

Evaluation of *Clematis hedysarifolia* DC. for potential anticonvulsant activity in Pentylenetetrazol and Strychnine induced convulsion in albino mice

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ABSTRACT

Juice of *Clematis hedysarifolia* DC, has been employed in the treatment of seizures and various neurological disorders. Research objective was to examine anticonvulsant effects of different solvent extracts of leaf and stem parts of *Clematis hedysarifolia* DC by employing several experimental models. Anticonvulsant activity of plant extracts at dosages of 200 and 400mg/kg (administered orally) was evaluated using pentylenetetrazole (PTZ) as well as strychnine (STN)-induced seizure models in mice. Acute toxicity study indicated that LD50 exceeded 2000mg/kg in mice. Pre-treatment with the aqueous extract of *Clematis hedysarifolia* DC resulted in a dose-related protective effect against PTZ-induced seizures along with mortality, offering complete protection at highest dose. Extract significantly delayed onset of myoclonic jerks and shortened duration of tonic seizures in a dose-dependent fashion. In STN-induced seizure model, although extract did not prevent seizure occurrence, similar to standard diazepam, it significantly ($p < 0.05$) delayed onset of seizures and extended survival period prior to death in dose-dependent manner.

Keywords: Anticonvulsant, *Clematis*, pentylenetetrazol, strychnine.