

TOXICOLOGICAL STUDIES OF AQUEOUS EXTRACT OF LEAVES OF STEPHANIA HERNANDIFOLIA

P.K. Sahu * J. Sahoo¹ and D.K. Tripathi²

*School of Pharmaceutical Sciences, SOA University, Khandagiri, BHUBANESWAR-751030

¹-IMT Pharmacy College, Gopalpur, PURI-752002

²-Runngra College of Pharmaceutical Sciences and Research, BHILAI, Chatisgarh, 490024

The acute and sub-acute toxicity of the aqueous extract of leaves of *Stephania hernandifolia* was carried out to evaluate its effects on certain biochemical, haematological and histopathological changes. The up and down procedure was adopted to evaluate the acute toxicity in mice. For sub-acute toxicity study, female albino rats were administered with aqueous extract of leaves of *Stephania hernandifolia* (200 mg/kg) daily for 90 days. Cage-side observations, changes in morphology, behavior and body weight were weekly noted. Blood collected on day 91 and sacrificed for hematological and biochemical as well as histopathological analysis. Relative organ weights of liver, kidney, spleen and adrenals were calculated. No mortality was observed with the said extract up to a dose of 3500 mg/kg, orally. In the sub-acute toxicity study, the drug significantly increased total bilirubin, SGOT, SGPT, Alkaline phosphatase, protein, albumin, globulin, urea, uric acid, LDL and VLDL. The results reveal the aqueous extract of leaves of *Stephania hernandifolia* to be moderately toxic and have the potential to cause chemical injury to liver and kidneys. It also shows hyperlipidemic effect and antifertility effect.

INTRODUCTION

Stephania hernandifolia belongs to family Menispermaceae. It is a slender climber widely found in some parts of north, east and south India (Anonymous, 2003, Kirtikar & Basu, 1999). Earlier antifertility effect of aqueous extract of its leaves in female rats has been reported (Sahu *et al.*, 2004). The aqueous extract showed significant anti-implantation property at doses of 1 and 2 g/kg body weight in female wistar rats (Mukharjee *et al.*, 2006) and was reported to inhibit ovarian gametogenesis (Maiti *et al.*, 1999). An ethnomedicinal formulation of leaves of *Stephania hernandifolia* showed 33.3% and 66.7% post coital pregnancy interception at a dose of 250 and 500 mg/kg respectively. Therefore the present study is undertaken to investigate the toxicity profile of the aqueous extract of leaves of *Stephania hernandifolia* following oral administration in female albino rats.

MATERIAL AND METHODS

The fresh leaves of *Stephania hernandifolia* were collected from Khandagiri

* Corresponding Author