all adults. It is likely that ischaemia, rather than haemorrhage, was the more frequent pathogenic mechanism.

The other disease which you did mention is diabetes mellitus. Diabetes, like hypertension, is a predisposing factor. In large series the frequency of previously recognized diabetes was 10-14%.^{1,2} However, when glucose tolerance tests are performed many new cases are discovered, the frequency of abnormal results increasing with age.¹ The frequency of overt and latent diabetes in patients with Bell's palsy is thus similar to that previously reported in oculomotor palsy.³ Patients with Bell's palsy frequently show abnormal blood vessels in their conjunctivae and nail-beds, and I have therefore postulated that diabetic microangiopathy may be a factor responsible for the nerve lesion.

Your leading article mistakenly attributes to Dalton the evidence that herpes zoster infection can cause Bell's palsy. Ramsay Hunt suspected this possibility when he described the syndrome which now bears his name, and it was Aitken and Brain⁴ who demonstrated high titres against the virus in some patients with typical Bell's palsy without vesicles. Though the possibility of an unrecognized viral infection causing Bell's palsy is interesting most patients lack any evidence of such a preceeding or concurrent infection. I have tried to isolate viruses from patients with Bell's palsy and also to detect antibodies to several viruses, but the results have been negative thus far.

The seasonal variation in the incidence of Bell's palsy which is frequently mentioned and which you quote is of course only circumstantial evidence that the disease is infective. As Leibowitz⁵ remarked, similar climatic influences have been shown on the occurrence of myocardial infarction (and also cerebral vascular disease). Leibowitz has subsequently demonstrated⁶ (and not in the paper you mistakenly quoted) clustering of cases of Bell's palsy. This interesting finding is open to similar alternative interpretations.

A final point concerns the theory that water retention is a predisposing factor in the development of Bell's palsy. I have found that pregnant women are more susceptible to Bell's palsy than expected, particularly just before delivery, and also in the puerperium.⁷ Water retention could be a factor there too.—I am, etc.,

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¹ Korczyn, A. D., *Lancet*, 1971, 1, 108.

² Hauser, W. A., Karnes, W. E., Annis, J., and Kurland, L. T., *Mayo Clinic Proceedings*, 1971, 46, 258.

³ Korczyn, A. D., *Lancet*, 1971, 1, 862.

⁴ Aitken, R. S., and Brain, R. T., *Lancet*, 1933, 1, 19.

⁵ Leibowitz, U., *Neurology (Minneapolis)*, 1966, 16, 1105.

⁶ Leibowitz, U., *Brain*, 1969, 92, 109.

⁷ Korczyn, A. D., *Acta Neurologica Scandinavica*, in press.

No Smoking and Life Expectancy

SIR,—In recent months the *B.M.J.* and numerous others have discussed the dangers of smoking. Everywhere, however, there appears one great omission. In its anxiety to persuade the public to abandon tobacco and the consequent illnesses and disability produced as a late penalty, it is important that the medical profession should also be far

sighted beyond a mere clinical field. It is not sufficient to abolish an undesirable disease if, as a consequence, more misery is produced later. A parallel situation has occurred in recent years where the prevention of malaria by removing an agent of population control has led to widespread starvation.

When the effects of reduced smoking bear fruit, we shall have an increased life expectancy and a larger number of elderly citizens. The people who have smoked are at present likely to die at an age when the younger generation is finding them a burden which they are unwilling to bear. We must therefore couple with our exhortations for the abolition of smoking a call for advanced creation of suitable homes and geriatric services to cope with the new population bulge that will develop.—I am, etc.,

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Diagnosis of Cystic Fibrosis

SIR,—I would like to comment on Dr. A. G. F. Davidson and Professor Charlotte M. Anderson's (6 November, p. 362) reference to the screening of meconium for the presence of albumin.

They state, quite correctly, that 10-15% of patients with cystic fibrosis have no clinical evidence of malabsorption and that such cases may not show a positive meconium test.

I mentioned earlier (11 September, p. 639) the routine screening programme being carried out in Newcastle using this technique. One of the aims of this experiment is to find out how many cases of cystic fibrosis are missed for this, or any other reason.

We do not know as yet if absence of malabsorption automatically means that a meconium test is negative, but even if this is so we feel it is still more than worth while to diagnose the remaining 85-90% at birth.—I am, etc.,

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"Stroke Units"

SIR,—In your leading article (6 November, p. 313) you suggest that we seriously consider the development of stroke units in this country, similar to those which have grown up in the United States. The conditions in the two countries are not, however, comparable. The majority of strokes occur in older patients and in the United Kingdom we already have a national network of geriatric units, which have done their best, with limited resources, to develop rehabilitation services. For many years these units have attracted stroke patients and many important contributions to the British literature of stroke have originated from such departments.

When the geriatric assessment unit of the Glasgow Royal Infirmary group of hospitals was established at Lightburn Hospital in 1968 one ward of 30 beds (15 male and 15 female) was set aside for stroke rehabilitation. A few patients are admitted from their own homes direct to this unit, but most strokes occurring in the area served by the hospital group are admitted in the first instance to the general medical wards of Glasgow Royal

Infirmary, where they undergo intensive care, if appropriate, and have ready access to neurosurgical and investigative facilities. Many patients are treated to conclusion in the medical wards, but each year between 150 and 200 patients are referred by the physicians in charge to the geriatric service, and are transferred, after assessment, to the stroke ward in the geriatric unit. One-quarter of these patients are under the age of 65, but none has objected to being treated alongside older patients. The stroke rehabilitation ward is organized along the lines of a standard geriatric rehabilitation ward, with close collaboration between doctors, nurses, physiotherapists, occupational therapists, speech therapist, medical social worker, and after-care services. The additional activities include a daily recreation programme organized by a ward hostess, pre-discharge home assessment, post-discharge follow-up, a club for relatives, group speech therapy, and group therapy for relatives of aphasic patients. A day hospital is being planned.

This arrangement has worked well, and similar collaboration between general physicians, neurologists, neurosurgeons, and geriatricians might prove a suitable pattern for the management of stroke patients in Britain. The unit depends heavily on its small staff of physiotherapists, occupational therapists, and speech therapists, and the continuing shortage of these grades of staff is the major obstacle to the needed expansion of stroke rehabilitation throughout the country.—I am, etc.,

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Epitaph for the M.C.H.C.

SIR,—Dr. F. Nour-Eldin (30 October, p. 298) takes exception to the statement of Dr. M. S. Rose that neither the M.C.H.C. (mean corpuscular haemoglobin concentration) nor the M.C.H. (mean corpuscular haemoglobin) convey anything of particular clinical value any longer (16 October, p. 169) and then goes on to raise a number of points.

It must be made quite clear that Dr. Rose is referring specifically to the M.C.H.C. as calculated by automatic apparatus and is contrasting this with the M.C.H.C. derived from the haemoglobin level and the packed cell volume measured by manual methods. That these two figures do not always mean the same thing has now become obvious as is explained by Dr. J. M. England and others (23 October, p. 232).

(1) The M.C.H.C., as measured by the Coulter Model "S," does not fall in hypochromic anaemia except in the severest cases of iron deficiency. Therefore, when measured in such apparatus, it cannot "return to normal on successful treatment of hypochromic anaemias." The M.C.V. (mean corpuscular value), on the other hand, begins to fall relatively early in iron deficiency and is an excellent parameter both for assessing the degree of the deficiency and for following the response to therapy.

(2) The traditional teaching of textbooks of haematology is that the absolute values, the M.C.V. and M.C.H., are unacceptably inaccurate because they depend upon the red cell count, which has a large inherent error—of the order of $\pm 400,000$ cells out of a total of 5,000,000 cells if a visual count is done on 500-1,000 cells.¹ The introduction

of electronic automatic counters has completely altered this, for they can count many thousands of cells in a few seconds. The Coulter Model "S" counts approximately 18,000 cells in each of three replicate channels in four seconds. These three replicate counts correspond closely and the inherent error should be only a fraction of that of counts done visually.

Automatic cell counters may introduce a number of errors of their own, such as co-incidence counts, incorrect setting of the threshold of discrimination, or those due to the presence of bubbles in the sample line. Nevertheless the precision now achieved with red cell counts gives the M.C.V. a status that it could not hold previously.

(3) Neither the manual nor the automatic M.C.H.C. is deceiving us—provided we recognize that they do not always measure the same thing. Where manual techniques remain in use the M.C.H.C. continues to be a useful index of hypochromia, though it should be recognized that it does not reflect a true reduction of the haemoglobin concentration in individual red cells. In those hospitals where the Coulter "S" has been installed the M.C.H.C. now seems to serve little practical purpose except perhaps in the important field of quality control, and attention must now be directed mainly to the M.C.V. In other words the manual M.C.H.C. reflects hypochromia but is not a true measure of mean haemoglobin concentration, whereas the automatic M.C.H.C., just because it is a true reading of mean haemoglobin concentration, is now of little value and is being supplanted by the M.C.V.

The examination of a well-prepared blood film remains of primary importance. The M.C.V., M.C.H., and M.C.H.C., however they are measured or calculated, are only mean values, and an examination of the blood film remains essential to reveal the diversity of cell size, age, shape, and "haemoglobulinization" that lies concealed by these mean figures.—I am, etc.,

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¹ Dacie, J. V., and Lewis, S. M., *Practical Haematology*, 4th ed., p. 26. London, Churchill, 1958.

Nephrotoxicity of Cephaloridine

SIR,—Dr. T. Rosenthal and Dr. H. Boichis (9 October, p. 115) report a patient in Israel who died in acute renal failure following cephaloridine administration. Of the few details given the following are important and probably relevant to the possible nephrotoxic reaction: the patient was aged 70 years; she had subacute bacterial endocarditis; a penicillin hypersensitivity reaction was elicited by ampicillin immediately before the start of cephaloridine and progressive oliguria developed during therapy. Among many other details not mentioned, but highly relevant to the outcome, are the following: the dose of cephaloridine and if it was adjusted appropriately for the age of the patient, or reduced at all when oliguria appeared; whether the patient was in heart failure at any time, or concurrently receiving other potentially nephrotoxic antibiotics, particularly aminoglycosides, or potent diuretics, particularly frusemide.

The normal human adult kidney can

excrete a maximum of six grammes of cephaloridine each day, though this amount decreases over the age of 50. If higher total daily doses are used, or if the dosage is not reduced appropriately in the elderly or in patients who have renal impairment initially because of disease, the concentration of the antibiotic in the plasma and tissues may accumulate and achieve possibly toxic levels.

I analysed¹ 36 cases of possible cephaloridine nephrotoxicity reported in the world literature and found the following factors common to many of the patients: a dosage of more than 6 g/day, excessive by any standard; patients with either definitely impaired or doubtful renal function before treatment, often treated without an appropriate dosage reduction; patients' age mostly over 50 years; bacterial endocarditis as the primary diagnosis; intercurrent penicillin or cephaloridine hypersensitivity reactions, in some cases possibly responsible for kidney damage and reduced function; the concurrent use of other potentially nephrotoxic antibiotics; and the concurrent use of potent diuretics. As a result of this latter observation I suggested that potent diuretics, particularly frusemide, may enhance the potential nephrotoxicity of cephaloridine and this was later confirmed in laboratory animals.²

In many of the 36 patients a fatal outcome to renal failure was avoided by either stopping or, at least, reducing the dosage of cephaloridine as oliguria and increasing uraemia developed. As Drs. Rosenthal and Boichis state cephaloridine should be used with care but this is a recommendation that applies to all drugs. Is it not timely to plead for drugs to be used only after full study of, at least, the manufacturers' standard information sheets on their products?—I am, etc.,

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¹ Foord, R. D., *Proceedings of the 6th International Congress of Chemotherapy*, Tokyo, 1969, 1, 597. University of Tokyo Press, 1970.

² Dodds, M. G., and Foord, R. D., *British Journal of Pharmacology*, 1970, 40, No. 2, 227.

Hospital Information Booklets

SIR,—Most general and psychiatric hospitals now produce information booklets or pamphlets for their patients and visitors. From a cold statement of committee rules these productions have gradually become more friendly and helpful in outlook to assist patients face the uncertainty and anxiety which accompanies hospital admission.

The patient, his relatives, family doctors, consultants, nurses, and administrators have an interest in the contents and effectiveness of hospital information booklets. In general these need to cover at least the address and telephone number of the hospital and how to get there; where to report on arrival and what to take along; visiting times and advice about food and gifts relatives may wish to bring; how to obtain information from doctors, nurses, medical social workers, and so on; and information about consent forms and involvement in teaching.

Some advice about facilities—cultural, secular, and religious—could be given, and the hospital procedure for discharge, follow-up, investigation of any complaints, etc., explained.

A plan of the hospital, a few pictures,

and a brief note about the history and management of the hospital can enhance the interest and usefulness of a booklet. In a psychiatric hospital information about the aims of the hospital and rehabilitation facilities is helpful, and a brief explanation of "informal" and "detained" and the patient's rights is desirable.

While information booklets can be standardized to some extent, they are still a field where hospital authorities can show their own initiative, imagination, and real concern about assisting their patients.—I am, etc.,

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Use of English

SIR,—Readers and participants on this subject may be interested in the views of Sir Arthur Quiller-Couch, sometime King Edward VII Professor of Literature at Cambridge University. His lecture concerning the practice of writing (1913) contains the passage set out below.

"But I have another word for our men of science. It was inevitable, perhaps, that Latin—so long the Universal Language—should cease in time to be that in which scientific works were written. It was impossible, perhaps, to substitute by consent, some equally neat and austere modern language, such as French. But when it became an accepted custom for each nation to use its own language in scientific treatises, it certainly was not foreseen that men of science would soon be making discoveries at a rate which left their skill in words outstripped; that having to invent their terms as they went along, yet being careless and contemptuous of a science in which they have no training, they would bombast out our dictionaries with monstrously invented words that not only would have made Quintilian stare and gasp, but would affront the decently literate of any age."—I am, etc.,

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SIR,—I do hope Professor J. G. Scadding's wistful protest (6 November, p. 364) will stimulate a healthy response. He has for long been concerned with plain English, and many of us who care about words must wish, like him, that standards in medical literature were higher. Managerial English—if this expression is intelligible—is equally irritating: there was a time when "viable" was an adjective which applied peculiarly to the fetus. Now (or, must I say, "at this moment in time") even obstetricians may apply it to an operating timetable.

I hope also that Professor Scadding would agree that some cross-breeding is a good thing, and certain new expressions which reach us from across the Atlantic ocean enrich the language; some abbreviations are an improvement, too. To "take the point" and to be normally "oriented" are examples. May he long continue to knock slovenly, ungainly, and meaningless English.—I am, etc.,

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Exeter

** This correspondence is now closed.—
Ed., B.M.J.