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Cardioprotective effect of *Digera muricata* (L) Mart. against the cardiotoxicity induced by acrylamide in rats

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The aim of present study was to investigate the cardioprotective effect of *Digera muricata* (L) Mart. against the cardiotoxicity induced by acrylamide in rats. Forty eight healthy female albino rats, weighing 190-200 g, divided into eight groups with six rats in each, group I as control, while group II were administered with dimethylsulphoxide (DMSO) 5.0 ml/kg b.w. orally once a day for four weeks. Group III was given 200 mg/kg b.w. of methanolic extract dissolved in DMSO once a day for four weeks. Rest of the rats were divided into five groups and were treated with aqueous solution of acrylamide 6 mg/kg b.w. intraparetoneally once a day for two weeks. Group IV was sacrificed after 15 days of the acrylamide treatment to collect the serum and heart gland. Group V remained untreated as such for the rest of the experiment Group VI, VII and VIII were given 100, 150 and 200 mg/kg b.w. methanolic extract dissolved in DMSO once a day for two weeks. After four weeks all the animals were dissected and the blood was collected by cardiac puncture and 5-7 ml blood was taken in falcon tube and was centrifuged to collect the serum and stored at -20°C for biochemical studies. Co-treatment with *Digera muricata* extract at 100, 150 and 200 mg/kg prevented the elevation of serum marker enzymes creatinine kinase (CK), cardiac creatinine kinase (CK-MB), lactate dehydrogenase (LDH), aspartate transaminase (AST), alanine transaminase (ALT), alkaline phosphatase (ALP), hydrogen peroxidase (H₂O₂), total cholesterol, LDL and alterations in protein, superoxide dismutase (SOD), peroxidase (POD), catalase (CAT), glutathione (GSH), glutathione-S-transferase (GST), Gluthaione peroxidase (GSHPx), γ-glutamyl transpeptidase (γ-GT), HDL, creatine and urea caused by acrylamide in rats. The protective effect was confirmed by the histological findings and was more prominent at 200 mg/kg. Hence we conclude that methanolic extract of *Digera muricata* protects against acrylamide induced cardiac toxicity.

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