urea, uric acid, $Na^+$ and $K^+$. MDA, SOD, catalase and GSH levels were measured in liver and kidney. $HgCl_2$ induced marked hepatotoxicity as evidenced by significant elevation in serum levels of ALT, AST, ALP, total bilirubin, total cholesterol, triglycerides and LDL, with significant reduction of HDL, total proteins and albumin as compared to controls, while nephrotoxicity was evidenced by significant elevation in serum levels of creatinine, urea, uric acid and $K^+$, with significant reduction of $Na^+$ as compared to controls. MDA was significantly increased, when SOD, catalase and GSH were significantly decreased in $HgCl_2$ injected groupsas compared to controls. *Eleusine indica* aqueous extract prevented various modifications of biochemical and oxidative markers. This study shows that *Eleusine indica* aqueous extractprevents $HgCl_2$ induced-hepato-nephrotoxicity, probably due to its antioxidant activities. These results justify the traditional use of this plant in the management of kidneys and liver problems.

## Keywords:

Mercury, *Eleusine indica*, hepatotoxicity, nephrotoxicity, rat