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 pychaemia 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,