potentiate the hexobarbitone sodium induced sleeping time. The sodium induced hypnosis is modified by hexobarbitone sodium receptor blockade.

Dr. A. Ramaswamy for their kind permission to report on the investigations carried out at the Indian Council of Agricultural Research Fellowship.

S. PAL SINGH*


letter to the editor

ANTIARRHYTHMIC ACTION OF METIAMIDE IN EXPERIMENTAL CARDIAC ARRHYTHMIAS

Sir,

It has been well established that cardiac actions of histamine are mediated by histamine H\textsubscript{1} and H\textsubscript{2} receptors and that there exist specific agonists and antagonists acting on them (1,2,3,4,5,7,8 and 11). Cyclizine, an antihistamine has been shown to antagonize positive chronotropic effect of histamine which is mediated through H\textsubscript{2} receptors (8) and to possess antiarrhythmic effect in experimental cardiac arrhythmias (9). This prompted us to investigate antiarrhythmic actions of metiamide, a well known H\textsubscript{2} receptor blocking agent on experimental cardiac arrhythmias.

In 5 mongrel dogs of either sex (10 kg to 15 kg) anaesthetized with pentobarbitone sodium (30 mg/kg iv) a self perpetuating type of atrial flutter was produced according to the method of Rosenblueth and Garcia Ramos (10). After 30 min of the production of arrhythmia metiamide was administered iv by the titration procedure of Winbury and Hemmer (12), i.e. 1 mg/kg of drug was injected every min till the reversion to normal sinus rhythm. On an average mean total dose causing reversion was 4.0 ± 0.5 (SE) mg/kg. Intravenous administration of metiamide did not have any effect on mean arterial blood pressure.

Anterior descending branch of the left coronary artery was ligated in 2 stages according to the method of Harris (6) in 5 anaesthetized (pentobarbitone sodium 30 mg/kg iv) mongrel dogs of both the sexes weighing between 11 kg and 14 kg. The animals were studied in conscious state 18 to 24 hr after the operation when their electro-cardiogram (Lead II) indicated hetrotrropic ventricular beats. Metiamide (10 mg/kg) diluted in 10 ml of isotonic saline was injected intravenously over a period of 10 min. Effect on total heart rate and ectopic rate was observed for 60 min. No effect was observed on total heart rate but ectopic rate was decreased on an average by 46.8% which was not significant statistically. The peak effect was observed between 15 and 30 min of administration of metiamide after which ectopic beats reappeared.

The mechanism by which metiamide exerts antiarrhythmic action needs more detailed elucidation/investigation, but it would not be unwise to attribute, in part, histamine H\textsubscript{2} receptor blockade by metiamide responsible for its antiarrhythmic action.
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