much to reduce the need for severe mechanical traumatization, while it is the fact that ether and, to a smaller degree, the other relaxing inhalational anaesthetics are potent agents in predisposing towards ileus from the second cause. Here again the use of curare by permitting the administration of reduced quantities of inhalational intestinal depressants should lessen the chances of development of post-operative ileus. The effect of curare itself on the gut was at first claimed in the U.S.A. to be parasympathomimetic. Workers in this country, possibly because of the greater purity of the product used, have been unable to confirm this; but as far as I know nobody has yet considered it to have the reverse action, and until some experimental evidence is produced that it does have any such adverse effect I see no reason why such a disadvantage should be imputed to it.—I am, etc.,

Preston, Lancs.

A. J. GRAY.

Curare or Magnesium Sulphate?

SIR,—The danger of curare lies in the fact that relaxation of the muscles may be too extensive; it also appears that the action may continue and increase after the operation. It is surprising, therefore, that use is not made of a drug which gives relaxation to the same extent; and though it has the same possible danger of respiratory failure this can be countered immediately; so also can its effect be annulled when the operation is over. I refer of course to injections of magnesium sulphate (0.5 to 1 ml. of 25% solution). Its action is countered immediately by calcium salts, though I am not sure of the appropriate dose. In practice, then, it should be absolutely safe.—I am, etc.,

Kingston-on-Thames.

W. F. COOPER.

Penicillin Pastilles

SIR,—Dr. G. I. C. Ingram (Jan. 4, p. 31) discusses the possible causes of stomatitis following the use of penicillin pastilles. In the final paragraph of his letter he suggests that the base in which the penicillin is included may be of importance in the causation of this stomatitis.

In the original work by Long and myself on the use of penicillin pastilles in oral inflammatory conditions we made use of penicillin in a simple gelatin base to which only "nipagin" had been added as a preservative. The results that we published both in this *Journal*¹ and in the *British Dental Journal*² were obtained with this type of pastille, and we found that when fresh they were most effective. In over 1,000 patients who were treated with these pastilles we occasionally saw some discoloration of the tongue, but the stomatitis which occurs so frequently with the modern commercial pastilles did not apparently occur. The disadvantage of these gelatin pastilles was, of course, that owing to the comparatively high water content they did not remain stable for long periods and had to be made up frequently in fresh batches. We regard the base, however, as of considerable importance.

In a further publication on the spread of drugs in the oral cavity³ we showed that with a gelatin base the spread backwards along the mucous membrane appeared to be very much more efficient than when a solid and non-glutinous base was employed. For this reason again, therefore, we advocated the use of gelatin as a base for the penicillin.

We have been most disappointed with the modern commercial lozenges. It is true that their keeping qualities are good, but in our experience they are not normally as effective as our original gelatin base type. We do not know the composition of the modern commercial types, but we feel that the frequent disappointment which arises from their failure to achieve successful results, and the very numerous cases of stomatitis following their use that we have seen, would appear to be due to the base employed. We would strongly advise those who have the requisite facilities whenever possible to get their own pastilles freshly made up in a pure gelatin base according to the method that we originally described.—I am, etc.,

London, W.1.

ALEXANDER MACGREGOR.

REFERENCES

- 1 MacGregor, A. B., and Long, D. A. (1944). *British Medical Journal*, 2, 686.
- 2 ——— (1945). *Brit. dent. J.*, 78, 33.
- 3 ——— (1945). *Lancet*, 2, 299.

Use of Penicillin Pastilles

SIR,—Having some experience of the manufacture of troch. penicillin, B.P., may I be permitted to reply to Dr. G. I. C. Ingram's letter (Jan. 4, p. 31). Penicillin is rapidly destroyed in aqueous solution, and for this reason the B.P. requires the lozenge to be prepared dry by compression.

Stomatitis after oral penicillin may be due either to the penicillin or the sucrose base. This sucrose base involves a number of technical problems if the resultant lozenge is to be smooth and is to dissolve easily in the mouth, but, having solved these problems and having used this method of preparation for a number of years and for a number of different lozenges, no instance of stomatitis from their use has come to our notice. In conclusion, may we have our terminology correct? Lozenges are prepared with a sugar base, pastilles with a gum or gelatin base.—I am, etc.,

Ashton-under-Lyne, Lancs.

T. H. MANNERS KERFOOT.

A Method of Giving Penicillin

SIR,—Herewith we wish to offer you a summary of the preliminary report to the Society of Clinical Studies, Havana, Cuba, made at its session of Nov. 14, 1946, referring to a new slow-absorption method for penicillin injections. The method consists in mixing a penicillin solution with whole blood, using as a solvent of the drug a solution of neutral sodium citrate (2%) and procaine (2.7%) in triple-distilled water. We (Machado Espinosa and Ramirez Corria) have used the following technique:

(1) We take 5 ml. of the solvent and add to it the quantity of penicillin we wish to give in one injection—for instance, 500,000 or 600,000 units—shaking until the drug has been dissolved. (2) We then introduce the solution into a 10-ml. syringe, preferably into a safety syringe (Yale-Luer-Lock). (3) With the syringe thus prepared we make a venous puncture in the patient who is to receive the injection, or in another person, and we extract a volume of blood equal to that of the solvent—i.e., 5 ml. (4) We shake the mixture in the syringe vigorously for not less than two minutes. If so desired the mixture of solvent, penicillin, and blood may also be introduced into an empty penicillin flask and be shaken there instead of in the syringe for two minutes.

(5) We now administer the total amount of the mixture in one deep intramuscular injection with an appropriate needle, preferably in the gluteus region. (6) The injections must be given at the rate of one injection every 24 hours or according to the criterion of the physician. (7) The dose our experience has shown us to be optimal and which we recommend is one of 500,000 to 600,000 units for an adult weighing about 70 kg. For lower weights doses of 100,000 units for every 10 kg. of body weight should be given.

We have been using crystalline penicillin, which in experiments with human volunteers, after injection in the above-mentioned amounts, has proved to be present in the blood at an exceptionally high concentration for adequate bacteriostasis as long as 48 hours after one injection.—I am, etc.,

Havana, Cuba.

M. MACHADO ESPINOSA.

Behcet's Syndrome

SIR,—I was interested in Dr. E. W. Prosser Thomas's case (Jan. 4, p. 14) because thrombosis of the inferior vena cava occurred. Furthermore, a section of the curious erythema-nodosum-like lesion seen in these cases showed the pathology to be that of an acute inflammation and thrombosis of a vein. In one of the cases I reported in 1934 thrombosis of the deep veins of the thigh occurred. I do not think the ulcers of the genitals are always small and discrete. Some of the vulval ulcers are large, and repeated attacks cause considerable loss of vulval tissue. These genital ulcers also occur in the vagina and on the cervix, and can be of some size in these situations. Fortunately in the vast majority of cases the lesions are confined to the mouth, and aphthous ulcers in this site are of course exceedingly common. The syndrome can, however, be very widespread and suggests multiple perivascular lesions; because of this the syndrome falls into many specialized branches of medicine and its study suffers thereby. Some cases get no eye changes, but I believe that many of the cases get acute ulcers of the stomach and that this accounts for the dyspepsia so often occurring with the mouth ulcers. If I