must be inhaled in order to produce asbestosis?" Although we have no answer directly applicable to man, we do have some indirect evidence that fairly heavy concentrations of asbestos dust are required to produce alveolar fibrosis in animals.

Thus, in one experimental investigation¹ exposure to inadequate concentrations of asbestos dust has been held responsible for the dictum that short-fibred asbestos dust was non-pathogenic,⁴⁻⁶ a concept now believed erroneous.⁴⁻⁶ We have found 10 mg. of short-fibred chrysotile dust injected intratracheally in rats to produce only transient focal fibrosis⁴ and exposure of guinea-pigs and rats to extremely fine chrysotile dust (19 mg./c.mm.) for three and a half months resulted in barely perceptible fibrosis in some animals and none in others as long as 10 months later.⁷

The implications in Professor Thomson's communications point up the need for more direct data than are now available on the minimal amount of asbestos dust required for the production of recognizable asbestotic alveolar fibrosis. Our present information, although indirect, suggests that asbestos dust is less pathogenic than is quartz dust on a weight for weight basis.—I am, etc.,

PAUL GROSS.

Industrial Hygiene Foundation of
America, Inc.,
Pittsburgh, Pa., U.S.A.

REFERENCES

- 1 Thomson, J. G., Kaschula, R. O. C., and MacDonald, R. R., *S. Afr. med. J.*, 1963, 37, 77.
- 2 Anderson, A. E., and Foraker, A. G., *Arch. Path.*, 1960, 70, 79.
- 3 Vorwald, A. J., Durkan, T. M., and Pratt, P. C., *Arch. industr. Hyg.*, 1951, 3, 1.
- 4 Holt, P. F., Mills, J., and Young, D. K., in *Fortschritte der Staublungenforschung*, 1963, p. 201. (Bericht über die IV Internationale Staublungentagung von 3-5 April 1962 in Münster (Westfalen).) Edited by H. Replöh and W. Klosterkötter, Niederheinische Druckerei, Dinslaken.
- 5 King, E. J., Clegg, J. W., and Rae, V. M., *Thorax*, 1946, 1, 188.
- 6 Gross, P., Westrick, M. L., and McNerney, J. M., *Amer. J. Path.*, 1955, 31, 579.
- 7 ——— unpublished data.

Transient Focal Cerebral Ischaemia

SIR,—May we reply to the comments of Professor D. Denny-Brown (October 12, p. 930)?

He states that presyncopal symptoms commonly accompany a local cerebral haemodynamic crisis occurring as a result of blood loss, cardiac arrhythmia, or shock. This is not to be denied. But transient ischaemic attacks (T.I.A.) occurring in this setting constitute only about 5% of cases. The arresting feature about the overwhelming majority of T.I.A.s is that they occur without evidence of disturbance in other parts of the central nervous system or in other systems. He further states that the symptoms described may not indicate cerebral ischaemia but may be due to carotid sinus stimulation; but surely the ultimate effect of this stimulation is to produce cerebral ischaemia? The fact is that if the common type of T.I.A. was due to hypo-

tension one would expect to be able to reproduce it before the onset of signs of general ischaemia.

The transient disorders of extreme hypertension are not irrelevant to the task of alerting clinicians, for the case quoted is not the only example we have met of hypotensive therapy being stopped on the assumption that it was causing hypotensive episodes, when in fact the crises were hypertensive in nature.

We did not, of course, produce generalized cerebral ischaemia at pressures of 95, 90, and 70–80 mm. of mercury. These pressures were taken from the digital arteries, as stated in the paper; the cerebral blood-pressure is much lower than this. The question as to whether hypotension is well tolerated in hypertensive states can only be settled by clinical trial. We have other evidence on this point which we hope will be published shortly.—We are, etc.,

JOHN MARSHALL.
R. E. KENDELL.

Institute of Neurology,
The National Hospital,
London W.C.1.

Bacteriological Examination of Urine

SIR,—The problem¹⁻³ is essentially one of obtaining an approximate quantitative measure of the numbers and types of bacteria in urine, with particular reference to counts over 10^6 /ml. I suggest that the drop method^{4,5} using a platinum-glass pipette^{6,7} might be a very convenient method for this purpose.

The pipettes are held in tubes containing 70% alcohol and pre-poured plates of a suitable medium (nutrient agar, blood agar, MacConkey agar, or any desired differential medium) made available as required. Plastic Petri dishes are very convenient. Immediately before use the pipette is "burnt off" and one drop of urine added to 10 ml. Ringer solution using screw-capped bottles or tubes with Astell seals. After mixing, and using a fresh pipette, one drop of the dilution is allowed to form very slowly and fall from a height of about 1 in. (2.5 cm.) on to the centre of the plate. The greater the height the larger the spread. A drop of Ringer is approximately 0.02 ml., so that this procedure adds 1/25,000 ml. of urine to a plate. The size of the drop is given by the

formula $V = \frac{2\pi r \sigma}{d g \phi}$ where V = volume, r = radius of tip, σ = surface tension, d = density, g = acceleration due to gravity, and ϕ is a correction factor. For the greatest accuracy the pipette used for the urine should be calibrated for urine, as this will have slightly different values for σ and d , but this is probably unnecessary for the level of accuracy involved in this type of work. If the count of the urine is 10^6 about 40 colonies are obtained per drop. Three drops may be utilized and the average taken if desired. If a high count is anticipated one drop may be spread over the whole plate using a platinum or iron wire, bent in a gentle curve.

This spreading technique is especially useful because *Proteus* is often present in urine and swarming colonies may spoil the plate. For this reason the well-known

devices should be employed to reduce this spreading—e.g., using a high concentration of agar, a thin layer of medium, a selective medium, counting the colonies at the earliest possible time, etc.

A second dilution can of course be made for very high counts, but this is usually not necessary for a preliminary screening test.

In addition to the convenience of this method (the outfit is very light and portable), surface culture has certain advantages over pour-plate methods.⁷ The pipettes may of course be autoclaved if desired.—I am, etc.,

London W.1.

J. G. DAVIS.

REFERENCES

- 1 Kippax, P. W., *Brit. med. J.*, 1963, 2, 562.
- 2 Bradley, J. M., and Little, P. J., *ibid.*, 1963, 2, 361.
- 3 Evans, D. I. K., *ibid.*, 1963, 2, 809.
- 4 Wilson, G. S., *J. Bact.*, 1922, 7, 405.
- 5 Miles, A. A., Misra, S. S., and Irwin, J. O., *J. Hyg. (Lond.)*, 1938, 38, 732.
- 6 Davis, J. G., and Bell, J. S., *J. appl. Bact.*, 1958, 21, 217.
- 7 ——— *Lab. Pract.*, 1959, 8, 58.

Ingrowing Toenails

SIR,—Ingrown toenails, also ingrown fingernails, are very common among the masses in China. The question of how to treat them has always been with us; articles in the medical press have been relatively common for the past 40 or 50 years, to my knowledge.

For people who in general walk barefooted or with straw sandals or cotton shoes the ordinary methods of treatment invariably fail, as I found to my cost after about ten years of trial in Chinese out-patient departments. It thus came about that eventually I was forced to attack the nail directly, in spite of all the warnings to the contrary. For the past 20 years or more I have found it entirely satisfactory, and I have even cured myself by the same method. There need be no blood.

The method is to anaesthetize the digit, and with fine sharp-pointed scissors, any granulations having first been removed, cut down the side of the nail so that a sliver of about $\frac{1}{4}$ in (3.2 mm.) or less is free down to the nail-bed. This piece is then avulsed.

With a little practice this can be done without anaesthetic (and one got plenty of practice in China). The point of the scissors must point outward—that is, against the under-surface of the nail and not against the very sensitive "quick." Further, the plane of the blades of the scissors must be in the radius of the digit. Only the fact that this works gives me the courage to write in this way.—I am, etc.,

D. VAUGHAN REES.

Eastbourne, Sussex.

SIR,—In your annotation on "ingrowing" toenails (October 12, p. 884) you rightly commend the efforts of Lloyd-Davies and Brill¹ in showing that conservative treatment can be effective in the management of embedded toenails. It must be appreciated, however, that their

results are the product of a special clinic devoted to toe conditions and of their enthusiastic application of a detailed and time-consuming regime. They reverted to conservative treatment because of the unsatisfactory results of radical surgery. I maintain, however, that radical surgery, logically and meticulously performed, offers the only certain cure for embedded toenail and onychogryphosis.

The anatomical basis of rational toenail ablation was established in 1887 by Quénu. He demonstrated that longitudinal nail growth occurred only from the lunular area of the nail bed (germinal matrix). He showed that excision of the germinal matrix would result in permanent ablation of the nail plate.

Since then scores of operations for embedded nails have been devised, most of which failed to apply the principle of a careful dissection of the germinal matrix as an exactly defined anatomical structure. Excision of wedges of nail wall and nail bed, curettage of nail bed, etc., have been advocated in various forms and found wanting. This has resulted in a swing towards the extreme procedure of terminal amputation of the toe, an operation which, ironically enough, does not always prevent sprouts of nail growing through the suture line. Yet from time to time Quénu's principle has been rediscovered and has been described by Wilson,² Heifetz,³ and Zadik.⁴

In 1958 I reported the results of 100 toenail ablations using Quénu's principle.⁵ In the 50 cases of embedded toenails there were no recurrences of symptoms in a follow-up of six months to five years. This compares with the figures quoted by Lloyd-Davies and Brill, who report that after two years only 50% of their cases had been cured.

Moreover, they had 40% of defaulters, of whom 16 could not be traced. This defaulter rate underlines the problem of conservative treatment of this condition. About 75% of patients with embedded toenails are active youngsters with sweaty feet. They are not the type of person who can be easily persuaded to attend a toe clinic for a long period of treatment and follow-up. It is far more satisfactory for all concerned to offer the patient a simple out-patient operation under local anaesthesia which results in permanent cure after 10 days.

Lloyd-Davies⁶ has condemned excision of the germinal matrix because he found recurrences after this operation. I find this difficult to explain, but I can only say that with the operative technique I have described recurrences do not occur. I am of the opinion, however, that most of the bad results of ablative nail surgery are due to the failure to apply delicate and exact dissection techniques to a precisely defined anatomical structure. The frequent use of the term "avulsion of the nail" and the frequent suggestion in the literature of toenail surgery that the nail bed should be "curetted" are evidences of a crude approach to the problem which goes a long way to

explain why toenail surgery remains in the doldrums.—I am, etc.,

A. W. FOWLER.

Bridgend General Hospital,
Bridgend, Glamorgan.

REFERENCES

- ¹ Lloyd-Davies, R. W., and Brill, G. C., *Brit. J. Surg.*, 1963, 50, 592.
- ² Wilson, T. E., *Med. J. Aust.*, 1944, 2, 33.
- ³ Heifetz, C. J., *J. Mo. med. Ass.*, 1945, 42, 213.
- ⁴ Zadik, F. R., *J. Bone Jt Surg.*, 1950, 32B, 66.
- ⁵ Fowler, A. W., *Brit. J. Surg.*, 1958, 45, 382.
- ⁶ Lloyd-Davies, R. W., *ibid.*, 1962, 50, 44.

Spontaneous Regression of Cancer

SIR.—Dr. Isobel P. Beswick and Mr. G. Qvist (October 12, p. 930) record a remarkable case of unexpected survival after treatment for generalized cancer, not to be confused with spontaneous regression. Another way of looking at it would be as an illustration of the sensitivity of presumed microscopic deposits

of undifferentiated carcinoma to radiation. Frequently a "combined treatment" policy may be successful where surgery or radiotherapy alone may fail.

I do not see how this case demonstrates the advantage to the patient of being left in complete ignorance of his disease. First, we do not know if he was completely ignorant just because he asked no questions. Many patients are well aware of the probable significance of their disease and simply do not wish to discuss it. Secondly, he might have behaved with the same "absolute faith" even if he had been told the truth. Besides, there are ways of garnishing the most unpleasant truth to make it palatable without removing hope. To me, the last paragraph of the letter displays well the muddled thinking that bedevils cancer therapy at present.—I am, etc.,

JOHN M. BRINDLE.

Radiotherapy Department,
Camborne-Redruth Hospital,
Redruth, Cornwall.

POINTS FROM LETTERS

Bath-tubs and Hygiene

Professor N. ISLAM (London N.W.1) writes: Bath-tubs must have a long, long history. This is no reason why they should be so zealously preserved. It is at times horrifying to see six to eight persons using the same bath-tub one after another with a little rinsing with soap and water in between. I am afraid I cannot call it hygienic in any way. And in what way are they superior to showers? Is it because of tradition that this unhygienic habit is still in practice in a country which has contributed much in the field of preventive medicine?

History of Hospitals

Mr. J. P. ENTRACT (The London Hospital Medical College Library, London E.1) writes: Your reviewer of *St. John's Hospital for Diseases of the Skin, 1863-1963* states (August 31, p. 556) that the example (of hospital history writing) was set by Sir Norman Moore in 1918, when he published his *History of St. Bartholomew's Hospital*. This is incorrect. In 1910 *A History of the London Hospital* by E. W. Morris was published, while as far back as 1892 a *Biographical History of Guy's Hospital* was produced by Sir S. Wilks and G. T. Bettany.

Deans of Employment?

Dr. RUDOLPH PAYNE (Norwich) writes: Reading your Educational Number of September 7 it occurred to me that at the present time the National Health Service is missing the equivalent of the father-figure of the old-fashioned "Honorary" who had contacts in his own specialty all over the world, wielded influence in the local hospitals, and was consulted regarding their practice staffing problems by the general practitioners. I cannot help feeling that everybody would benefit if each area would have a "Dean of Employment" who would co-ordinate the demands of the regional board, executive councils, local authorities, etc., with the needs of the young doctors who are nowadays lost in the maze of regulations, directives, and advertisements of the various bodies.

Abortion Law Reform

Dr. J. FANNING (London S.W.19) writes: With reference to Dr. Evelyn Fisher's letter (September 21, p. 751) I should like to point

out that it is laid down in Canon Law in the Roman Catholic Church that every aborted foetus is to be baptized if it is alive. If there is doubt as to whether it is alive it should be baptized conditionally. If necessary, of course, any lay person may carry out the baptism.

Wheeled Lavatory Chair

Dr. KATHARINE BUCHENAIGH (Sherborne) writes: A wheeled lavatory chair (September 21, p. 751) is in common use in hospitals both general and geriatric. The usual skeleton aluminium chair has four wheels and can, of course, be pushed. It has an ordinary lavatory type seat, usually plastic. These days there are usually grooves under it into which a bedpan may be pushed, presumably in case of emergency or to collect specimens. Alternatively, it can be reversed over the normal lavatory pan and the patient left in peace. I have personally seen these chairs in use within the last three months in the City of York Hospital and the Dorset County Hospital in both medical and surgical wards, and in the Booker Hospital, High Wycombe, geriatric unit, and in the geriatric nursing-home in Hastings run by the Anglican Community of the Nursing Sisters of St. John The Divine. In all these places they are in regular daily use and are a great blessing to patients and staff alike.

Music and Sedation

Dr. F. J. BENNETT (Colwyn Bay) writes: The idea of inducing sleep by transmitting suitable programmes of music or speech might be tried by the B.B.C. after midnight. I believe that many patients could be helped thereby, and the demand for barbiturates reduced.

Cigarettes in Germany

Dr. H. G. CALDWELL (Whitehead, Co. Antrim) writes: I was interested to read in your advertisement columns (September 28, p. 34) that one of the attractions held out to doctors to join the R.A.M.C. is the low cost of cigarettes in Germany. I wonder if Army medical officers ever engage in health education and if so what line the Army medical directorate advises them to take in instructing young soldiers about smoking and health.