LETTER TO THE EDITOR

EFFECT OF NAGARMOTHA (CYPERUS ROTUNDUS LINN) ON RESERPINE-INDUCED EMESIS IN PIGEONS

Sir,

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Powdered root of Cyperus rotundus Linn. (Nagarmotha) is widely used in Ayurvedic, Siddha and Unani medicine for the treatment of fever, diarrhoea, vomiting and in the management of Cholera (2) It is also employed commonly in the treatment of vomiting of pregnancy. In the present study, its effect on reserpine-induced emesis in pigeons (1) has been evaluated.

Nagarmotha roots were obtained from a local dealer of Ayurvedic medicines, identified and a suspension containing 80 *mg/ml* of the drug was prepared in ion free distilled water using gum acasia as suspending agent. Healthy pigeons weighing between 200-300 g were divided into four groups of 10 each. They were fed with grain (Jwar) in the morning and the experiments were performed at 11 a.m. Group I received reserpine (0.5 *mg/kg*, im); group II received triflupromazine ('Siquil', 4 *mg/kg*, im) followed by reserpine after 30 min. The third group was given Nagarmotha (80 *mg/kg*/p0) followed by reserpine after 45 min, while the fourth group was administered Nagarmotha (80 *mg/kg*/p0) followed by reserpine after 24 hr. The birds were observed for 4 hr and the incidence and time of onset of vomiting was recorded. The results were analysed by using Chi-square test.

Reserpine induced vomiting in 100% of the birds in group I which lasted for 2 hr, the average time for the onset of vomiting being 63 ± 9 9 min. Nagarmotha given 45 min in advance protected 83% of the birds, while in the remaining the time of onset of vomiting was significantly delayed (Table I). Nagarmotha administered 24 hr prior to reserpine failed to provide any protection against the emetic effect of reserpine as regards its incidence or onset time. The group which received triflupromazine was completely protected from the emetic effect of reserpine (Table I).

TABLE I : Effect of Nagarmotha (80 *mg/kg*/po) on reserpine (0.5 *mg/kg*, im) induced emesis in pigeons.

S. No.	*Drug*	*Emesis*		
		Incidence %	*Time of onset in min±SD*	
1.	Reserpine (10)	100	63± 9.9	P<0.001
2.	Nagarmotha + Reserpine after 30 min (10)	17	130±27.9	P<0.05
3.	Triflupromazine + Reserpine after 30 min (10)	00	—	
4.	Nagarmotha + Reserpine after 24 hr (10)	100	65±7.2	

(Figures in parenthesis indicate the number of animals).

These observations reveal that Nagarmotha antagonises the emetic effect of reserpine when given 45 min in advance, though apparently the dose used in the study is less effective than the given dose of triflupromazine in this respect (Table I . Since reserpine induced emesis is due to the stimulation of CTZ, the probable site of action of Nagarmotha appears to be CTZ. The study supports the use of Nagarmotha as an antiemetic in various systems of medicines.

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REFERENCES

1. Benfey, B. G. and D. R. Verma. Influence of methyl dopa on the central effects of reserpine. *Br. J. Pharmac.*, 22 : 366-370, 1964.

2. Nadkarni, K. M. Cyperus Rotundus Linn, In 'Indian Materia Medica' Edited by Nadkarni, A. K. Bombay, *Popular Prakashan*, **1** : 428-429, 1982.

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