

INDIVIDUAL VARIATIONS IN THE RESPONSE TO ADRENALINE OF THE CAT
BLOOD PRESSURE

Sir,

Adrenaline (1 to 10 $\mu\text{g}/\text{kg}$ iv) usually causes a rise in blood pressure in cats under pentobarbitone anaesthesia. While carrying on some investigations on pempidine tartrate, we got a batch of five mongrel cats supplied by a local dealer in which adrenaline when given in the doses of 2 $\mu\text{g}/\text{kg}$ caused a fall in blood pressure. However, when the same dose of adrenaline was repeated 10-15 min after the injection of pempidine tartrate (8 mg/kg) usual pressor response was obtained.

The cats were put into a bag and pentobarbitone sodium (35 mg/kg ip) was given by passing the needle of the syringe through the bag as these cats were hyperexcitable and difficult to handle otherwise. Blood pressure was recorded through the carotid artery with a mercury manometer.

Similar results were obtained in all the five cats. Adrenaline (2 $\mu\text{g}/\text{kg}$) caused a mean fall of 29 ± 2.9 mm of Hg before pempidine and a mean rise of 23.4 ± 1.1 mm of Hg after pempidine.

Burn and Hutcheon (1) have reported that adrenaline causes fall in blood pressure in cats under ether anaesthesia. They ascribe it to the high sympathetic tone of blood vessels in cats under ether anaesthesia. It is possible that there might be release of endogenous catecholamines in cats captivated in the bag as these hyperexcitable animals struggled at the time of injection. Obviously this will lead to high basal vasoconstrictor tone of blood vessels. Pempidine causes relaxation of blood vessels and thus after pempidine the usual pressor response was regained. Further work on the mechanism of adrenaline-induced depressor response will be done when such animals as showing fall in B.P. to adrenaline will become available.

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REFERENCE

1. Burn, J.H. and D.E. Hutcheon. The action of noradrenaline. *Br. J. Pharmac.*, 4 : 373-380, 1949.

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