The Oxford series suggests strongly that this excess is largely concentrated in the first two years of the disease, but this is not supported by the Christie data. Effusions arising from haematogenous spread should arise equally often on either side, so that the excess of ipsilateral effusions suggests another mode of spread. This other mode of spread is presumably permeation of the chest-wall, the tumour invading inwards towards the pleura rather than outwards towards the skin. Prompt and energetic treatment of the chest-wall after mastectomy, especially in stage II, may be worth while, even at the risk of a minor degree of lung fibrosis.—I am, etc.,

Radiotherapy Department,
Churchill Hospital,
Oxford. E. H. PORTER.

Hospital Infection with *Pseudomonas pyocyanea*

SIR,—The leading article on hospital infection with *Pseudomonas pyocyanea* (24 October, p. 1019) prompts me to call attention to an outbreak of meningitis caused by that micro-organism which occurred in one of the hospitals in our county several years ago.

At the request of the hospital administrator, an investigation was made of four cases of meningitis due to *Ps. aeruginosa* (the American equivalent of *Ps. pyocyanea*). Two of the patients died while the search for the cause was in progress.

The patients were of various ages (3½, 6, 7, and 35 years), resided in various parts of the county, and had no direct contact with one another neither before nor after admission to the hospital. They were admitted to three different wards for diagnosis and treatment for different illnesses (suspected poliomyelitis, suspected brain tumour, and acute glomerular nephritis). Each of the four patients had a diagnostic lumbar puncture performed on or soon after admission. The punctures were made by three different medical interns in the three wards. Normal spinal fluid was obtained in all four instances. On culture, two of the fluids were found to be sterile, the other two contained contaminants, *Ps. aeruginosa* and *C. diphtheroid*, respectively. As there was no evidence of cellular reaction at that time, these micro-organisms presumably were not present in the spinal meningeal space previous to the withdrawal of the spinal fluid.

Signs of meningitis appeared from 4 to 12 days following the initial lumbar punctures. On subsequent spinal taps, definite cellular response was evident in the spinal fluid (turbidity and marked increase in the number of leucocytes with a predominance of polymorphonuclear cells), and *Ps. aeruginosa* was isolated on culture of the spinal fluid of each of the four patients. The micro-organism was also isolated from the brain of the fatal cases on post-mortem examination.

In view of the history and distribution of the cases the only common-source factor appeared to be the central supply of the hospital where the lumbar puncture kits originated and were supposedly sterilized. Investigation revealed that the man who usually carried out the autoclaving had been on vacation during the period of the time the kits used on the four patients were autoclaved. During his absence an orderly unfamiliar and inexperienced with the procedures, and apparently indifferent to careful technique, operated the autoclaves.

An analysis of the records of 271 autoclaving procedures carried out by the substitute, and a study of the "ATI Steam-Clox" used with each pack, revealed that 43, or 16% of them, indicated under-timing, and 14% over-timing, of autoclaving, thus suggesting considerable laxity in this procedure. It was also found that only 15 out of 602 packs sterilized, or 2.5%, were under-timed for a comparable period by the regular staff. When these ratios are put to the chi-square

test, an answer of 54 is obtained, indicating that their difference is definitely significant and it is most improbable that chance alone could have been responsible for it.

Study of other admissions to the hospital disclosed the presence of an infected burn case from which *Ps. aeruginosa* had been cultured, and a ruptured appendix showing the same organism. Review of the hospital procedures suggested that rubber gloves might have served to disseminate infection. Gloves were used in the dressing of the infected wounds, as well as in the performance of the spinal punctures. The soiled gloves were washed in a Westinghouse washing machine with added disinfectant and detergent, dried in a mechanical dryer, blown up, inserted into envelopes, and then subsequently, presumably, inadequately autoclaved. Bacteriologic study of limited available unused material "sterilized" during the critical period, and a search for missed cases among hospital patients who received lumbar punctures at that time, proved unrevealing.

Control measures were recommended to the hospital administrator and no additional case has occurred.

—I am, etc.,

I. JACKSON TARTAKOW.
Nassau County Dept. of Health,
Mineola, New York,
U.S.A.

Diagnosis of Xanthelasma

SIR,—In their interesting paper describing the effects of the administration of Atromid to a small group of patients with high blood-cholesterol levels, xanthoma tuberosum, and xanthelasma palpebrarum, Dr. B. Mason and Professor C. Bruce Perry (9 January, p. 102) remark the absence of any effect on the lesions of two patients with xanthelasma palpebrarum in contrast with the disappearance of the lesions in four patients with xanthoma tuberosum.

Their findings might be illuminated and perhaps explained by surgical biopsy of the lid lesions that they accept as xanthelasma on presumably clinical grounds. I suspect they will discover, as I have done on several occasions, that these lesions are in fact simple miniature epidermoid cysts composed of keratin squames and not essentially lipid deposits at all.

Lentil-like yellowish nodules in the skin of the eyelids are often seen in adults of both sexes, but especially in the middle-aged and elderly—that is, the same patients in whom vascular disease and elevated blood cholesterol are not uncommon—but I think it is uncritical to call all such lesions xanthelasma palpebrarum without producing histological or chemical proof of the assumption.—I am, etc.,

London S.E.10. PETER J. E. WILSON.

Drugs for Algeria

SIR,—I have been interested in Algeria for many years now and am helping them all I can in their work of reconstruction. About a year ago I appealed for drugs to be supplied by way of doctors' samples. I have now heard again that they require vitamins and antihistamines. Dr. Marie-Jose Renard, of Tiza Rached (Grande Kabylie), and of the European Committee for Non-Governmental Aid has written me to make the appeal.

I would be very glad if you could appeal through your columns for such drugs. If

they are left with me I will arrange for them to be sent on.—I am, etc.,

6a Belsize Park Gardens,
London N.W.3. JOHN BAIRD.

Estimation of Haemoglobin

SIR,—In the article on haemoglobinometry in the series "To-day's Drugs" (2 January, p. 40) the comment is made that the M.R.C. grey-wedge is the "best available instrument for the enthusiastic practitioner." As one who has used this instrument for many years in general practice I am in complete agreement.

The price of the M.R.C. grey-wedge is, nevertheless, high. Without influencing its accuracy an attempt has been made—in collaboration with the manufacturers of the standard apparatus—to produce a simplified instrument at about half the price. This has been done by reducing the range. The M.R.C. photometer estimates haemoglobin from 4 g./100 ml. to 22 g./100 ml. In general practice a patient with a severe degree of anaemia or polycythaemia is best investigated by a competent haematologist. The modified grey-wedge photometer is only calibrated from 6 g./100 ml. to 16 g./100 ml. Thus by using a smaller grey-wedge a considerable reduction in costs has been achieved and accurate haemoglobinometry has been brought into the scope of even a single-handed general practitioner.

To make the instrument even more versatile it has been calibrated for use with either oxyhaemoglobin or cyanmethaemoglobin. There are two scales, one of which can be covered at a time. (A simple adjustment with two screws makes the selection easy.)

Field trials so far undertaken have shown the instrument to be satisfactory in use and accurate. The trials are not yet complete. Production should commence within a year. It will be manufactured by Messrs. Keeler, of Wigmore Street, London, who also make the M.R.C. grey-wedge photometer. They are calling the simplified photometer the "Haemoscope."—I am, etc.,

London W.12.

STUART CARNE.

"Neo-Listerism"

SIR,—In the article on antiseptics (12 December, p. 1513) we are reminded that Lister was successful in reducing the number of wound infections by prophylactic application of an antiseptic (carbolic acid) to wounds and that antiseptics are still valuable in surgery for skin disinfection and to assist in the control of cross-infection. Implied in this statement is the idea that antiseptics are no longer suitable for application to wounds.

For ten years we have had at our disposal a non-toxic antiseptic suitable for direct application to tissues and not significantly inhibited by blood, serum, or pus. I refer, of course, to chlorhexidine (Hibitane). Yet this new antiseptic has received no universal recognition of its efficacy in sterilizing open wounds.

In 1965 we will celebrate the centenary of the first successful case treated antiseptically by Lister. Yet, ironically enough, a hundred years later in spite of having vastly superior antiseptics we have almost totally rejected Listerian principles. Lister's attitude can be

summed up in his own words, "Asepsis in this imperfect world is not to be trusted, human carelessness and fallibility are common; it is safer to have an antiseptic." These words are as true to-day as they were a hundred years ago. Organisms will always be with us and no amount of asepsis will eliminate them entirely. They float in the air, they lurk beneath the gloves of the surgeon, they drop down from a stray wisp of hair, and they escape through the sides of the mask. Every wound is contaminated and therefore potentially infected.

Many people confuse the use of antibiotics with that of antiseptics. Spraying antibiotics into a wound does not eliminate all the organisms and creates problems of resistance which render the proper use of antibiotics ineffective.

The following regimen is suggested for routine use in all traumatic and operation wounds; brain and meninges excepted.

(1) Wounds are thoroughly washed out with a 1/2,000 solution of chlorhexidine before closure.

(2) All instruments which have been handled are immersed in the same solution.

(3) All suture materials and implants are steeped in the same solution before insertion into the tissues.

(4) Hand-bowls for rinsing contain 1/10,000 chlorhexidine.

(5) Gauze dressings are wrung out in 1/2,000 chlorhexidine before application to the wound. All changes of dressings are similarly treated.

I feel sure that if the above regimen were applied by surgical units experiencing trouble from sepsis in clean wounds there would be a dramatic vindication of Listerism and perhaps "antiseptic" would cease to be a dirty word when applied to surgery.—I am, etc.,

Bridgend General Hospital, A. W. FOWLER.
Bridgend, Glamorgan.

Tego Compounds

SIR,—In your discussion of antiseptics (12 December, p. 1513) under the heading of Tego compounds you mention that "a disadvantage of the Tego compounds is that they are less active against *Ps. pyocyanea* than most other vegetative organisms."

Tego MHG, which is the compound recommended for hospital disinfection, kills *Ps. pyocyanea* in less than five minutes at 22° C. and in the recommended concentration of 1%.¹ This killing time differs from other vegetative organisms by two or three minutes only. This can hardly be described as a disadvantage. On the contrary, we know of no other generally used disinfectant product which can kill *Ps. pyocyanea* as rapidly as Tego under practical conditions of use (for example, in the presence of blood, pus, serum, or other organic matter). A "disadvantage" of the Tego compounds is that, like the quaternary ammonium compounds, they are inactivated by soap or other anionic compounds, and where such compounds are used it is necessary to rinse before the application of Tego.—I am, etc.,

C. HARRIS.

Tego Division,
Hough, Haseason & Co., Ltd.,
Manchester 19.

REFERENCE

- ¹ Perkins, F. T., and Short, D. J., *J. animal technics Ass.*, 1958, 8, No. 1.

Tuberculous Immigrants

SIR,—I was glad to see the matter of tuberculous immigrants brought forward by Dr. H. J. Robinson (9 January, p. 127); his suggestions are good and their adoption, in my view, imperative. The general public, I feel, is quite unaware of the complete lack of examination of any immigrant, no matter what disease he may harbour.

We are given to understand by Parliament that suspected cases of tuberculous disease will be kept under observation by the medical officer of health of the district of settlement. Does this mean anything at all? In the *B.M.J.* of 15 June 1957 (p. 1417) I wrote a letter on this subject. In reply to a question in Parliament (*B.M.J.*, 6 April 1957, p. 827) with regard to scrutiny of tuberculous immigrants or other infectious persons the Parliamentary Secretary stated that "where tuberculosis was suspected in any person . . . coming to this country, the port medical officer notified the medical officer of health of the district to which the person was proceeding, so that he might be brought under observation." This statement, now as then, is entirely misleading. The port medical officer sees none of them—so how can he suspect any? The ship surgeon, and through him the port medical officer, are the last people an immigrant who knows his condition will wish to see, and there is no provision that he should see anyone. In nearly 11 years as ship surgeon in large passenger ships trading into one of our busiest reception ports I have reported—and the port medical officer has seen, through this report—only one case, and that one called me in only because she had had a large haemoptysis and was in fear for her life. She knew of her condition and was coming, no doubt like many others, for free treatment. Those who do not know of an infection are, of course, of even greater danger.

The position now appears to be the same as then. This has resulted in such spreads of disease as reported by Dr. D. K. Stevenson in Bradford in the *B.M.J.* of 19 May 1962 (p. 1382), and one can be sure in many other places. That this situation should be allowed to persist in face of the aims of our public health and world health organizations is a blot on civilization and common sense. The immense cost of this continuing battle with ever renewed attacks might well, with advantage, as Dr. Robinson suspects, be set against the cost and effort of x-ray examination. It would save also a deal of suffering and many man-hours of industrial potential.

In some countries intending immigrants have to furnish from the country of origin a medical report and chest x-ray before they will be considered.—I am, etc.,

New Milton, Hants.

JNO. CRAWFORD.

** A leading article on the medical examination of immigrants appears at p. 208 of this week's issue.—Ed., *B.M.J.*

Plight of Rural Practice

SIR,—We have been members of the British Medical Association for many years, since qualification, and, though at times recently our feelings have run high, we have

been impressed with the fair way you have published the letters of many aggrieved colleagues.

We conduct a large, entirely rural practice. Our cut in mileage under the rural practices scheme will be, according to our own estimation and verified by our executive council, well over £400 a year, by far the largest in the county. This in spite of the fact that our lists will have increased by over 200, and our confinements last year were 126 and steadily rising.

Domiciliary midwifery services in this area have completely broken down for some time. There are no midwives—only two married general nurses, one part-time. We conduct our confinements, except when there are obstetric contraindications, in the nearest local general-practitioner unit, eight miles away. For this extra sixteen miles' return journey, carried out several times a week day and night, we receive no mileage whatsoever. It is no fault of ours the authorities can produce no midwives. This extra expense has to be borne by us without question or redress, on top of an aggregate mileage of more than 40,000 miles a year.

Further expense is entailed, because of extremely poor bus communications, in maintaining eleven country-surgery sessions a week in outlying villages, in addition to twelve surgeries at our main residences. This involves rent, rates, upkeep, travel, and delivery of medicines soon after each surgery terminates. This has always involved us in keeping two full-time secretary-dispensers.

Our children have all had to go away to school. We have not been in the fortunate situation of neighbouring colleagues in having excellent day schools and a university close to hand. Our telephone expenses are heavier, as we have only automatic exchanges and must employ "sitters-in" when our own families are unable to cope. Local medical committee meetings are still held on Tuesday afternoons, in spite of protest—an impossible time for busy country doctors to consider nomination.

We should not therefore have been surprised, when we voiced a protest at a recent B.M.A. general meeting about the cut in rural mileage, to receive the amazing statement from a city chairman that country doctors had been paid too much in the past for their work, which clearly showed a complete lack of grasp or interest in the affairs of the rural practitioner, or any desire to ascertain the proper facts. This extraordinary state of affairs has been allowed to continue too long. It is so easy to blame the rural practitioners for lack of interest when meetings are held in working hours, only possible for those with leisure. It is not an attitude to make for unity in our ranks at this time, or prevent our children (also in the profession) considering emigration.—We are, etc.,

M. B. D. DIXEY.

E. G. MCPHERSON.

J. M. DIXEY.

Soham, Cambs.

Fraser Committee Daily Work Sheet

SIR,—This form is dangerously inadequate and should not be filled in by general practitioners. The reasons are as follows:

(1) It would underestimate the work of every general practitioner.