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Nephroprotective role of *Dicliptera roxburghiana* in CCl₄ induced renal toxicity in mice

Bushra Ahmad, Muhammad Rashid Khan and Naseer Ali Shah
Quaid-i-Azam University, Pakistan

Dicliptera roxburghiana (Acanthaceae) is used as general tonic and for wound healing in traditional medicine system of Pakistan. This research project was designed to investigate the nephroprotective effects of methanol extract of *D. roxburghiana* (DRME) on CCl₄ induced renal toxicity in mice. Balb c mice (42) were treated with their respective doses for 30 days. Group 1 was control group. Group II was administered with DMSO and olive oil. Group III was treated with CCl₄ (1 ml/kg b.w; 20% in olive oil). Group IV was administered with CCl₄ and Silymarin (50 mg/kg). Group V and VI were administered with CCl₄ and DRME 40 and 60 mg/kg b.w. respectively. Group VII received DRME 60 mg/kg b.w. urine profile showed low pH, decreased level of urine proteins whereas elevated levels of specific gravity, red and white blood cells and urea in CCl₄ treated group. Serum analysis revealed decreased overall proteins, albumin and globulin whereas elevated creatinine, urobilinogen and bilirubin levels in CCl₄ intoxicated mice. Antioxidant enzymes Catalase, Peroxidase, Superoxide dismutase, Glutathione-S-transferase and Glutathione reductase were low whereas γ -GT was high in kidney of CCl₄ treated group. Furthermore, decreased GSH contents and total tissue proteins while elevated TBARS contents and damaged DNA were noticed in CCl₄ intoxicated kidney. Renal histoarchitecture showed cellular infiltration, glomerular atrophy, dilated tubules and damaged Bowman's capsule in CCl₄ intoxicated mice. These anomalies were reversed by DRME doses. On the basis of our results obtained in this study, we suggest the protective role of *D. roxburghiana* in renal toxicity.

Biography

Bushra Ahmad has recently submitted her PhD thesis. She has worked for six months at University of Oxford as visiting research student to conduct a part of her PhD research. She has published 10 papers in reputed journals.

bushra_ahmad04@yahoo.com

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