from its cavity. The sounds tend to be lower in pitch than when produced in air.—I am, etc.,

London S.W.16.

M. J. BALL.

Tuberculosis in Developing Countries

SIR,—As one engaged in tuberculosis work in a developing country for nearly 20 years, I have great pleasure in joining Dr. N. Islam of Pakistan (15 February, p. 429) in congratulating Dr. Wallace Fox on his excellent paper on realistic chemotherapeutic policies for tuberculosis in developing countries (18 January, p. 135).

While admitting that treatment in hospitals under supervision is undoubtedly the best, I cannot agree with the views expressed by Drs. William J. Bell and P. P. Brown (22 February, p. 501) that control can be achieved only by a form of therapeutic detention for which hospital beds must be made available. We have about 5 million patients in the country, of whom about 2–3 million are infectious at any point of time, as against 35,000 beds we have for these patients. It is obviously impossible to provide hospital beds even for a fraction of these millions of patients not only now but also in the foreseeable future. Their suggestion "the need is for simple shelters built of local materials at village levels, where patients may rest or work under control" is a very sound one. But to provide accommodation for all these patients even in kucha buildings is impracticable and the only alternative is to organize mass treatment of the patients in their own homes and admit only such patients who cannot be treated at home owing to complications, drug resistance, or compelling socio-economic reasons. For this purpose expansion of hospital beds and provision of cheap isolation-homes are necessary. I am in full agreement with their views that "... if therefore uncontrolled out-patient chemotherapy becomes the order of the day, we can expect further deterioration of an already lamentable situation." But then, what has been recommended is not "uncontrolled out-patient treatment" but a well-organized domiciliary treatment service. Experience shows that it is quite practicable to have such organizations, and sputum conversion can be achieved in 80–90% of patients so treated,¹ provided adequate quantities of drugs are available.

With regard to drug resistance, the situation in Hyderabad is no better than that in Ghana. For instance, 15% of the freshly diagnosed, previously untreated patients had cultures resistant to isoniazid and 4% to streptomycin in 1959–60²; and this had increased to 21% and 8%, respectively, in 1963.³ 84% of 452 chronic patients undergoing treatment for about 6 years had cultures resistant to isoniazid—45% to streptomycin and 85% to one or both drugs.³ Failure on the part of the patients to take the drugs could undoubtedly be one of the causes for this high rate of drug resistance, but domiciliary chemotherapy in those years was mainly with isoniazid alone,³ and it is conceivable that drug resistance could have been substantially reduced if all three drugs had been given to the patients for at least a period.

There is just another point: 52% of the new patients seen at our centre during Janu-

ary to August 1963 had already had private treatment, though all came from very poor segments of the city population and 43% of them had initial cultures resistant to one or both drugs—40% to isoniazid and 24% to streptomycin. This suggests that there is need to have some sort of control over the manufacture of improper drug combinations and the sale of antituberculosis drugs to prevent their indiscriminate use and breeding of drug-resistant strains.—I am, etc.,

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Treatment of Thyrotoxicosis

SIR,—We read with great interest the article on thyrotoxicosis treated by surgery or ¹³¹I with special reference to the development of hypothyroidism, by Dr. M. Green and Professor G. M. Wilson (18 April, p. 1005). The comparison between the two methods clearly shows a much lower incidence of hypothyroidism after surgery, with hypoparathyroidism and recurrent-laryngeal-nerve damage on the debit side with the operative method of treatment. The following considerations are pertinent in our view, in making any comparison:

(1) The advantages of non-hospitalization are claimed for ¹³¹I. It should be remembered, however, that the management of thyroidectomy has changed considerably. The euthyroid patient can be admitted on the pre-operative day, and the post-operative period is generally four to five days.

(2) Isotope therapy can only be carried out in specialized and well-staffed units—mainly in teaching hospitals. Surgery, on the other hand, can be and is most effectively done in hospitals throughout the country.

(3) Isotope therapy is expensive in man-hours and equipment with a follow-up system, which adds to the cost. The possibility of hypothyroidism for years after the initial treatment necessitates protracted observation of the patient on this account.

(4) Our own experience of over 1,250 personal thyroidectomies for thyrotoxicosis suggests that hypothyroidism after surgical treatment is usually manifest in the first year. An annual follow-up of patients after this would suffice.

(5) Perhaps the best of all surgical results are in the so-called "thyrocardiacs." Many of these have nodular goitres, in whom it is generally agreed that ¹³¹I is difficult to gauge.

(6) The delay in achieving the euthyroid state with ¹³¹I therapy and the fact that 49% of patients in Green and Wilson's series required more than one dose almost condemns it on the basis of loss of man-hours and costing. The effect on the home in female patients should also not be ignored.

(7) One of us (W. M.) has done a tanned red-cell test in recent years on every case and has found great variation in the results repeated over the course of a few months. Clinical features, laboratory tests, and histology rarely corresponded and it was not possible to spot the thyrotoxic phase of Hashimoto's disease.

(8) While surgery has virtually no mortality, the morbidity from its complications is less by far than a 40% incidence of hypothyroidism over 10 years observed with ¹³¹I. The myxoedema rate after surgery in our series is 2–3%. Unilateral recurrent nerve injury is often temporary. It occurs in 2–3% and produces virtually no disability. Bilateral recurrent nerve injury has not occurred. The incidence of clinical hypoparathyroidism after operation is 2–3%. Recurrent thyrotoxicosis after operation has occurred in less than 1% of our series.

We are of the opinion that the treatment of the thyrotoxic patient by surgery has many advantages. In comparison with ¹³¹I it is more concise and predictable, requires less overall supervision, and in the end may well be less costly.—We are, etc.,

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W. MICHIE.

GUY BLACKBURN.

Hypertension with Monoamine Oxidase Inhibitors

SIR,—Your leader (7 March, p. 578) and the subsequent correspondence relating to this subject have prompted me to recall some early experience with iproniazid ("marsilid"). This drug was first used in this country at the London Hospital in 1952 for the treatment of tuberculosis.¹ The remarkably wide range of its side-effects was at once apparent. Daily records of these effects were made in 50 in-patients over a period of four months' treatment and the details of 18 different types of toxic reaction were subsequently published.² Your reference to "recent reports" (in 1963) of the hypertensive effects of iproniazid suggests that the earlier experience gained during the treatment of tuberculosis is not widely known. An account of hypertensive attacks due to iproniazid was first published ten years ago,³ when the following description was recorded:

"Four patients (8%) treated with Iproniazid experienced attacks of a most distressing nature. These usually occurred when they first lay down on their beds during the early part of the evening. The attack presented with palpitations and a sense of intense anxiety, followed by a rushing throbbing sensation in the neck, and culminating in a severe thumping occipital headache associated with flushing of the face and profuse sweats. Two patients vomited during the attack and a third complained of blurring of vision. In each case, the symptoms subsided within half to one hour. Examination revealed an extremely anxious and restless patient with a tachycardia and hypertension. Blood-pressure readings before, during and after the attack are available for three of those patients and in each case it was significantly raised during the attack." (Paradoxically, hypotension with postural syncope is a more common reaction to iproniazid and occurred in eight of the same series of 50 patients.)

The possible application of iproniazid in psychiatric problems was also recognized in 1952. A small group of patients in a mental hospital was treated, with improvement in their appetite, weight, and general condition.²

Unfortunately iproniazid proved too toxic to justify its use in tuberculosis, but it would be of some comfort to know that the experience recorded in these original trials was still

available to those who use the drug in psychiatric work to-day.—I am, etc.,

United Liverpool Hospitals. COLIN OGILVIE.

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- ² ——— Thesis for the Degree of M.D. University of Liverpool, 1954.
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Treatment of Vincent's Stomatitis with Metronidazole

SIR,—In certain respects it is unfortunate that the authors of this article (2 May, p. 1149) did not include a practising dentist, as recognition of the natural history of the disease and some knowledge of the progress of treatment approach over the past forty years would put the use of this new drug ("metronidazole") into proper perspective, and, by indicating that section of cases in which it might with profit be exhibited, make the whole more valuable.

Diagnosis essentially depends on a recognition of the punched-out tips of the interdental papillae, with occasional confluent areas in severe cases, and for practical purposes confirmation of diagnosis depends on the dramatic—no other word—improvement that follows mechanical cleaning of the teeth and associated tissues, coupled with oxygenation by oxidizing spray, peroxide application, or use of one of the many sodium-perborate preparations available to the dentist.

The infection is predominantly anaerobic and the use of swabs or smears, except to differentiate the occasional confusing case, plays no great part in diagnosis. In almost every case complete cure can be, and is, clearly achieved by these means, provided the need for some follow-up care is made absolutely clear to the patient. Wisdom-teeth pockets, overhanging fillings, etc., all provide reservoirs of infection, and these need diligent attention to avoid later recurrence. The danger thus lies, should some specific medicament be exhibited, in all these other factors' being neglected, with the virtual certainty of recurrence and relapse into a chronic state with further exacerbations from time to time.

An acute case, promptly treated on the lines described, will progress to complete cure with little or no permanent damage; and with the patient fully aware of the hazard of relapse, a good dental future is assured.

The patients treated in the experiment described may not have been of a type or social order in which this regime could have been inculcated, and it is clear this drug may have a certain, and indeed very valuable, place in epidemics in closed communities, such as was noted in World War I. But I would most strongly emphasize that the fullest weight be given to the views and practice of dental surgeons with long experience of this common condition, whose current methods yield a permanent cure rate that stands comparison with surgical and medical treatments in many other fields.

No one, I believe, would suggest that the fungicidal antibiotics have in any large part replaced local treatment in *Tinea pedis* infections, and the analogy here would seem to be very close.—I am, etc.,

London S.W.1.

ROBERT CUTLER.

Identification of Drugs

SIR,—Dr. A. J. Moon suggests (2 May, p. 1184) that as tablets, capsules, etc., are "usually dispensed from larger bottles," and the writing of a small label for the smaller container can be difficult and tedious, manufacturers should supply extra, small labels already printed.

But why dispense from large bottles? Why not prescribe that an original container, as issued by the manufacturer, is always to be dispensed? (A container holding enough tablets for individual treatment for one patient, or, in the case of prolonged treatment, a week's supply?) This is common practice in every civilized country in the world except Great Britain.

What is the ludicrously little extra expense involved compared with (1) the use of a container expressly chosen by the manufacturer as suitable for that drug; (2) the saving in time and humiliation to the pharmacist in having to spend so much of each day in childishly counting out tablets (and even sometimes scraping off labels to write others less legible); the rapid identification of (a) the chemical nature, (b) the brand, (c) the responsible maker's name and address, (d) the amount of active ingredient in each tablet, (e) the number of tablets in the container, (f) any statutory warnings on their use, (g) the maker's advice on any special storage requirements? Additionally, this procedure would ensure that the tablets had not been touched or otherwise subjected to possible contamination since they left the factory in which they were made.

We have advanced from the days when foodstuffs were dispensed from bulk containers. Are drugs not as important as food? Is it not more difficult to identify tablets than butter, jam, and pickles, and yet nowadays we insist that these last three commodities be supplied to us in properly labelled original containers.—I am, etc.,

NICHOLAS HERDMAN.

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Rheumatism Research

SIR,—Dr. W. S. C. Copeman's survey of rheumatism research (11 April, p. 963) makes good reading for someone who like myself took a lively part in the initial struggle leading to the advent of the International League against Rheumatism, trying to awake the interest of the medical profession for the systematic study and treatment of rheumatic ailments.

In the eyes of the younger medical generation of to-day the need for such an action would appear probably as an anachronism, as they could hardly imagine the complete absence of interest of the official medical circles of those days. Insufficient knowledge, especially of the chronic forms of the disease, total lack of proper appreciation of all its implications, both from the humanitarian and national economic point of view, were in my opinion mainly responsible for the grave neglect. Only if one takes the then prevailing situation into consideration can one fully appreciate the important task which the early antirheumatic crusade had to fulfil. There can be little doubt about it that the foundation of the International League against Rheumatism meant a turning point in the

whole campaign, as Copeman rightly points out. There is, however, a certain inaccuracy in his report regarding the "genesis" of the League, probably owing to the fact that at that time he had not yet joined the movement. The League was *not* "founded" by J. van Breemen and R. Fortescue Fox, as he asserts. In fact, during the annual meeting of the International Society for Medical Hydrology in Paris, 1925, the Council of this Society appointed an International Committee on Rheumatism,¹ consisting of Drs. J. van Breemen (Holland), R. Fortescue Fox (England), H. Jansen (Denmark), G. Kahlmeter (Sweden), F. Kornmann (Switzerland), L. Schmidt (Czechoslovakia), and Professor A. Strasser (Austria).

At the next annual meeting of the International Society for Medical Hydrology in Paris, 1927, a further completion of the membership of the committee took place by adding to the list Drs. Dietrich (Germany), I. Gunzburg (Belgium), and Henry Forestier (France). During the following annual meeting in 1928 in London and Oxford some further reorganization of the Committee took place and the name of the International Committee on Rheumatism was changed into the International League against Rheumatism.²

Needless to say this does not detract from the great intrinsic value of Dr. Copeman's survey, but I am sure you will agree that the historic truth and the memory of the valuable pioneer work done by the whole "avant-garde" must be preserved.—I am, etc.,

London W.1.

L. SCHMIDT.

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- ² *Year Book Ligue intern. c. Rheumat.*, 1950.

Group Practice

SIR,—I was interested in Dr. Margaret F. J. Lowenfeld's letter (25 April, p. 1118) headed group practice.

I gather that the official policy has been to encourage the growth of group practices, as they are thought to be more efficient than a single-handed practice. Also, from the Government's point of view they are cheaper. From the doctor's point of view there is more off-time, more pay, and security in case of illness. From the patients' point of view it does seem in some cases as if they can never know if they are going to see the doctor of their choice.

The single-handed practitioner is at the moment suffering from being discriminated against financially and in every other way. It appears that they assumed that the single-handed practitioner was likely to be inefficient, incompetent, and out of date. This need not be so any more than it is necessary for the patient not to be seen by the same doctor in a group practice.

I am sure that both types of practice can be equally efficient if all concerned realize that the patients' welfare must be our chief aim.—I am, etc.,

Evershot, Dorset.

B. S. C. GASTER.

Contamination of Dialysis Fluid

SIR,—Miss Elizabeth E. Kidd expresses concern of the bacterial contamination of the dialysing fluid of the artificial kidney (4 April,