LETTERS TO THE EDITOR

Chloroquine in Bronchial Asthma

SIR,—Chloroquine possesses specific antihistamine and anti-anaphylactic activity (Agarwal and Deshmankar, 1963) and this could account for the anti-asthmatic action of the drug (Juul-Møller, 1961). Since allergic reactions are mediated through histamine releases from tissues, we have studied the tissue levels of histamine after chronic administration of chloroquine in rats.

Groups of 4 male albino rats (100 to 125 g.) were used in all experiments. Chloroquine sulphate (5 mg./kg.) was injected intraperitoneally daily into 2 groups for 21 days. An equivalent quantity of normal saline was injected into another 2 groups of control rats. The animals were killed on the 21st day and samples of lungs and stomach were pooled, extracted and assayed for histamine as described by Parratt and West (1957).

The results, as summarised in Table I, clearly indicate chloroquine to cause a significant reduction in the histamine content of the lung, but the histamine content of the stomach was found to increase. Similar results have been obtained with glucocorticoids for lung (Chowdhuri, 1962) and stomach (Telford and West, 1960) in rats.

TABLE I

THE EFFECT OF CHLOROQUINE ON HISTAMINE CONTENT (AS BASE) OF TISSUES OF RATS

Tissue	Histamine (ug./g.) ± (S.E.)	
	Control	After Chloroquine
Lungs	4·3	2·48
Stomach	8·66	11·76

The histamine depleting action of chloroquine in lungs further substantiates its value in bronchial asthma. Juul-Møller, in a personal communication, told us he had found asthmatic patients under chloroquine therapy to be free from attacks of status asthmaticus and this persistant action of the drug may be due to the histamine depletion in the lungs.

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