when serving as the military member of the Medical Advisory Division, S.E.A.C., was of the opinion that relatively light contact by mosquitoes with walls sprayed with a 5% solution of D.D.T. in kerosene resulted in a "biting inhibition" reaction which prevented the insect from feeding, either by an initial peripheral paralysis or by loss of appetite caused by the D.D.T. This effect has been noted recently with the stinging of wasps in Sweden and with *Stomoxys* in this country.

Concerning the lack of toxic vapour we have clear evidence that vapours emanating from screened surfaces painted with D.D.T. are lethal to flies in enclosed spaces, though whether directly or by readorption on to treated surrounds has not been determined.—We are, etc.,

F. G. SAREL WHITFIELD.

A. H. BAKER.

L. J. WHITE.

Avebury Laboratories, Goring-on-Thames, Oxon.

REFERENCE

1 *J. Hyg., Camb.*, 1940, **40**, 321.

Curare in Treatment of Spastic Conditions

SIR,—Drs. C. Astley Clarke and R. D. Hotston (Feb. 14, p. 289) report that curare in oil and wax had no advantages over the aqueous preparation in duration of effect or avoidance of side effects. With an air of finality they concluded that curare in oil is not the hoped-for advance in reducing spasticity.

With their findings one can have no quarrel. The implication that they have set up a critical comparable experiment with previous work is, however, fallacious. Their entire experiment was carried out with a suspension of *d*-tubocurarine in oil and wax supplied by Burroughs Wellcome and Co., whereas previous material was made up by the experimenter himself and later by E. R. Squibb and Sons. Suspensions in themselves vary with the techniques of the makers, and potency assays from manufacturer to manufacturer have varied greatly. This is common knowledge. There remains then a great weakness in the nature of your authors' conclusion from their experiments. A more acceptable and less sweeping conclusion would be that Burroughs Wellcome curare in oil and wax did not yield any more favourable results than aqueous curare.

I might add that spasticity is frequently a moiety of syndromes exhibiting weakness, ataxia, involuntary movement, and contracture. A critical evaluation, therefore, of its amelioration by any agent obviously requires careful study. Such study should include recording of range of motion changes, variations in stretch response as judged clinically and by myography, motion pictures of motor function, and whatever other data can be gleaned from the skills of the physiotherapist and neurologist. Static deformities must be exempted from the experimental group treated. Such data cannot be extracted from clinical observations of, "Did the injections enable a bed-ridden patient to walk or allow an ambulatory one to discard a stick?"—I am, etc.,

New York.

EDWARD B. SCHLESINGER.

Pancreatitis Due To Ascariasis

SIR.—I feel that this case is of sufficient interest to warrant a short description.

A boy of 18 months was admitted to hospital with a history of diarrhoea with blood and mucus, and a rectal prolapse, for three weeks. Examination showed a very thin baby with tense distended abdomen, liver slightly enlarged, a small readily reduced rectal prolapse, and temperature of 100° F. (37.8° C.). No other abnormality was found. The stools were very pale and bulky, offensive, and contained much free fat. They were unaffected by diet, and microscopy disclosed ascaris ova. The third day after admission a mass became palpable under the costal margin, just to the left of the midline, and santonin treatment produced two adult ascarides. Over the next eight days the mass slowly and steadily enlarged, with steady deterioration of the child's condition. The temperature swung irregularly between 101° and 97.6° F. (38.3° and 36.4° C.).

On the ninth day after admission consent was at last obtained from the parents, and the mass was explored under local anaesthetic. An abscess cavity adherent to the abdominal wall was opened and 6½ oz. (190 ml.) of greenish-yellow pus with a sweetish smell was evacuated. The patient's condition precluding further exploration, a small drain was inserted and the skin protected with sterile vaseline. The following day there was a profuse yellowish serous

discharge and the drain was removed. The fourth day after operation slight digestion of the wound edges was noted, and the following day, the fifth after operation and the fourteenth after admission, the patient died.

Post-mortem examination disclosed an abscess cavity occupying the whole of the head of the pancreas, extending some 3/4 in. (1.87 cm.) to the left of the midline, and containing the partially digested remains of an adult ascaris. A track extended upwards retroperitoneally, entered the liver, the whole of the left and quadrate lobes of which were destroyed, and discharged through an incision at the left costal margin. In the small intestine a further seven ascarides were discovered.

In the rather limited literature at my disposal the only references I can find to a similar occurrence are those of ascaris being a rare cause of acute pancreatitis in Craig and Faust. *Clinical Parasitology* (4th edition, 1945, p. 342), and Rose and Carless, *Manual of Surgery* (7th edition, p. 1314).

My thanks are due to the Acting Director of Medical Services, Tanganyika Territory, for permission to publish this account.

—I am, etc.,

Chunya, Tanganyika Territory.

N. A. DUNCAN.

Stasis of Chest Radiographs

SIR,—When a tuberculous patient moves from one district to another it is the practice of most tuberculosis officers to send the chest x-ray film to the colleague who is to take over the case, and these are often useful for comparison with subsequent films. The more enlightened voluntary hospitals also co-operate in this respect when they transfer patients to tuberculosis clinics. Sometimes, however, it is extremely difficult to obtain such films, not only from hospitals but even from Government departments.

It may be that this reluctance to part with x-ray films is due to the fear that they may be lost, but for practical purposes they may be just as much lost in the archives of some distant institution as if they were at the bottom of the Atlantic. True, some of these film-hoarders send clinical and radiological reports, but it is impossible to compare a film with a report. Surely when a patient moves from one clinic to another his chest x-ray film, often the one concrete piece of evidence in his medical history, should follow him like his more orthodox shadow.

The day draws near when the tuberculosis officer is to be enmeshed in the net of Governmental and voluntary hospital control, and he too may become a film-hoarder. Before the net is finally drawn, however, perhaps one last pleading wriggle may be permitted in this matter of the free circulation of chest x-ray films.—I am, etc.,

Worcester.

R. B. MAYFIELD.

Treatment of Undulant Fever

SIR,—The present unsatisfactory state of treatment of undulant fever is stressed in the annotation under this title in the *British Medical Journal* of Nov. 1, 1947 (p. 700), which prompts me to record my experience in the use of "suramin," ("germanin," "Bayer 205," or "antrypol").

Since it is rare for any one physician to have a sufficient number of cases under his care for a controlled experiment, and since the course of the disease is so unpredictable as to make conclusions drawn from a small number of cases hazardous, it is hoped that others will take steps to use this simple method of treatment and record their results, so as to confirm or refute its apparent efficacy.

So far as I am aware, suramin was first given for this purpose in 1930 by Dr. J. Leggate, of Salisbury, Southern Rhodesia, in consultation with me. The patient, an adult male European, had been ill for four months, and a blood culture revealed *Brucella abortus*, which his serum agglutinated to a titre of 1/50. The dosage was 1 g. suramin in 10 ml. of sterile distilled water intravenously once a week for four doses. The first dose caused some exacerbation of pyrexia and of symptoms, but after the second injection there was a gradual improvement, and convalescence began after the third dose.

Since that date the drug has been used by me for seven cases whose diagnosis had been definitely confirmed by positive blood culture. Satisfactory results were obtained in all of them.

The details of the procedure have varied somewhat, but the method now adopted is as follows:

As soon as a pyrexial period commences, 1 g. of suramin in 10 ml. of sterile distilled water is injected intravenously. This is usually followed by an exacerbation of symptoms and of pyrexia over the subsequent one to two days. A week later a similar injection is given. No exacerbation has been noted, and there is a tendency for the pyrexial curve to pass into a rapid lysis over the next two or three days.

In five of the patients a further pyrexial bout started and in these a further injection of 2 g. was given, with disappearance of all symptoms within 48 hours. In the other two cases two injections sufficed.

No treatment other than symptomatic was given, but in view of the well-known effect of suramin on the renal tubules the urine was examined daily for albumin and casts. On the above dosage neither was demonstrated on any occasion. The following is an illustrative case.

A European male aged 20 was admitted to hospital on Feb. 18, 1941, with a history of 6 days' headache, backache, shivering, and joint pains of insidious onset, the latter not relieved by adequate doses of aspirin; two days' drenching sweats, especially at night; sudden onset of acute pain, lasting for one day, in right knee, right big-toe joints, left ankle, and left elbow, all of which were red, swollen, and distended with fluid.

On admission, T. 102.2° F. (39° C.), P. 128, R. 26; in extreme pain; appearance as of an acute gonococcal case with complications but no urethral discharge and no gonococci in prostatic smear. There was a mild secondary anaemia, with W.B.C. 12,500 (polymorphs 68%, lymphocytes 30%, eosinophils 2%). Blood culture in broth and in blood-broth sterile. No agglutination to typhoid or *Brucella* groups on Feb. 19 and Feb. 24, 1941.

The treatment given was 1 g. sulphapyridine 4-hourly for 6 days, with an intramuscular injection of 1 g. soluble sulphapyridine twice daily on Feb. 19 and 20. This had no effect on the pyrexia, the acute joint pains, or the orchitis. By March 1 the temperature had returned to normal but the chart was "undulant" in character.

On March 4 a new pyrexial phase started and further blood cultures in blood-broth were taken. One specimen was incubated under normal conditions and one under 10% CO₂ tension; only the latter grew "an organism having the biochemical and agglutination reaction of *Br. melitensis*." On March 5 the first injection (1 g. suramin) was given intravenously. A mild exacerbation of pyrexia was noted but no increase in joint or testicular pain. On March 12 the second injection was given. There was no immediate effect, but from March 15 the temperature slowly subsided, to become normal on the 20th.

On March 23 the third pyrexial phase started and 2 g. of suramin was given on the 24th. During that night the testicular pain disappeared, but the joints were still very painful; temperature (8 p.m.) 102° F. (38.9° C.). The following day the temperature did not exceed 100° F. (37.8° C.) and was normal on the 26th. He was discharged from hospital on April 23 and was seen at intervals for nine months. No relapse occurred.

This case illustrates the following points: (a) the uncommon type with acute joint involvement; (b) the rare epididymo-orchitis (cf. Straus's reaction); (c) the failure of sulphapyridine; (d) the need for CO₂ tension for success in blood culture; (e) the method of treatment advocated.

Suramin is one of the symmetrical urea derivatives, and there is some laboratory evidence that it has an inhibitory action on the *Brucella* group.

A personal communication from Dr. M. Gelfand, of Salisbury, reports a further successful treatment by this method in a patient seen by him in consultation with Dr. Nuttall Smith, of Gatooma, who carried out the treatment.—I am, etc.,

S. Rhodesia Government Medical Service.

R. M. MORRIS.

Idiosyncrasy to *d*-Tubocurarine Chloride

SIR.—May I comment on the article by Drs. T. Cecil Gray and John Halton (April 24, p. 784) on this subject? I was surprised to read that 15 mg. of *d*-tubocurarine chloride had been used on their first case as an initial dose. Surely there are very few anaesthetists who have not realized that such a dose is excessive. Previously I have advocated an initial test dose of 5–10 mg., followed by minimal additions, owing to individual susceptibility (*British Medical Journal*, 1947, 1, 267). My further experiences have more than justified this belief.

The use of a pharyngeal airway when inflating the lungs must be condemned for two reasons—namely, (1) distension of the stomach, and (2) regurgitation of fluid from the oesophagus to the air passages. To obtain a clear airway, intubation in the majority of

cases is quite unnecessary with the glottis paralysed by *d*-tubocurarine chloride. However, it becomes essential when inflation is carried out, in order that a pack can be inserted in the pharynx or a cuff-tube in the trachea, either of which will avoid the above complications.

Blood-stained fluid was regurgitated and entered the air passages during the 195th minute, from which time the patient's condition appeared to deteriorate rapidly. The routine use of a cuff-tube or a pack before inflating the lungs would have avoided this catastrophe. However, it appears that in spite of this mishap Case 2 was again subjected to the danger of regurgitation into the air passages, not to mention the effect on the stomach of intermittent distension for 45 minutes.

I am in full agreement with Drs. Gray and Halton in re-emphasizing the importance of a trial dose, although I consider 1 mg. per stone sufficient as the initial dose for a child.—I am, etc.,

Swansea.

D. S. JONES.

Malignant Syphilis

SIR.—Dr. C. D. Alergant (April 17, p. 757) appears to be critical of the medical memorandum written by Dr. W. Fowler and myself, entitled "Malignant Syphilis" (March 6, p. 457), and we would like to make the following comments:

1. The diagnosis was not at any time in doubt. In addition to the evidence in favour of syphilis which we published, the patient was also seen by Dr. J. T. Ingram, consulting dermatologist to the Leeds General Infirmary, who was also satisfied that the patient had syphilis. It is our experience, and that of most authorities we have consulted, that it is extremely difficult to find *S. pallida* in rupee or other very late secondary syphilitic eruptions.

2. We are accustomed to using very large doses of penicillin, arsenicals, and other drugs in the treatment of syphilis, but did not do so in this case because we were convinced that the slightest therapeutic shock would have precipitated his death. It was not merely a question of combating virulent infection but of endeavouring to keep alive a patient who from the time we made our first examination was almost moribund from severe and long-continued toxæmia.

3. It has been our experience that it is very difficult to infect rabbits with material from human syphilis. To have made this experiment when the patient was first seen would have meant subjecting him to unnecessary manipulations, thereby increasing his weakness.

4. The question of therapeutically inactive penicillin can be excluded because many other patients suffering from syphilis were treated with the same batch of drug, which was in general use in the hospital, and no suspicion of lack of potency was aroused.

—I am, etc.,

Leeds.

ROBERT LEES.

The Fenestration Operation

SIR.—With reference to the recent communications in your *Journal* on the above subject I should like to suggest that the newly formed Otolaryngological Group Committee of the B.M.A. should appoint a special research subcommittee from the most suitable members of the Group to collect the data submitted to them on request from all surgeons who have performed these operations. A national record should be kept of their results and the findings of this subcommittee should be issued through the *British Medical Journal* at regular intervals up to a period of ten years, so that the medical profession and, through them, the public will be able to reach a true assessment of the value of this operation in this country, being guided by such a body of experts. A questionnaire could be drawn up and sent out to cover all data required, both pre- and post-operative. Already much data is available compiled on a scientific basis.

I understand that Dr. Julius Lempert, of New York, who is shortly to pay us a welcome visit to this country, claims to have operated on several thousand cases, but we want to know the British findings. It was in this country that early pioneer work was done by Jenkins, Fraser, and the late Dr. A. A. Gray, before Mr. Lempert improved the technique and so made the operation practicable. The report would stimulate further research concerning otosclerosis, the cause of which is so little understood at present.

Medical opinion is much divided in this country, even among our most eminent specialists, as to the final results of this operation. Time is an essential factor. The success of this operation and its recognition by the medical profession depends