ABSTRACT

Objective:
To explore the pharmacognostical characteristics and in vivo anticonvulsant activity of chloroform, alcoholic and aqueous extracts of Diplocyclos palmatus leaves, Abutilon indicum Linn sweet stem and Cassia occidentalis whole plant, individually and their herbal formulation separately.

Methods:
The plants were successively extracted using chloroform, alcoholic and aqueous. The extract was screened for phytochemicals using HPTLC, GCMS techniques. The extract was also screened for acute toxicity. The anticonvulsant activity against MES and PTZ induced convulsions individually and their herbal formulation using Wistar albino rats.

Results:
The phytochemical screening study reveals the presence of more chemical constituents in chloroform extract followed by alcoholic and aqueous extract. We found no significant changes in average body weight of animals, up to tested oral dose of 3000 mg/kg, during acute toxicity study. The in vivo study reveals the anticonvulsant activity of chloroform and alcoholic extract against MES and PTZ induced convulsions. The chloroform extract is found to be more potent, similar to Phenytoin, in controlling both MES and PTZ induced convulsions than alcoholic and aqueous extracts. Study also reveals the presence of more chemical constituents in chloroform extract and suspension having good stability on storage. The formulation is found to be more potent, similar to standard, in controlling both MES and PTZ induced convulsions.

Conclusions:
The results obtained suggest that the formulation has remarkable anticonvulsant activity. Also, our study indicates the potential application of these combined herbal dosage forms could be suitable for anticonvulsant activity. However, this claim demands through investigation in other models for anticonvulsant activity.

KEY WORDS: Shivling, Atibala, Neegro coffee, anticonvulsant, HPTLC and GCMS,