Letter to the Editor

QUINIDINE LIKE ACTIVITY OF γ-AMINOBUTYRIC ACID

By

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Several investigators have reported that γ-aminobutyric acid (GABA) inhibits the electrically or chemically evoked activity of mammalian cerebral cortex (2, 4, 5, 6). Since, drugs inhibiting nerve excitability have been shown to inhibit the cardiac excitability (3), we have studied the effect of GABA on the refractory period of the cardiac muscle.

The experimental procedure employed was as described by Dawes (1). The spontaneously beating isolated auricles of the rabbit and guinea-pig were stimulated each time for 15 seconds by shocks of increasing frequency until a point was reached where the auricles would no longer respond to every stimulus applied and started dropping beats. This was recorded as the maximal response rate and is considered to be the reciprocal of the refractory period. GABA in concentration of 1 *mg./ml.* was found to lower the threshold of the maximal response rate of auricles by 8 to 17 per cent in a series of 10 experiments (Fig. 1).

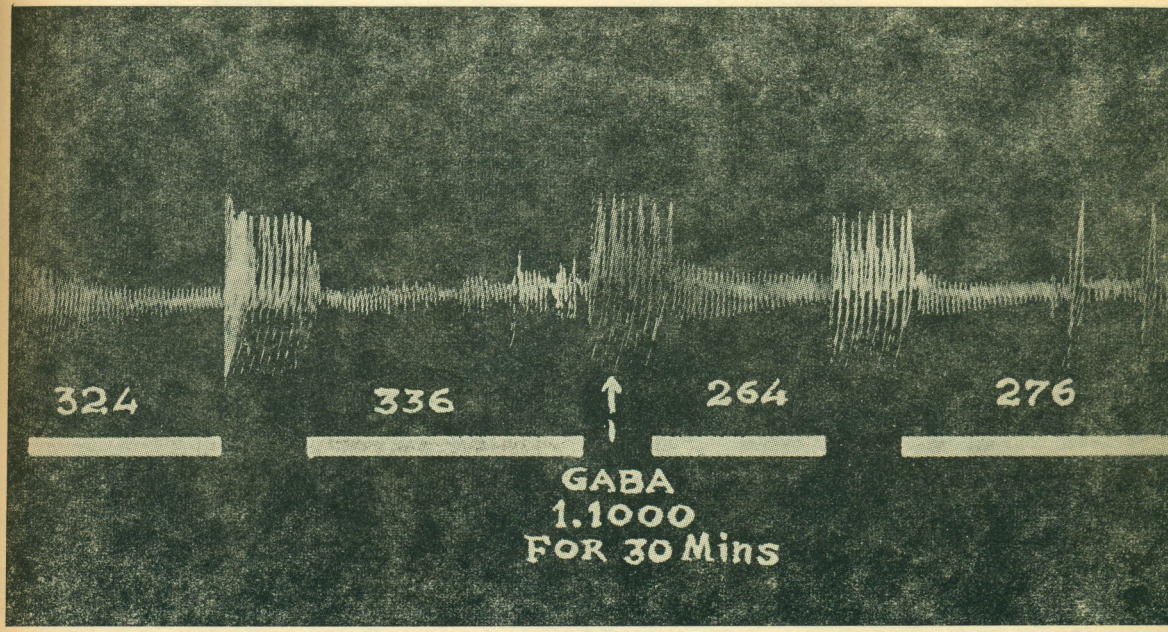

Fig. 1. Showing maximal response rate of rabbits auricle before 336/min.) and after 276/min.) GABA 1:1000. White blocks indicate rate of electrical stimuli per minute.

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This quinidine like activity shows a similarity between the reactions of the cardiac and brain tissues to GABA.

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