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Anticonvulsant action of petroleum ether fraction of Cardiospermum halicacabum against electroshock induced Convulsion in rats:

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ABSTRACT: *The protective effect of the petroleum ether fraction of the indigenous drug cardio-spermum halicacabum against electroshock induced convulsions in rats was studied. Alcoholic extract of the petroleum ether fraction of cardiospermum halicacabum in the dose of 350 mg/kg body weight was effectively reduced the extensor an flexor component of tonic convulsions in electroshock induced convulsions in rats. The difference was statistically significant ($p<0.05$) with respect to control.*

INTRODUCTION :

Cardio spermum halicacabum belongs to the natural order sapindales. It is a climbing herb and grows throughout India (1,2) saponin, L- amino acid, β Sitosterol, quebrachitol, capric acid, arachidic fatty acid and DL-DOPA are the essential constituents of this plant (3,4), the whole plant is considered for useful in rheumatism, stiffness of limbs ands described to reduce swelling of hardened tumours (5). In the Unani literature the seeds are described as anticancerous(6). The plant juice is said to be used as diruretic, diaphoretic, emetic and laxative. Also useful in amenorrhoea, gonorr hoea, asthma and in nervous disorders (7-9). In view of medicinal properties, the present investigation was undertaken to evaluate the anticonvulsant action of this plant against electroshock induced convulsion in rats.

MATERIALS AND METHODS:

The whole plant was collected from Tanjore District and the authenticity of the herb was confirmed by the department of medicinal Botany and Industrial Microbiology, A.V.V M pushpam (* for Correspondence) College, Poondi, Tamil Nadu. The shade dried and coarsely powdered whole parts of the plants were exhaustively extracted with ethanol in a soxhlet apparatus.

The ethanolic concentrate was extracted with petroleum ether. The extract is concentrated at room temperature to get the residue.

A 5% suspension of the extract of cardiospermum halicacabum was prepared with 0.5% carboxy methyl cellulose in distilled water. Proper homogenization of the suspension was don by passing through hand homogenizer and diluted with normal saline to carryout this study.

ANTICONVULSANT ACTIVITY:

Wistar albino rats each weighing 120-150 gm were housed individually in normal

ambient temperature, fed with pellet food and water ad libitum, were divided into two groups of 10 animals each and used for the following studies. In group I the test drug was administered perorally at a dose of 350 mg/kg b.w (dose selected as 1/th of its LD50, calculated in a previous study). In group II received carboxy methyl cellulose suspension perorally.

One hour after this drug treatment, convulsions were produced in threats by "Techno' convulsiometer by delivering and current of 150 mA through the corneal electrodes for a period of 0.2 second (10) Duration of extensor, flexor component and clonic phase was noted for each animal of the groups.

RESULTS AND DISCUSSION:-

Cardiospermum halicacabum at the does of 350 mg/kg was effectively reduced the extensor and flexor component of tonic convulsions produced in rats. The difference was statistically analysed by suing studies 't' Test (11). The detailed results are furnished inTable-1

Table -1

Anticonvulsant action of petroleum either fraction of cardiospermum halicacabum in Albino rats.

S. No	Treatments Dose mg/kg	Time (sec) in various Phases of Convulsion				
		Flexor	Extensor	Clonus	Stupor	Rec./Death
1.	Test group cardio spermum halicacabum (350mg/kg b.w)	3.4±0.66*	4.6±1.36*	25.6±2.14	65.2±4.24	Recovered
2.	Control group CMC suspension	6.4±1.4	9.6±0.64	26.2±1.46	66.4±4.8	Recovered

*P<0.05

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