Correspondence

Poliomyelitis

SIR,—In your leading article on poliomyelitis (July 26, p. 135) you do not mention swimming and diving in sewage-polluted rivers as a cause of infection. When will the people of this country understand that if they will turn sewage into our rivers and then bathe in them they must expect trouble. Again and again we see cases of infantile paralysis appearing in farms and villages on the banks of polluted rivers. The virus is present in faeces and then passes through sewage into rivers. Young people bathe in sewage-polluted rivers, and we wonder why they get infantile paralysis.—I am, etc.,

New Barnet, Herts.

J. E. ELAM.

SIR,—I would like to draw public attention to the danger of labelling bins "Pig Food." Take off the lid the day before the refuse is collected and you find bones, meat, fat, paper, rotten cabbage mixed up with bits of carpet, sardine tins, newspaper, and a living mass (often several inches deep) of maggots, the last item keeping us well supplied with flies. I suggest that the spread of infantile paralysis may be thus caused, an outbreak of the disease in a hill station in India being coincident with stable manure being thrown on the open ground instead of being conveyed to the destructor.—I am, etc.,

London.

K. O. VAUGHAN.

SIR,—The official memorandum dealing with precautions against acute poliomyelitis (*Journal*, July 26, p. 141) is not very helpful and in places a little ludicrous. For instance, in a disease which is as likely as not air-borne and principally attacks children under five, we read that gargles and nasal sprays have been disappointing.

Would not it have been better to say that the nostrils of the immature should be periodically swabbed out, and that the same can be effectively done by the adult, when washing the face, with the wet fingers, thus avoiding the paraphernalia of a nasal douche, which will certainly not be persisted in more than a few times?—I am, etc.,

London, S.W.5.

PERCY TATCHELL.

Oxygen Poisoning in Man

SIR,—May I venture to doubt Sir Leonard Hill's theory (June 21, p. 900) that oxygen convulsions and nitrogen and argon narcosis are both due to carbon dioxide accumulation? Subjectively and objectively the symptoms of the two conditions are utterly different. I have never experienced or observed confusion or euphoria before an oxygen convulsion. Confusion is universal and euphoria common in nitrogen narcosis. Carbon dioxide enhances both oxygen and nitrogen poisoning. The obvious explanation of this fact is that it causes cerebral vasodilatation, and thus facilitates the absorption of other gases by the brain. I hope shortly to publish data which may help to clear this question up.

With regard to the questions of priority raised in his letter, the Official Secrets Act makes a full discussion illegal. No one can doubt the fundamental part played by Sir Robert Davis, but so long as publication is restricted it is impossible to assign credit objectively, and controversy can lead nowhere.—I am, etc.,

University College, London, W.C.1.

J. B. S. HALDANE.

Tuberculosis in a D.P. Camp in Austria

SIR,—With reference to Dr. F. J. W. Miller's paper on tuberculosis among small children in Newcastle (July 19, p. 91), I wonder if some observations on children in an Unrra-operated D.P. camp in Austria would be of interest. This camp had a shifting mixed Polish and Ukrainian population varying from 1,600 to 2,100. The consequent frequent changes of barracks made tracing of contacts extremely difficult. Indeed, usually no contact with known adult cases could be discovered. No ill child (with the exception of one, whose father's illness

was discovered only through the child) had an infected parent, and none of our infected parents had sick children, but two open cases had positively reacting children with very old calcifications.

I spent one year in this camp. During this time 9 open and 7 closed adult cases were removed to a sanatorium after great moral struggles or left the camp, and 3 closed cases remained in the camp. Shortly after my arrival a number of children over 5 years old were sent to a sanatorium in Italy and did not return, and 5 infected children in a family of 6 remained. These are not included in the following remarks. In this year 10 children under 3 and 3 under 5 years were found to have active primary tuberculosis (I exclude figures for older children), 3 as a result of Evans patch-testing, which was carried out last December in all camps as a preliminary to mass radiography, unfortunately delayed by various difficulties until June.

240 children under 10 were examined, and suspicious cases further examined by the Pirquet test. 46 were positive and were x-rayed immediately and, if not active, again in three months. One child aged 18 months was negative in December but in April was found to have a large infiltration and to react positively. Of the 46, 2 or 3 showed nothing abnormal, 22 showed active or subsiding disease, and the rest one or more calcifications. About 12% of adults were x-rayed at some time, and about 50% of these showed calcifications of unknown aetiology.

The 13 young children mostly appeared very ill at first, with pallor, sweating, loss of weight, and cough. About half had marked physical signs in the lungs. After a few months all except the baby referred to above, who unfortunately developed whooping-cough, were steadily improving in every way. None of these children had any special treatment other than extra milk and butter, as the mothers were very reluctant to allow them to go into hospital and did not enforce rest or early bed or distasteful medicines—or indeed anything the children didn't want. The camp was appallingly crowded, the rooms usually stuffy and either too hot or too cold, but at least we usually managed to give every tuberculous family a room to themselves. Iron and vitamin preparations were taken rather irregularly owing to the mothers' standard of education and difficulty at first in getting iron. Cod-liver oil was not available.

Regular supervision and examination was also very difficult to enforce and indeed only brought about by withholding milk until the mother brought the child, when one would remark to the mother, "You evidently consider baby quite healthy, so why should he have extra milk?"

I was surprised at the good results in spite of this laissez-faire attitude. In fact, tuberculosis at all ages was taken rather lightly. The elder patients demanded dog fat to eat and rub on their chests as a sovereign remedy (there was a high mortality among dogs at one time, I believe), and sanatorium treatment was regarded always with great disfavour owing to the separation from family and the discipline required. So long as they got some extra food they didn't see why they should bother or be bothered.

I would be very interested to see pre-war tuberculosis death figures for Poland, as such relatively rapid recovery among children so ill appears unusual to me. Was their degree of illness due entirely to their previous poor nourishment, and their recovery when nutrition was improved a sign of their natural high immunity? All our new cases with the exception of the baby were discovered in the second half of 1946, when food for the whole camp was poor, while from November, 1946, the children's diet was supplemented by International Red Cross parcels.

Similar conditions were found in other camps. Full reports will no doubt be published by the Unrra tuberculosis specialist.—I am, etc.,

Northwood, Middlesex.

AGNES C. CLARK,
Late Medical Officer, U.N.R.R.A.

Meningitis after Spinal Anaesthesia

SIR,—Dr. C. A. Vuylsteke (*B.M.J.*, Feb. 1, p. 179) reported four cases of pseudomonas meningitis following spinal anaesthesia. Three of these, caused by the melanogenes variety of *Ps. pyocyanea*, were fatal; one, caused by true *Ps. pyocyanea*, recovered after sulphathiazole treatment. Patients had been operated upon by three different surgeons at two surgical clinics whose nursing personnel belonged to the same school. During this period they had five other cases of meningitis. Careful examination of the cerebrospinal fluid did not reveal the slightest trace of any pathogenic agent. Four patients were cured, one died. Every experienced surgeon will agree that the occurrence of pyocyanea infections in surgical wards means very defective aseptic technique. The author holds the lack of sterilization of the brushes used by the surgeons to scrub their hands responsible

for the meningeal contamination. Since then the brushes have always been sterilized and no further cases of meningitis have been reported.

True infection of the cerebrospinal fluid following spinal anaesthesia may very rarely be attributed to pyohaemia or to ulcerations of the skin; the contamination through anaesthetic solution ampoules also seemed to be very rare, since the phials are not immersed in spirit but dry-stocked and cautiously opened. In my opinion the causes of the cerebrospinal fluid infection in the recorded cases are quite evident. I believe that the sources of contamination are the hands of the surgeons and the instruments.

Prevention means clean hands or gloves and sterilized instruments. Bacteriological sterility of infected syringes and needles can only be secured through two techniques: either warm-air oven (Poupinel) one hour at 150° C. (302° F.), or steam ten minutes at 120° C. (248° F.). Syringes of Record type do not resist these sterilization techniques, and all-glass syringes ("pyrex") are especially useful. We used spinal anaesthesia for 35 years in more than 50,000 cases, and so far no fatal meningitis has been observed in our services. In conclusion, meningitis following spinal anaesthesia can be easily avoided by aseptic measures. Boiling of infected syringes is not sufficient to warrant sterility. Syringes of Record type may be the cause of the C.S.F. contamination.—I am, etc.,

Bruges.

J. SEBRECHTS,
Professor of Surgery.

Arsenical Dermatitis Treated with BAL

SIR,—I was surprised to read the article by Dr. J. Lawrence Reeve (July 26, p. 132) on the successful treatment of two cases of arsenical dermatitis with BAL. To the best of my knowledge this drug is still on the secret list. More surprising, however, than this premature disclosure is the author's conclusion. After describing the progress of two cases, Dr. Reeve concludes that "BAL may well be the answer to the syphilologist's prayer, for, instead of cases of arsenical dermatitis being in hospital for weeks at a time, they may now be treated as out-patients."

I venture to predict that those venereologists who, through the co-operation of the Medical Research Council, have been able to obtain small supplies of this drug over the past two years or more, and whose experience in its use for cases of arsenical dermatitis extends to many more than two cases, will not subscribe to the author's view as expressed in his conclusion. On the contrary, I feel sure they will continue to regard arsenical dermatitis as a very serious complication to treatment and will, in all but the mildest cases, endeavour to admit their patients to hospital. At the same time they will give thanks to the discoverers of BAL for having provided them at last with a drug whose efficacy cannot be doubted in the treatment of this serious condition and which needs no extravagant or premature claims for its recommendation.—I am, etc.,

Truro, Cornwall.

A. E. TINKLER.

Primary Treatment of Fingertip Injuries by Skin Grafting

SIR,—I have read with great interest Dr. S. J. Krister's note (July 26, p. 152) on this subject. It is most regrettable that though this method is now part of standard theoretical teaching and is mentioned in most textbooks it is still not used often enough, with consequent daily loss of useful finger-lengths. For the past three years I have routinely used primary plastic procedures in all recent injuries involving loss of skin including well over a hundred fingertips. May I therefore be permitted to make a few comments on Mr. Krister's admirable description?

In industrial accidents—the most common source of finger injuries—clean-edged wounds as are usually caused by slicing machines are relatively uncommon. Crushing with or without avulsion or blunt tearing are the types of trauma most frequently encountered. These make special preparation of a graft bed necessary, but grafting is called for just as much as in the simpler and therefore easier injuries.

Though apparently aware of its importance Mr. Krister has not stressed sufficiently the necessity of excising all devitalized or grossly contaminated tissue. Failure to do so will lead inevitably to sepsis and constitutes the most common source of graft failure. Satisfactory excision of an irregular wound is best carried out in a blood-

less field, and for this purpose I found most efficient a rubber band tourniquet applied near the base of the finger after a ring block. The tourniquet also guarantees absolute haemostasis until the application of the compression dressing, thus avoiding the graft's being lifted up by a small collection of blood or the necessity of applying a ligature beneath the graft—two other causes of failure.

I have found full-thickness grafts quite satisfactory but prefer thick pinch grafts—i.e., those including the full thickness of the dermis in their centre. Using these, perforating the graft is unnecessary, but when the diameter of the defect exceeds 1/2 in. (1.25 cm.) I use two or three grafts applied side by side. With this modification suturing of the graft is usually unnecessary provided a compression dressing is used. As the grafts are harder the percentage of success is nearer 100% than 80%; and the final appearance is equally good.

Except in the presence of a fracture of the remaining bone 14 days is too long a period to keep on the primary dressing. Owing to the necessary thickness of the latter the graft becomes softened and soggy. Change of the dressing is therefore indicated on the eighth or ninth day, even sooner in children. At this time the graft will be found to have already firmly taken and usually requires protective covering for only one further week, thus cutting down the patient's period of incapacity.—I am, etc.,

London, W.1.

P. P. H. SCHMIDT.

Surgical Aspects of Amoebiasis

SIR,—It is unfortunate that Mr. P. Theron's article (July 26, p. 123) on the "Surgical Aspects of Amoebiasis" gives further publicity to the technique of air replacement of liver abscess. This practice, although productive of interesting x-ray pictures, cannot be of benefit to the patient, and the presence of air in the cavity may delay healing. Should repeated aspiration be considered necessary the clinical state of the patient is a reliable guide to its frequency.

If penicillin and sulphadiazine are administered to patients who fail to respond to emetine alone, aspiration, with its attendant hazards, can usually be avoided. Even when the inflammatory process has reached the thoracic or abdominal wall the response to this combined therapy is frequently satisfactory, and with earlier diagnosis aspiration and drainage should rarely prove necessary.—I am, etc.,

Leeds.

R. N. TATTERSALL.

Calculation of the Colour Index

SIR,—Dr. Arthur Jordan and Dr. Herbert Levy (July 26, p. 149) would have been wise to have studied my letter more carefully before proceeding to criticize the contents. My intention was to protest against the rather ignorant viewpoint, unfortunately so prevalent at the moment, that the colour index has had its day and should be replaced by the blunderbuss use of the haematocrit—a procedure which to most people with any experience of large-scale haematology is obviously impracticable even if it were desirable. The haematocrit has its uses, but it should be reserved for cases where a primary screening by experts carrying out routine blood counts, together with a consideration of clinical findings, has shown it to be indicated. Furthermore, I was fully aware of the various investigations of human error in calculating haemoglobin, and the figures quoted by Dr. Jordan merely confirm that 80% of trained observers are likely to produce normal values of colour index within the range of 0.90 to 1.05. The personal errors of the remaining 20% would be uncovered by the ancillary investigations which were maintained. The errors of the cell count are not relevant to this discussion as they affect the mean cell volume and colour index equally. A further point is that the haematocrit is subject to mixing errors and variations of centrifuge speed—a serious disability in these days of current cuts.

I would point out to Dr. Levy that a mean cell volume determination is not likely to give much more help in the diagnosis of pernicious anaemia than an accurately calculated colour index. In any case no pathologist of repute would be prepared to concur in a diagnosis of this disease without first examining the bone marrow and gastric contents. Inaccurate diagnosis of pernicious anaemia is unfortunately not uncommon and was referred to in a previous communication (Nov. 24,