

LETTERS TO THE EDITOR

Antimicrobial Activity of Certain Local Anaesthetics

SIR,—It is humiliating to find that the more successful a drug is in its own field, the more certain it is that any other activity it may possess will be overlooked.

While investigating and comparing a number of formulations for their properties, including antibacterial activities, certain of these formulae were found to have activity in excess of that of the known ingredients. The more usual experience is of course to find that the introduction of active bactericidal agents into lotions and ointments, reduces their activity. When, however, the opposite occurs it suggests either some synergism or unsuspected activity in the ingredients.

The samples being investigated contained local anaesthetics and it was found that these have an antiseptic action. A brief exploratory survey of other similar drugs showed that amethocaine and amylocaine had bactericidal and fungicidal activity of significance at the levels ordinarily used in topical applications, whereas procaine and lignocaine in equivalent concentrations were inactive.

The relation between some of the local anaesthetics and the sulphonamides, each being derivatives of *p*-aminobenzoic acid, suggested initially a possible explanation of this action. However, of the four local anaesthetics used, though procaine and amethocaine are so linked in structure, only the latter has antimicrobial activity. Further work is obviously needed to elucidate this problem.

This is another instance of the oversight due to narrowness of outlook in our approach to the action of drugs, particularly in the case of the older established drugs which have not been submitted to extensive screening. Classical examples of this disregard were cited by Professor M. Westergaard* (Copenhagen) at the recent Symposium on antibiotic resistance, when he pointed out that a number of antibacterial agents and other drugs were mutagenic in lower organisms.

We are continuing our investigation of this particular problem, and will be publishing our results later; meanwhile there would appear to be similar opportunities of beachcombing among the older drugs, even by workers in small departments with limited resources, using traditional methods!

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April 10, 1957.

* At the Public Meeting at the Royal Society of Medicine, following the Ciba Symposium on "The Emergence of antibiotic resistance", March 29, 1957.