SHORT COMMUNICATION

EFFECT OF CYPROHEPTADINE OF FLEXOR REFLEX IN FROGS

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Summary: Higher dose of cyproheptadine decreased flexor reflex in frogs, evoked by electrical stimulation of the toe.

Key words: cyproheptadine flexor reflex

INTRODUCTION

Although the appetite-stimulating effect of cyproheptadine is well-known both in man (5,6) and animals (1, 2), at high dose it decreased the rate of bar-pressing for food pellets under both continuous re-inforcement (3) and variable interval schedule (4). A motor deficit could explain the decrease and therefore the effect of cyproheptadine on flexor reflex was inve,tigated.

MATERIALS AND METHODS

Five frogs of either sex of the species Rana Hexadactyla, weighing between 30 and 35 g, were decerebrated. The knee joint was fixed and the gastrocnemius was separated from surrounding tissues. The tendo-achillis was detached, ligatured and connected to a Grass force displacement transducer (FTO3B). Cyproheptadine was dissolved in saline (1 in 300). Contraction of the muscle due to electrical stimulation of the toe (Frequency 1/sec, duration 0.2 msec and strength 6 volts) wa, recorded by Grass Polygraph before and immediately after injection of either saline or cyproheptadine (7 *mg* or 20 *mg/kg* body weight).

RESULTS AND DISCUSSION

No significant change in flexor reflex was observed after administration of lower dose of cyproheptadine (7 *mg/kg* body weight), whereas there was a significant inhibition of flexor reflex after administration of higher dose of cyproheptadine (20 *mg/kg*), compared with saline (Fig 1). This observation could be correlated with our previous studies on motivated feeding behaviour. We (4) observed that there was a significant decrease of bar-pressing response for

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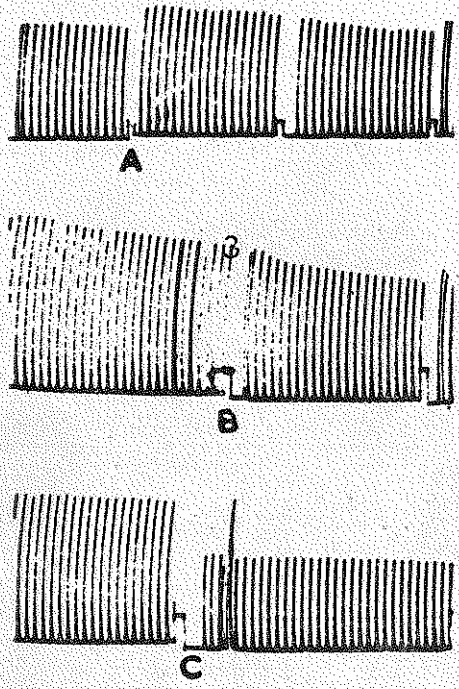

Fig 1: Contraction of the gastrocnemius due to electrical stimulation of the toe. A, injection of saline. B, injection of cyproheptadine (7 *mg/kg*.) C, injection of cyproheptadine (20 *mg/kg*).

getting food-pellets after administration of higher dose of cyproheptadine, which in turn could decrease its appetite-stimulating effect. It seems from the present investigation that this deficit in instrumental performance may be due to 'motor deficit'.

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