

complete absence of response after 10–20 min (Fig. 1). Increasing the strength of the impulse did not prevent this abolition of the muscle response, but if nerve stimulation was at this juncture stopped for 5 min or longer, a transient recovery of twitch occurred. Also, in contrast to normal rats, the treated animals failed to maintain muscle tetanus (Fig. 1a).

Intravenous injection of emetine (1 mg/kg) in preparations from untreated rats produced little effect on single twitches, but caused a definite fall in the height of the tetanus with inability to maintain it at a steady height for the duration of the stimuli (Fig. 1b). Onset of the effect as well as recovery from it was rapid, and the effect could be reproduced by repeating the dose of emetine (Fig. 1c). With increasing doses of the drug, single twitches were also inhibited but the effect on tetanus was always greater than that on single twitches. A dose of 3 mg/kg produced complete inhibition of both single twitches and tetanus. The inhibitory effect of the drug was antagonized by prostigmine, the effect on single twitches being more readily antagonized than that on tetanus (Fig. 1c).

The results of these *in situ* studies thus support the *in vitro* findings of Ng (1966) and suggest that emetine has a tubocurarine-like effect on neuromuscular transmission in the rat.

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Treatment of experimental lymphoedema with coumarin

Experimental lymphoedema can be treated with coumarin. Investigations were made in groups of 30 rats, 200 \pm 30 g. Lymphoedema was induced by extensive ligation of cervical lymph nodes, with careful sparing of blood vessels and nerves; the extent of the lymphoedema of the head and of the neck was measured plethysmographically on the 4th postoperative day.

Control animals were treated with 0.9% NaCl solution and the experimental group was injected with 5 mg coumarin per kg daily. The controls showed an increase in the volume of the head and the neck of 21%, the coumarin-treated animals an increase of 10%. The difference between the treated and the untreated group is significant $P < 0.02$. The explanation of the therapeutic effect of coumarin remains to be elucidated.

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