

Anti-atherogenic and anti-ischemic potentials of Croton membranaceus observed during sub-chronic toxicity studies

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ABSTRACT

Background Croton membranaceus (CM) is used for benign prostate hyperplasia treatment. **Objective** Sub-chronic toxicity studies are non-existent and provided the basis for this study. **Materials and Methods** 90 days oral administration of a low dose (LD) (30 mg/kg b. wt.), medium dose (MD) (150 mg/kg b. wt.), and high dose (HD) (300 mg/kg b. wt.) CM aqueous root extract to 3 groups (n=6 each) of male Sprague-Dawley rats, alongside a control group, was undertaken. Urinalysis, hepato-renal function tests, lipid profile, cardiac enzymes, and routine hematology tests were performed. **Results** Triglyceride levels (C=1.05 $\pm$ 0.19, LD=0.64 $\pm$ 0.08, MD=0.55 $\pm$ 0.04, HD=0.50 $\pm$ 0.02 mmol/L) were significantly reduced (P<0.05). Very low density lipoprotein (C=0.48 $\pm$ 0.09, LD=0.29 $\pm$ 0.04, MD=0.25 $\pm$ 0.02, HD=0.23 $\pm$ 0.01 mmol/L) decreased significantly (P<0.05). Cardiac enzymes-creatinine kinase (C=568 $\pm$ 172, LD=315 $\pm$ 79, MD=441 $\pm$ 209, HD=286 $\pm$ 81 IU/L) decreased markedly (P<0.05) alongside lactate dehydrogenase (C=2675 $\pm$ 875, LD=1667 $\pm$ 1229, MD=1186 $\pm$ 442, HD=855 $\pm$ 239 IU/L) (P<0.05). **Conclusion** C. membranaceus aqueous root extract is non-toxic but demonstrates anti-atherogenic and anti-ischemic potentials.

KEYWORDS

Anti-atherogenic . anti-ischemic . Croton membranaceus . sub-chronic . toxicity

REFERENCES

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