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Aqueous extract of *Monodora myristica* ameliorates cadmium-induced hepatotoxicity in male rats

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This study investigates the protective effect of *Monodora Myristica* (MM) on cadmium-induced liver damage in experimental animals. Experimental rats were divided into five groups (G1–G5): G1 was maintained on tap water only and served as the negative control, G2–G5 were maintained on cadmium in the animals' main drinking water for 21 days to induce hepatotoxicity. G2 served as the positive control (cadmium only); G3 and G4 were treated with aqueous extracts of MM at a dose of 200 mg/kg bw and 400 mg/kg bw respectively, G5 was treated with 20 mg/kg bw of Livolin Forte (LF). At the end of the experiment, levels of hepatic enzyme biomarkers alanine transaminase, alkaline phosphatase, aspartate transaminase, total cholesterol, triacylglyceride and malondialdehyde were significantly raised in the cadmium treated groups. Conversely, cadmium treatment elicited noticeable decrease in hepatic antioxidant enzymes reduced glutathione (GSH), catalase (CAT), superoxide dismutase (SOD). Co-treatment with MM at varying doses as well as LF considerably decreased the elevated levels of the hepatic biomarkers as well as TC, TG and malondialdehyde in the cadmium-treated groups with the effect more pronounced in G4 and G5. Treatment groups (G3–G5) also exhibited the reversal potential of MM and LF on cadmium toxicity at the tested doses as their administration was accompanied by a pronounced increase in the levels of these enzymes. These results demonstrates that aqueous extracts of MM is effective in the amelioration of hepatic damages arising from cadmium-induced toxicity, indicating that the antioxidant bio-constituents of MM play an important role in the prevention of liver toxicity possibly by inhibiting bioaccumulation of free radicals in animal models.

Biography

Abiola Fatimah Adenowo is presently a PhD student at University of Zululand, Republic of South Africa. She completed her Masters' degree in Biochemistry in College of Medicine, University of Lagos, Nigeria. She has four papers published in reputed journals.

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