blood pressure monitoring in general practice through collaborations such as those taking place in Oxfordshire.

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Multiple sclerosis: diagnostic optimism

EDITOR,—In his editorial on advances in diagnosing multiple sclerosis W I McDonald bases his optimistic conclusions on the contributions of magnetic resonance imaging.¹ As he states, this technique has helped not only in identifying the lesions in the central nervous system but by providing information on the stages of development (or recession) of the disease process.

Magnetic resonance imaging may, however, yield some other, disquieting findings. Apart from the surprising findings that this technique nearly always shows more lesions in a patient than are expected on the basis of the clinical picture and that lesions are often seen in areas remote from those under suspicion, it seems that similar findings may be observed in people who are entirely free of neurological symptoms. This has been emphasised in a recent report of a study examining use of the technique in migrainous patients²; to the authors' surprise, lesions were found on magnetic resonance imaging in seven of 32 healthy controls. Hyperintense lesions on T2 weighted sequences are well known in elderly subjects,³ but in this series the controls were aged 20-50 (mean 31). No mention is made of whether follow up studies were done in these subjects or whether gadolinium assisted repeat examination was performed.

Thus the finding of lesions on initial magnetic resonance imaging in people suspected of having multiple sclerosis, even in the usual age group, seems not to be sufficient evidence to clinch the diagnosis; repeated examinations, preferably with contrast media, should be done. A separate (and disturbing) question is whether multiple sclerosis, clinically silent, is far more ubiquitous than anyone has suspected.

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Pethidine in sickle cell crisis

EDITOR,—B J Pryle and colleagues confirm that the doses of pethidine commonly used to manage painful sickle cell crisis may lead to accumulation of its toxic neuroexcitatory metabolite, norpethidine.¹ We have also observed seizures in patients with sickle cell crisis receiving high dose intramuscular pethidine as analgesia. This can cause concern to the medical team as a fit may be the

presenting feature of a cerebrovascular event related to sickle cell disease, which would require urgent management including exchange transfusion.

Pethidine analgesia in sickle cell crisis has other inadequacies: a study performed at this hospital in 10 patients admitted with painful sickle cell crisis showed that on 12 of 61 patient days norpethidine concentrations were greater than 500 µg/l while nine patients were receiving pethidine doses of 4.4-9.5 mg/kg/day and one patient was receiving 21 mg/kg/day.² At the same time visual analogue scales were used by the patients and nursing staff to assess the effectiveness of the analgesia. These showed that the patients were receiving suboptimal analgesia, had breakthrough pain while waiting for this controlled drug to be dispensed, and had depressed affect and discomfort at the site of the injection.

We now manage patients with sickle cell crisis by continuous subcutaneous infusion of morphine, the dose being based on body weight and the time to breakthrough pain after an initial injection of morphine given after assessment in the accident and emergency department. This has proved acceptable to most patients and provides smoother pain control: an added advantage is the boost facility, which gives the patients a measure of control over their analgesic requirements. Some patients, however, are unable to tolerate this regimen because of pruritis and, occasionally, bronchospasm.

As with all opiate regimens, the patient should be carefully observed for evidence of respiratory depression by regular measurement of the respiratory rate and continuous pulse oximetry. The infusion should be halted if this occurs. We recommend that other units evaluate this form of analgesia in their patients with sickle cell crisis.

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Maintenance treatment with methadone

EDITOR,—It is perhaps flattering that Colin Brewer and colleagues attribute "proprietary and parochial" powers to us when we merely wished to note the diversity of prescribing styles within Europe.¹ In our article we neither promoted nor opposed any single style; we merely reported on the diversity.²

The scope of the debate on drug treatment matters greatly, for it can easily create an artificial dichotomy that drives out the middle options. Brewer and colleagues imply that they have "exposed" our practice of prescribing injectable drugs. In fact, we have not only reported on this in passing³⁻⁵ but have also published an audit of injectable prescribing.⁶ This small aspect of practice, however, receives disproportionate attention: we doubt whether major gains in the provision of treatment will be made in this area.

There is indeed an increasing body of scientific evidence on the benefits of maintenance programmes using oral methadone,^{7,8} but Brewer and colleagues imply that the same quality data exist for prescribing injectable drugs. The gathering consensus on the benefits of methadone relates to oral methadone: the United Kingdom is probably (except for some small experimental projects⁹) the only country in the world to permit the prescribing

of injectable drugs to addicts. On any day nearly a quarter of a million addicts receive oral methadone worldwide, compared with probably fewer than 1000 who receive injectable methadone, morphine, or heroin. We would benefit from a clearer separation of the debates about maintenance treatment with oral and injectable methadone.

Maudsley Hospital has recently received funding to establish a new maintenance programme using oral methadone in south London, with which we plan to conduct the first controlled comparison of drug taking and risk behaviour for HIV infection. This form of treatment is expensive and must be delivered in a cost effective fashion that maximises the possible benefit to users. Careful scrutiny is needed to identify the key factors that enhance a positive outcome. There may be real benefit for some patients who receive maintenance treatment with injectable methadone, but if Brewer and colleagues are genuinely interested in delivering the best treatment to as many drug users as possible they should forgo the limelight of controversial minority approaches to treatment and look to a model of delivering maintenance with oral methadone which may benefit more than a handful of clients.

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Reformulated Omnopon

EDITOR,—We write to highlight several problems we have encountered recently with the reformulated Omnopon products. After the Committee on Safety of Medicines' *Current Problems* reported the genotoxicity of noscapine¹ we observed a considerable drop in the use of papaveretum to a low level. With the availability of the reformulated Omnopon, it was decided to buy this product in preference to the currently stocked generic papaveretum still containing noscapine despite the resultant increase in expenditure.

It is apparent, however, that the reformulated product cannot be easily substituted for the old product. Several potential problems have been identified if current prescribing practice continues. A common prescription is "papaveretum 20 mg," but the reformulated product is no longer papaveretum, and a dose of 20 mg is misleading. The "20" ampoules now contain 15.68 mg of the remaining constituents. This may cause errors of administration and confusion over records of controlled drugs.

The manufacturers recommend prescribing the reformulated products in millilitres of solution and stipulating the name of the product—either Omnopon or Omnopon Paediatric. This approach,

however, is open to error. A considerable educational effort would be required to alter established prescribing habits. To complicate matters further, the title of the products on the datasheet does not reflect the name printed on our stock of the reformulated product. Omnopon Paediatric is actually packaged and labelled as Omnopon 10 with no reference to paediatric on the box.

We believe that the risk of the wrong strength of Omnopon being prescribed and administered is great and does not warrant its continued use.

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1 Committee on Safety of Medicines. Genotoxicity of papaveretum and noscapine. *Current Problems* 1991 June (No 31).

*We sent this letter to the manufacturer, who replied as follows.

EDITOR,—After *Current Problems* warned about the potential genotoxicity of noscapine Roche Products considered that there were two possible options. These were either to discontinue the product or to reformulate it without the noscapine component. The weight of opinion from the medical profession seemed to support a continuing therapeutic requirement for the mixed alkaloid preparation.

Having decided to reformulate Omnopon preparations, we reluctantly changed the prescribing recommendations to include doses expressed as volumes. This was thought to be less confusing than listing the three ingredients separately as the active ingredient could no longer be referred to as papaveretum. This situation is likely to remain until such time as we can negotiate a redefinition of papaveretum or establish a separate term to encompass the three constituent alkaloids in their fixed proportions.

Meanwhile, we are listening to the views of those such as Diane Ketley and T O'Carroll and are looking at the best way of revising the product's labelling to minimise the possibility of dosing errors. A dosing chart for Omnopon is available from our drug information and surveillance department for easy reference.

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Visual problems in the elderly population

EDITOR,—R P L Wormald and colleagues confirm the common and disabling nature of cataract in the elderly population.¹ Unfortunately, the size of their study population produces confidence intervals too wide to be useful in planning and contracting.

To take an example, in the population aged 65 and over Wormald and colleagues quote the prevalence of cataract that reduced vision to less than 6/18 as 5.8% (95% confidence interval 3.0% to 9.9%). It is useful to know the prevalence of cataract that reduces vision to this level as patients are likely to complain of visual difficulties² and may be referred to an ophthalmologist.³ Such information may then be used to adjust activity levels in contracts. If the estimated prevalence and confidence interval are applied to a health district with a population of 45 000 people aged over 65, however, the estimated number of people affected is 2610, but with a confidence interval of 1350 to 4455. When factors such as relative contra-indications to intervention and refusal of treatment are quantified the variation in the number referred

and treated is likely to be even greater. Therein lies the difficulty for both purchasers and providers of health care.

Studies of incidence and prevalence provide an important measure of the burden of a disease in the community; unless these studies are rigorously conducted with a population of suitable size (in this case around 50 000; A K McCallum, unpublished MFPHM thesis) the implications for services are merely intelligent guesstimates.

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Cataract in developing countries

EDITOR,—Andrew R Potter expresses a point of view with which few people would wish to disagree—namely, that if a technology is cheap and quick by all means use it.¹ We would add safety and efficacy as other important variables. Though intracapsular cataract extraction with correction of aphakia with spectacles is indeed inexpensive, quick, and, in good hands, a safe method of curing blindness due to cataract, questions have been raised about the quality of visual rehabilitation in the longer term. Intracapsular cataract extraction with correction of aphakia has been almost universally replaced by extracapsular extraction with intraocular lens implantation in those countries able to afford the necessary technology.

There are arguments for and against both intracapsular and extracapsular cataract extraction, either with or without intraocular lens implantation, in developing countries. The patients' requirements, the equipment and facilities available, and the training and experience of the eye surgeon dictate that the treatment of cataract will also differ according to local circumstances. Controlled trials addressing these complex questions are being undertaken, and their outcome should be awaited.

Potter refers disparagingly to the World Health Organisation's document on the use of intraocular lenses in developing countries.² Intraocular lenses are already being introduced in many developing countries. The purpose of the WHO report is to provide information to allow states to formulate their own policies in such a way as to avoid the mistakes made in the industrialised countries during the evolution of intraocular lenses while maximising the use of limited health care resources. We believe the report to be a valuable and forward looking document, which reflects the views of experienced ophthalmologists and international non-government organisations working in the developing world to eliminate curable blindness.

WHO's prevention of blindness programme has closely collaborated with a group of 10 non-government organisations, forming the consultative committee. The result has been the development of activities and programmes in 83 of 106 countries in which blindness is a public health problem. In addition, WHO, with non-government organisations, has organised workshops and produced publications on childhood blindness; the local preparation of low cost eye medicines; manpower development for eye care in Africa; low cost spectacle production; the distribution of ivermectin

for the treatment of onchocerciasis; and use of intraocular lenses for cataract surgery in developing countries. Rather than criticising WHO, those concerned with the control of blindness should be encouraging WHO's prevention of blindness programme for its valuable initiatives and its efforts to work together with ministries of health and non-government organisations to reduce blindness globally.

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Adrenaline in allergic emergencies

EDITOR,—We disagree with the advice on the correct route for administering adrenaline in allergic emergencies given in both Thomas Hedner and colleagues' paper¹ and Gregory Y H Lip and Malcolm J Metcalfe's letter in reply.² The advice perpetuates the widespread ignorance among British junior doctors regarding anaphylaxis and misconceptions about the role of adrenaline.³ Intravenous adrenaline (5-8 µg/kg) is the foundation drug in treating grade III or IV anaphylactoid reactions (Ring's classification), and case reports of myocardial reactions with intravenous adrenaline do not stand close scrutiny.⁴

In an unpublished survey in which 30 senior house officers from all accident and emergency departments in the north west were interviewed (by MG) 21 did not name adrenaline as the essential drug for this treatable life threatening emergency and 27 did not know the dose and how to calculate the concentration of adrenaline in mg/ml from ampoules marked 1:1000 and 1:10 000.

Our department has now got a clear protocol for anaphylaxis, which is part of our induction course for new casualty officers.

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Altitude induced illness

EDITOR,—A J Pollard's editorial on altitude induced illness provokes me to make several partial refutations and further comments.¹

Firstly, not all rapid ascents to altitudes above 2500 m are characterised by acute mountain sickness. Indeed, in the Mount Everest region of Nepal the incidence of acute mountain sickness has been recorded as 49% among trekkers who flew to 2800 m.²

Secondly, the ascent schedule mentioned is not widely recognised.³ The rule of thumb should be that above 3000 m, each night should be spent on