PROTECTIVE EFFECT OF HYGROPHILA SPINOSA AGAINST CISPLATIN INDUCED NEPHROTOXICITY IN RATS

Ingale KG, Rokade NB, Bodade BJ

KYDSCT's college of Pharmacy Sakegaon,Bhusawal

ABSTRACT

The nephroprotective effect of the *Hygrophila spinosa* methanolic extract (HSME) was evaluated in wistar rats with cisplatin-induced acute renal damage, in which generation of reactive oxygen species plays a major role. Nephrotoxicity was induced by a single i.p. injection of cisplatin (7.5 mg/kg). The extract was administered for ten consecutive days at 250 mg/kg and 500 mg/kg b.w. p.o. and silymarin in a dose of 50mg/kg/day, i.p. and on 11th day cisplatin (7.5 mg/kg) was given i.p. The results revealed that HSME pre- treatment significantly reduced blood urea and serum creatinine levels elevated by cisplatin administration. Also, HSME significantly attenuated cisplatin-induced increase in malondialdehyde and decrease in reduced glutathione, and catalase and superoxide dismutase and glutathione peroxidase activities in renal cortical homogenates. Additionally, histopathological examination showed that HSME markedly ameliorated cisplatin-induced renal tubular necrosis. In conclusion, HSME can be considered a potential candidate to protect cisplatin nephrotoxicity.

Keywords: Cisplatin, *Hygrophila spinosa*, Lipid peroxidation, Nephrotoxicity

Corresponding Author: Ingale K. G
Email: kundaningale31@gmail.com

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