

ANTICONVULSANT ACTIVITY OF *CITRULLUS COLOCYNTHIS* DRY DISTILLATE

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Background

Epileptic seizures are paroxysmal events of transitory alteration in consciousness caused by excessive, abnormally synchronized, or widely distributed neuronal electrical discharge due to brain dysfunction. In Sudan the dry distillate of *Citrullus colocynthis* fruit known as *Gotran* is traditionally used for the treatment of epileptic seizures. The aim of this study is to evaluate the anti- epileptic activity of the distilate of *C. colocynthis* fruits.

Methodology

The distillate (extract) of *C. colocynthis* fruits was carried out using dry distillation method.
The seizure was induced to the rats by injected with Pentylenetetrazole (80 mg/kg). The rats were divided into the negative control group (normal saline); positive control group (received standard anticonvulsant {Sodium valproate, 1 mg/kg}), and tested group which received the extracts (500-2000 mg/kg). After 30 mints of induction, the convulsions parameters in the animals were observed such as signs of neurological deficits, particularly hind limb tonic convulsions.

Findings

All rats injected with Sodium valproate were protected against seizure (100%). In the negative group protection percentage was 0 %, and all rats suffered convulsions and died in a very short time. In the group treated with distillate of *C. colocynthis* fruit significantly prolonged onset of the seizure, reduced the duration of seizure and mortality (50%).
GC/MS analysis of *C. colocynthis* fruit dry distillate represents the presence of 108 compounds with four compounds well known for their antiepileptic activity, 1-(3H-Imidazol-4-y1)-ethanone (imidazole derivatives), Pyrazine, 2-ethyl-3-methyl- Pyrazinetrimethyl (pyrazine derivatives) and Indole derivatives.

Conclusion

The study concluded the antiepileptic activity of *C. colocynthis* fruit distillate which is compatible with sudanese traditional medicine in the treatment of epilepsy with *Gotran* (distillate of *C. colocynthis* fruit).

Biography

Ikram Mohamed Eltayeb has completed her PhD at the age of 35 years from Khartoum University, Sudan and promoted to associate professor from University of Medical Sciences and Technology (UMST), Sudan.. She is the coordinator of the research unit, Alfajr College for Science and Technology. She has published more than 18 papers in reputed journals and has participate in more than 10 scientific conferences.

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