LETTER TO THE EDITOR

UNUSUAL GANGLIONIC RECEPTOR SITE FOR CHOLINE IN RATS

Sir,

Two types of excitatory receptor sites have been described for the autonomic ganglion(1), one of them is blocked by drugs like hexamethonium and another by atropine. Evidence presented in the present communication indicates that the pressor action of choline in the rat is mediated through neither of these two sites.

Healthy male mongrel rats (225-325 *g*) were anaesthetised by intraperitoneal injection of urethane (1.5 *g/kg*). Blood pressure was recorded with Statham Transducer and Grass polygraph (Model-4). Carotid artery was cannulated to record the blood pressure and the opposite jugular vein was cannulated for injecting the drugs.

8 *mg/kg* of choline chloride caused a fall in blood pressure when injected intravenously. The same dose produced a pressor response, if given 10 min after the intravenous injection of 1 *mg/kg* of atropine sulphate (2). The pressor response to choline in atropinised rats was not blocked by hexamethonium chloride (10 *mg/kg*), given 10-15 min prior to the injection of choline (n=5). Rather hexamethonium itself converted the choline-induced drepressor response into a pressor one. However, the pressor response to choline in atropinised or hexamethonium pretreated rats was blocked by nicotine (total dose of 10 *mg/kg*, injected iv in divided doses) administered 10 min before choline (n=5) (Fig. 1). The blocking action of nicotine indicates

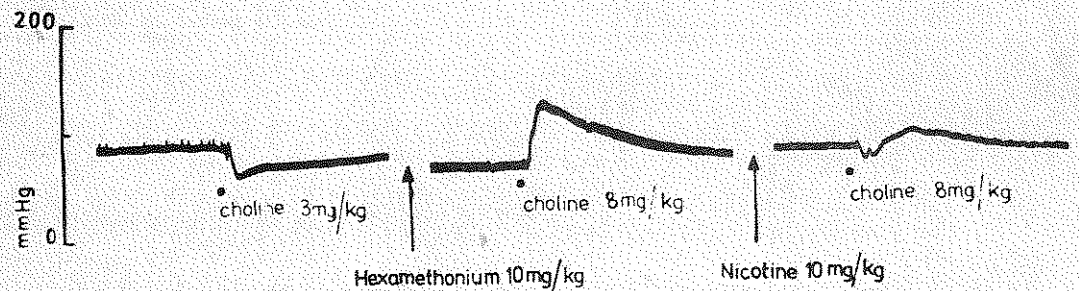

Fig. 1: Male rat, 270 g (urethane anaesthesia). Record of carotid arterial blood pressure. Ist pannel shows control response to choline. 2nd pannel shows response to choline 15 min after hexamethonium. 3rd pannel shows the response to choline 10 min after nicotine in hexamethonium pretreated rat.

that the pressor response to choline is mediated through the sympathetic ganglion. It also seems probable from the present results that pressor response to choline is mediated through a ganglionic site which is neither blocked by hexamethonium nor by atropine.

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