

Partial in vitro and in vivo red scorpion venom neutralization activity of *Andrographis paniculata*

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ABSTRACT

Objective Red scorpion (*Mesobuthus tamulus*) is the most lethal among all poisonous species of scorpions. Envenoming by *Mesobuthus tamulus* is quite common along the western coast of India, without any established therapy. *Andrographis paniculata* is one of the plants that has long been used in traditional herbal medicine for the treatment of poisoning by animal bites. Hence, the study was planned to evaluate the ethanolic extract of *Andrographis paniculata* for the treatment of *Mesobuthus tamulus* envenoming. **Materials and Methods** Ethanolic extract of the plant *Andrographis paniculata* was obtained using a Soxhlet apparatus. Lyophilized venom sample of *Mesobuthus tamulus* was used. Swiss albino mice weighing 20-30 g were used in the study. Calculation of LD₉₉ of *Mesobuthus tamulus* venom was performed using Turner's method. Acute toxicity of *Mesobuthus tamulus* venom and its neutralization by the plant extract at a dose of 1 g/kg and 2 g/kg in vivo was seen. Neutralization of the lethal venom effect of *Mesobuthus tamulus* by plant extract at the dose of 1 g/kg and 2 g/kg by Alam and Gome's method (in vitro) was also seen. **Results** The LD₉₉ of *Mesobuthus tamulus* venom from this study was determined to be 25.12 µg/g and the LD₅₀ was 15.85 µg/g. In the acute toxicity and in vivo neutralization study, plant extract at the dose of 1 g/kg and 2 g/kg resulted in a mean survival of 62.667 min and 39.333 min, respectively. Neutralization of the lethal venom effect of *Mesobuthus tamulus* by the plant extract at the dose of 1 g/kg and 2 g/kg by Alam and Gome's method (in vitro) showed a mean survival of 49.667 min and 42.5 min, respectively. **Conclusion** The ethanolic extract of *Andrographis paniculata* has some protective effect against the red scorpion venom in mice but does not offer any survival benefit.

KEYWORDS

Mesobuthus tamulus . *Andrographis paniculata* . LD₉₉

REFERENCES