in values between the control, musk- and hydrocortisone-treated animals are statistically highly significant ($P < 0.001$). After 1·0 and 1·5 mg., and 1·0 and 2·0 mg. respectively of musk, the difference in the amount of fluid was also significant ($P < 0.01$ and < 0.001), but betweeen 2·0 mg. musk and 1·0 mg. hydrocortisone the difference was not significant ($P > 0.7$), neither was the difference between the weights of the pouch wall significant, in these latter two instances.

TABLE I

EFFECT OF MUSK AND HYDROCORTISONE ON GRANULOMA POUCH

Drug	Dose (mg.)	No. of rats in each expt.	Fluid in the pouch wall (ml.)	Weight of the pouch wall (g.)
1. Control ..	—	10	10·4 ± 0·293*	4·8 ± 0·161*
2. Musk ..	1·0	30	1·8 ± 0·17	1·4 ± 0·094
(pooled	1·5	30	1·1 ± 0·17	0·8 ± 0·094
samples)	2·0	30	0·1 ± 0·17	0·3 ± 0·094
3. Hydrocortisone acetate ..	1·0	10	0·2 ± 0·293	0·4 ± 0·161

* All figures represent means of S.E. of the mean.

We believe these tests to show musk to be an anti-inflammatory agent like hydrocortisone acetate.

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Effectiveness of 5-Hydroxytryptamine in Ectopic Ventricular Tachycardia Resulting from Acute Myocardial Infarction in the Dog

SIR,—In an earlier publication, we showed that nialamide, a monoamine oxidase inhibitor reverted ectopic ventricular tachycardia induced by two-stage ligation of the anterior descending branch of left coronary artery in dogs to normal sinus rhythm (Kapila and Arora, 1962). Since monoamine oxidase inhibitors increase the concentration of various biological amines within the body tissues (Udenfriend, Weissbach, and Bogdanski, 1957), it was likely that at least one of these amines might be responsible for the observed salutary effect. Noradrenaline, however, when injected intravenously under the same experimental conditions as that of nialamide evoked ectopic ventricular beats (Maling, 1957), instead of reverting ventricular tachycardia to normal sinus rhythm. We therefore thought it worthwhile to study the effect of another monoamine (5-hydroxytryptamine (5-HT)) on the ectopic ventricular activity.

An aqueous solution of (5-HT) creatine sulphate was injected intravenously 18 hr. after two-stage ligation of the anterior descending branch of the left coronary artery of the dog (Harris, 1950), in doses of 10, 20, and 50 μg./kg. The electrical changes in the heart were observed through a cardioscope and the electrocardiogram recorded on a two channel Philips cardiopan 2.

Half an hour after the intravenous injection of 5-HT, there was a short phase of about 10–15 min., when there was a slight reduction in the ectopic ventricular rate after which it again returned to the previous level. During this period there was a slight increase in the total heart rate.

TABLE I

PEAK EFFECTS OF 5-HT CREATININE SULPHATE ON TOTAL HEART RATE AND ECTOPIC VENTRICULAR RATE

Dose of 5-HT μg./kg.	Total heart rate/min.		Ectopic ventricular rate/min.		Toxicity
	Before drug	After drug	Before drug	After drug	
10	180	170	180	136	None
10	148	140	104	60	None
10	164	150	124	76	None
20	160	140	120	46	None
20	170	160	165	60	None
20	140	115	120	15	None
50	210	152	190	104	None
50	180	132	160	80	None
50	206	170	206	160	None
50	188	170	188	40	None
50	220	135	200	15	None
50	176	150	150	32	None

Maximum reduction in the ectopic ventricular rate and total heart rate occurred 24 hr. after the drug administration. There was a decrease in the total heart rate and ectopic ventricular rate (Table I). A dose response relationship was not noted, probably due to the higher doses employed in dogs having initial higher total heart rate and ectopic ventricular rate. The peak effect lasted for more than 8 hr. 40 hr. after the drug administration ectopic ventricular beats were present in large number.

The present studies reveal that 5-HT when injected intravenously in dogs having ventricular tachycardia produced its effect in two phases. Firstly, an immediate effect of short duration with some reduction in ectopic ventricular rate and a slight increase in total heart rate. Secondly, the peak effects were noted 20 hr. after 5-HT administration. There was a reduction in the total heart rate as well as in ectopic ventricular rate and the effect lasted for a number of hours.

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