Indian J Physiol Pharmacol 1997; 41(4) : 429–430

LETTER TO THE EDITOR

EFFECT OF *OCIMUM SANCTUM* LINN ON NOISE INDUCED CHANGES IN PLASMA CORTICOSTERONE LEVEL

Sir,

(Received on May 8, 1997)

Research paper entitled "Effect of *Ocimum sanctum* linn on noise induced changes in plasma corticosterone level" published in recent issue of the Journal makes a very interesting reading (1). It has been demonstrated that ethanolic extract of *O. sanctum* prevents the changes in plasma level of corticosterone induced by acute and chronic exposure to noise stress. *O. sanctum* has previously been reported to have antistress, hypotensive, cardiac depressant and hypoglycaemic activities in different experimental studies (2–4). These actions are considered beneficial to the heart as it protects the heart from ill effects of hypertension, hyperglycaemia and stress (5). Viewed in this reference the present observation has great therapeutic relevance as noise pollution has been reported to produce hypertension (6). Besides *O. sanctum,* there are certain other medicinal plants like *Terminalia arjuna* and *Inula racemosa* which modify the neurohumors in stressful conditions like coronary artery disease and/or mild hypertension (Table I) (7). Daily use of these plant based drugs particularly *O. sanctum* by people who are esposed to noise pollution in megacities in India could possibly be one of the ways to combat noise induced hypertension. Before we advocate this, it seems logical to carry out further studies investigating the effect of these drugs viz, *T. arjuna, inula racemosa, Ocimum sanctum, Saussurea lapta Clarke* on noise induced changes in corticosterone, adrenaline, nordadrenaline, blood sugar and lipids to elucidate the link between noise induced alterations in cardiovascular hemodynamics, hypertension and lipids.

Table I : Showing effect of 90 days treatment with indigenous drugs on neurohumors in CAD patients. (n = Indicates number of CAD patients)

Groups	*Plasma cortisol (mg%)*			*Plasma catecholamines (ng/100 ml)*		
	Pretreatment	*Post-treatment*	*P value*	*Pretreatment*	*Post-treatment*	*P value*
Indula racemosa (n=30)	18.4 ± 2.1	16.8 ± 2.6	< 0.001	239.3 ± 11.4	232.0 ± 8.0	<0.001
Saussurea lappa clarke (n=30)	14.4 ± 3.0	13.8 ± 2.7	> 0.05	233.2 ± 10.8	232.6 ±10.9	> 0.05
Terminalia arjuna	17.7 ± 3.4	15.3 ± 3.6	<0.05	255.9 ± 9.4	246.8 ± 8.4	< 0.001

S. DWIVEDI
Department of Medicine,
University College of Medical Sciences and G.T.B. Hospital,
Dilshad Garden, Delhi – 110 095

REFERENCES

1. Sembulingam K, Sembulingam P, Namasivayam A. Effect of *Ocimum sanctum* linn on noise induced changes in plasma corticosterone level. *Indian J Physiol Pharmacol* 1997; 41: 139–143.
2. Bhargave KP, Singh N. Antistress activity of *Ocimum sanctum* linn. *Indian J Med Res* 1981; 73: 443–451.
3. Mediratta PK, Dewan V, Bhattacharya SK, Gupta VS, Maiti PC, Sen P. Effect of *Ocimum sanctum* linn. on humoral immune responses. *Indian J Med Res* 1988; 87: 384–386.
4. Chattopadhya RR. Hypoglycaemic effect of *Ocimum sanctum* leaf extract in normal and streptozotocin diabetic rats. *Indian J Exptl Biol* 1993; 31: 891–893.
5. Dwivedi S. Cardiovascular friendly plants. *Annals of Academy of Medical Sciences (India)* 1997; (Under publication).
6. Bhattacharya SK, Kashyap SK. Studies on noise pollution. *ICMR Bulletin* 1996; 26: 61–68.
7. Dwivedi S. Prostaglandins and related neurohumors in ischaemic heart disease. *Ph.D. Thesis Medicine, Banaras Hindu University* 1987.