lations, including tetanus toxoid. The injector is supplied with two nozzles—one for intradermal and the other for subcutaneous and intramuscular injections. So far as I could determine from the literature there was no certainty as to the maximum depth of penetration, and before considering the use of this machine for giving intramuscular injections the following study was undertaken.

With the co-operation of Dr. Philip Sheldon, consultant radiologist, Oxford United Hospitals, and with the help of the manufacturer's chief engineer, I received 1 ml. 45% Hypaque (sodium diatrizoate) into the deltoid area. A series of x-ray pictures were then taken to determine the spread and depth of the injection. A block of wood was used to compress the soft tissues in order to demonstrate clearly the thickness of skin, subcutaneous fat, and muscle.¹ As will be seen from the illustration, after the material has penetrated the skin, there is an immediate spread in all directions, and the best that can be expected is for the material to reach the subcutaneous layer.

Perhaps it would reach the muscle in a really thin subject, or a child, but, unless one could predetermine depth penetration for each subject, it might be better to accept the machine as a means of reaching no deeper than subcutaneous regions.—I am, etc.,

W. G. WHITE,
Senior Medical Officer,
British Motor Corporation Ltd.

Cowley,
Oxford.

REFERENCE

- ¹ Meema, H. E., Sheppard, R. H., and Rapoport, A., *Radiology*, 1964, 82, 411.

Premedication for Hypotensive Anaesthesia

SIR,—Dr. P. J. Thompson (2 August, p. 300) raises some interesting points regarding hypotensive anaesthesia for micro-aural

surgery. Over the past five years I have anaesthetized some 280 patients for these operations, using hypotensive methods, and I would like to make the following observations.

Adequate microscope haemostasis cannot be achieved unless the systolic blood pressure is dropped to 40 mm. Hg or below. This cannot be done in normotensive patients without the use of a ganglion-blocking agent, and I use pentolinium tartrate (Ansolsen) for this purpose. The average dose administered is 10 mg. in addition to the thiopentone, N₂O and O₂, halothane anaesthetic technique, using a Ruben's valve.

More resistance to hypotension was noticed when atropine premedication was used, and after experimenting over the years I have found Omnopon 10 mg. and Scopolamine 0.4 mg. (hyoscine hydrobromide) one hour preoperatively to be the most satisfactory.

It is difficult to produce adequate hypotension in teenagers, and I have long since given up using hypotensive drugs on patients under 21 years of age.

Instant reversal of hypotension can be achieved by the administration of methylamphetamine 10 mg. intravenously plus 10 mg. intramuscularly. Since the ear is packed after operation no persistent postoperative bleeding has resulted.

Despite the low blood pressure produced no patient has as yet given any anxiety during or after operation. All patients are vetted carefully, and if the slightest suspicion of cardiovascular disease is present no hypotensive technique is used. Likewise not a single patient has shown any cardiovascular complication after operation, in spite of the fact that profound hypotension has been produced for up to one hour's duration. This may be accounted for by the fact that blood loss is virtually non-existent under these conditions.—I am, etc.,

A. R. KERR.

Royal Infirmary,
Huddersfield, Yorks.

Cancer Research

SIR,—It is indeed surprising that your recent leading article (5 July, p. 4) summarized the main branches of cancer research in four words—namely, diagnosis, treatment, causation, and prevention. I venture to suggest that the order be reversed, as not enough emphasis is given to prevention where "causes" are known.

The family doctor cannot see what benefits accrue to his patients suffering from cancer, and he has good reason for so thinking. Our patients with cancer do not appear to be living longer. Can anyone show breast cancer survival rates have increased? Has the outlook improved for lung cancer and large bowel and rectal cancer? New operative procedures are not the product of medical research. The fall in death rate from gastric cancer is not shown to be the results of the efforts of workers in the laboratory.

As a general practitioner I wonder what has happened to the suggestions made by Professor P. Beaconsfield (15 October, 1966, p. 948) concerning the shortcomings of the present organization of research, when he wrote that "millions are wasted on cancer research." This was over two years ago, and in my opinion the millions are still being wasted.

If £26m. are being allocated annually for medical research purposes in the United

Kingdom (and a large proportion of this goes to cancer research laboratories), from the results thus far obtained it is evident that this branch of research needs an agonizing reappraisal. The only people who can do this are the clinicians, because their contact with the patient gives them a sense of drive and urgency which is quite unknown to the scientist in his ivory tower.—I am, etc.,

M. MACLEOD.

Wallasey, Cheshire.

Asymptomatic Bacteriuria in Pregnancy

SIR,—We were interested in the paper by Dr. G. L. Williams and others (26 July, p. 212). One of their main findings was that a defective urinary concentrating ability occurred in 31 (31%) of 100 pregnant women with bacteriuria, but not in non-bacteriuric pregnant control patients. They point out that previous workers have found the incidence of defective concentrating ability to be higher and claim their observations to be new.

However, results almost identical to those of Dr. Williams and his colleagues were reported by us in 1968.¹ Our results showed a defective urine concentrating ability in 30% of 63 patients with bacteriuria in pregnancy but in only 1 of 33 non-bacteriuric pregnant women. The findings of Dr. Williams and colleagues therefore confirm those already reported by ourselves. Incidentally, they also found that the lower limit of concentrating ability in pregnant women without bacteriuria was 750 mOsm/kg. Reference to our paper shows that we had come to the same conclusion.—We are, etc.,

W. BRUMFITT.

Edgware General Hospital,
Edgware, Middx.

D. S. REEVES.

St. Mary's Hospital Medical School,
London W.2.

REFERENCE

- ¹ Reeves, D. S., and Brumfitt, W., in *Urinary Tract Infection*, ed. by F. O'Grady and W. Brumfitt, 1968, p. 53. London, Oxford University Press.

Prolonged Labour

SIR,—The recent article by Dr. Kieran O'Driscoll and others (24 May, p. 477) advocating active management in the first stage of labour emphasizes the changing view towards prolonged labour associated with incoordinate uterine action and posterior positions of the occiput.

On a recent visit to Czechoslovakia sponsored by the Royal College of Obstetricians and Gynaecologists I observed the practice at the Institute for the Care of the Mother and Child in Prague. In 1968, out of 1,002 deliveries only 54 patients laboured longer than 16 hours in the first stage, and only six laboured longer than 30 hours. The incidence of intrapartum foetal death was 1:1,000, the forceps rate was 3%, the caesarean section rate was 4%, and the mean birth weight was 3,350 g.

These results were obtained by a policy of early amniotomy, and oxytocic infusion when progressive cervical dilation ceased. It is interesting that analgesia was used sparingly and consisted mainly of nitrous oxide and pethidine. A senior obstetrician with

sole responsibility for the labour ward supervised all deliveries.

A policy of active intervention together with the wider use of caudal or epidural analgesia seems to be safe, humane, and desirable, and to represent a significant

advance in the management of the first stage of labour.—I am, etc.,

B. V. LEWIS.

Nuffield Department of Obstetrics
and Gynaecology,
Radcliffe Infirmary,
Oxford.

Intermittent Methohexitone

SIR,—I must reply briefly to the letter from Professor John S. Robinson and colleagues (26 July, p. 240) under the above heading, as the authors stated in their original article (31 May, p. 540) that "The so-called minimal-incremental technique of administering methohexitone as described by Drummond-Jackson (1962) was used," and made further reference to "my" supposed technique. It is not the physiological measurements to which objection is taken but

details of the several deaths of which only they seem to have knowledge.

I wish to make it clear that the decision to issue a writ against your correspondents as the authors of the article "Physiological Responses to Intermittent Methohexitone for Conservative Dentistry" (31 May, p. 540) was taken bearing in mind certain interviews given to the lay press and on television which have had the inevitable result of alarming the public. Two examples are: (a) from

Year	Total Deaths	Methohexitone Included	Intermittent Methohexitone	Authority
7 yrs. 1959– 1965	51	3	—	Report of a Joint Subcommittee (1967), <i>Dental Anaesthesia</i> , Appendix B, p. 23. H.M.S.O.
1966		0	0	<i>Hansard</i> , 22 July 1969, written answers, column 366
1967		0	0	
1968		3	1*	

* This death is not separately shown in the answer in *Hansard* but is taken from a study of the reports on the three cases shown in the answer.

the physiological treatment given to these patients, as shown by the authors' own text. Safety precautions that are as much part and parcel of the technique as the minimal increments themselves were flouted. Misuse of any anaesthetic technique must lead to unfavourable physiological measurements.

Your correspondents are worried by the dismissal by Dr. J. G. Bourne (7 June, p. 630) of any deaths associated with the technique. Perhaps they will comment on the above official figures (see Table) and give

Birmingham Post, 30 May: "Dr. Wise said all deaths caused by the drug were not being reported although seven people died this year"; (b) from *Daily Sketch*, 31 May: "One of the doctors who investigated the drug said: 'In our opinion it has killed about one in every 7,000 or 8,000 of the people on whom it has been used. That is about one every two or three months. . . .'" —I am, etc.,

S. L. DRUMMOND-JACKSON.

London W.1.

SIR,—Whatever the outcome of critical assessments of this method of anaesthetic administration, it may well prove that we shall owe a debt to Professor J. S. Robinson and his colleagues (31 May, p. 540) for highlighting possible dangers inherent in its use for prolonged operative dental procedures. Indeed, Dr. J. G. Bourne (9 August, p. 359), who has given freely of his time to help dentists in this specialty, has set on record a possible safe limit of 20 minutes' operating (7 June, p. 631), while other authorities seem to favour a lesser period. In this no criticism of the method itself is necessarily implied, but practising dentists should take due note of it, having regard to the pressures inherent in N.H.S. dental practice, in which high productivity in terms of items of service is directly related to income. Advocates of this method have shown an initiative and enthusiasm that is wholly commendable, and, while dental opinions vary as to the quality of conservative service possible in the set-up essential for its safe operation, many must realize how unfavourably the overtones inherent in N.H.S. practice have influenced its potential use.

It is abundantly clear that the good faith of all concerned in this discussion is not in doubt, and, as a certain well-defined, albeit small proportion of our dental patients

might, and do, benefit from this new approach in anaesthesia, the discussion so far has been infinitely rewarding.—I am, etc.,

ROBERT CUTLER.

London S.W.1.

Sympathetic Nervous Overactivity in Tetanus

SIR,—Your leading article (2 August, p. 251) refers to the successful use by Prys-Roberts and colleagues¹ of sympathetic blocking agents to combat this dangerous complication of severe tetanus. They reported at the same time that continuous administration of nitrous oxide or halothane inhibited the sympathetic overactivity; these drugs, however, could not be continued for a long period because of their known toxic effects.

We propose the use of a simple drug which appears to prevent this complication and provides valuable sedation as well, like nitrous oxide or halothane but without side-effects. We have reported² 16 patients with tetanus of maximal severity who received (in addition to the usual treatment by curarization and intermittent positive pressure ventilation) paraldehyde in doses up to 12 ml.

six-hourly by the intragastric or intramuscular route throughout the disease. We originally chose this drug as the safest for continuous sedation; but we also attribute to it the absence of sympathetic overactivity in these patients, who all recovered.—We are, etc.,

LESLIE COLE.

H. R. YOUNGMAN.

Addenbrooke's Hospital,
Cambridge.

REFERENCES

- ¹ Prys-Roberts, C., Corbett, J. L., Kerr, J. H., Crampton-Smith, A., and Spalding, J. M. K., *Lancet*, 1969, 1, 542.
- ² Cole, L., and Youngman, H. R., *Lancet*, 1969, 1, 1017.

Translations and the Language Barrier

SIR,—The Postgraduate School of Librarianship and Information Science at Sheffield University has been investigating the use of foreign language publications by research workers. Supported by a grant from the Office for Scientific and Technical Information, the 18-month project, now nearing completion, has covered research work being carried out in all disciplines at Sheffield University, assuming this university to be reasonably typical for Britain. We have interviewed well over 50% of academic staff and research students about their language knowledge, scope of research, and use of foreign language materials, and, of course, we have collected records on all aspects of library use.

A major objective of the project is to isolate the factors militating against the full use of relevant research work published in languages other than English, and to assess the relative significance of these factors. One important aspect is the availability of translation services and the cost, timeliness, and quality of translations made. We should be pleased to hear from research workers in other universities and in industry about their own experiences in obtaining translations (if possible with details of the translations they have had: language, subject, source of translation, speed, full or summary translation, written or oral, length and cost of the translations, quality, etc.), and in any unsuccessful attempts to obtain translations, in particular the language concerned and the sources approached. We would also welcome any suggestions for improving the present situation.—We are, etc.,

W. L. SAUNDERS.

W. J. HUTCHINS.

LISBETH J. PARGETER.

Postgraduate School of Librarianship
and Information Science,
University of Sheffield,
Yorks.

Iatrogenic Hypothyroid Psychosis

SIR,—Although postoperative hypothyroid psychoses have been previously reported¹ I am unaware of any recorded instance of antithyroid drugs having such an effect. This makes the case history reported by Drs. C. F. Herridge and I. Abey-Wickrama of considerable interest (19 July, p. 154), and one's only regret is that the young woman's clinical state precluded wait-