SHORT COMMUNICATION

ANTICONVULSANT ACTIVITY OF *CANSCORA DECUSSATA* ROEM. & SCH.

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Summary: Anticonvulsant activity of the dried crude powder of the whole plant of *Canscora decussata* (Shankhpushpi) and its alcoholic extract was assessed in albino rats. Phenytoin sodium served as the reference compound. The crude dried powder and its alcoholic extract and phenytoin sodium were found to provide cent per cent protection against electro-shock and their ED_{50} values were 62 *mg*/100 *g*, 7.6 *mg*/100 *g* and 1.4 *mg*/100 *g* respectively.

Key Words : *Canscora decussata* anticonvulsants Shankhpushpi

INTRODUCTION

'Shankhpushpi' is an antiepileptic and anticonvulsant remedy described in Charak Samhita (1), an ancient Ayurvedic treatise. Whitney (6) mentioned that this drug has been described under the name 'Nyastika' in the protohistoric writings of Atharvaveda. According to Filliozat (3) the Vedic period lasted from 1500 to 1000 B.C. while the Charak Samhita was compiled in 1st or 2nd century B.C.

The name 'Shankhpushpi' connotes different plants in different states. Thus 'Shankhpushpi' is *Clitoria tenatea Linn.* in Kerala, *Convulvulus pluricaulis Chois.*, *Evolvulus alsinoides Linn.* in Uttar Pradesh and *Canscora decussata* in Bengal (2). This confusion might have arisen due to a lack of communication between investigators of ancient India.

Canscora decussata was selected as till now no experimental study seems to have been made on this plant. This communication reports our preliminary findings on *Canscora decussata.*

MATERIALS AND METHODS

Crude powder of *Canscora decussata* was prepared by grinding the whole dried plant into a fine powder form.

The extraction of the powder was done with absolute alcohol in Soxhlet apparatus. A dark green, sticky, thick and viscous substance weighing about 1/6th of the original crude powder was obtained. For ease of administration the extract was suspended with gum acacia prior to feeding the rats.

The anticonvulsant activity was assessed in albino rats of both sexes, weighing 90 100 *g*. The rats were divided into 12 groups of eight animals each. The anticonvulsant activ was assessed by noting the protection provided by the compounds against convulsions induc with a current of 150mA for 0.2 sec by an electro-convulsometer (5). All rats were initia subjected to electric shock (without drug) to record the hind limb extension. Rats showi a positive response were selected for drug trial. The rats were then allowed a rest period 72 hr. The different groups were then fed varying doses of the whole plant crude pow or alcoholic extract of the powder or phenytoin sodium, each suspended in 2 *ml* of distil water. The control group was fed only 2 *ml* of distilled water. All rats were given t drugs twice, first 24 hr prior to and again one hr prior to applying the electric shock. T crude powder was fed to 5 groups of rats in doses of 25, 50, 75, 100, and 125 *mg*/10 respectively. The alcoholic extracts was fed at the dosage of 2,5,10,15 and 20 *mg*/100 *g* five other groups of rats. The three reference groups consisted of 10 rats each which were f phenytoin sodium in 1,2, and 3 *mg*/100 *g*.

The ED_{50} of crude powder, alcoholic extract and phenytoin sodium was calculated b the method of Miller and Tainter (4).

RESULTS AND DISCUSSION

Data on the percentage protection offered by various doses of the crude powder a alcoholic extract are shown in Table I. It is clear that both the alcoholic extract and t crude powder of the plant protect against supramaximal electroshock. Further studies wi metrazol induced convulsions, potentiation of pentobarbitone induced narcosis and toxicity a in progress.

TABLE I : Percentage protection against supramaximal electroshock obtained after the crude powder a alcoholic extract of *Cancora decussata* and phenytoin sodium.

Compound	*Group*	*Dose* (*mg*/100*g*)	*Percentage protection*	ED_{50} (*mg*/10
Crude powder	I	25	25	
	II	50	37.5	62
	III	75	62.5	
	IV	100	100	
	V	125	75	
Alcoholic extract	I	2		
	II	5	25	
	III	10	57	7
	IV	15	71	
	V	20	100	
Phenytoin sodium	I	1	40	
	II	2	60	1
	III	3	100	
Control group (water)	I	2*ml*	—	

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