confusional states (J Dougall, personal communication).

Chest complications were said to have been avoided by the use of spinal anaesthesia. Urbach *et al* found a similar incidence of postoperative chest complications when patients were randomly allocated to spinal or general anaesthesia.¹ Bronchopneumonia was the most common recorded cause of death in the first month after spinal anaesthesia in patients with fractured hips in our studies.^{2,3}

Professor Sikorski and colleagues also comment on the advantages of spinal anaesthesia in total hip replacement. These advantages cannot be assumed to apply to the patient with hip fracture, and, furthermore, some of the evidence quoted is for epidural, not spinal (subarachnoid), anaesthesia. Specifically, in contrast with the findings in hip replacement surgery, spinal anaesthesia is not associated with reduced blood loss in patients with hip fracture.¹

Lower mortality has been shown with spinal anaesthesia than with general anaesthesia in the patient with hip fracture,²⁻⁴ but this effect is transient, and, as our studies have shown, long term mortality and other indices of outcome are identical with both techniques.² The incidence of deep venous thrombosis assessed by venography is, however, significantly lower in the spinal anaesthetic group,⁵ and the reduction in early postoperative mortality in the spinal group is probably due to a reduction in thromboembolism.

While a useful technique, spinal anaesthesia is potentially dangerous in the hands of inexperienced anaesthetists and for inappropriate patients and is particularly hazardous in the presence of hypovolaemia, common in the elderly patient with a fractured hip. The evidence is now convincing that it does not have any major intrinsic superiority over general anaesthesia for the repair of fractured neck of femur, and it is important that the misconceptions mentioned are corrected.

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Reducing errors in the accident department: using radiographers

SIR,—Rather than asking radiographers to interpret x ray films would it not be more prudent to train casualty officers to a higher standard before they start. Many casualty officers are appointed immediately after house officer posts, with consequently very little experience, often to posts with little

supervision or teaching, yet are expected to be experts in all subjects.

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SIR,—May I congratulate Dr Laurence Berman and his colleagues at Northwick Park Hospital on suggesting a method of reducing errors of interpretation of radiographs taken in the casualty department, by the use of formal reporting by radiographers (9 February, p 421). This system runs informally in many accident and emergency departments, but their work suggests that it should be formalised.

May I take issue with several points, however. He states that "an increasing workload has resulted in some casualty departments abandoning reporting of radiographs." The responsibility for reporting of all radiographs must lie with radiology departments and their consultant radiologists. This is still not happening in many accident departments in spite of guidelines drawn up by the Casualty Surgeons Association and agreed by the Royal College of Radiologists. Any move to delegate reporting of accident and emergency x ray films to radiographers¹ could only be regarded as a retrograde step in the safe management of our patients.

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- 1 Aberdour KR. Must radiologists do all the reporting? *Br J Radiol* 1976;49:573.

Treatment of septic arthritis due to *Mycobacterium kansasii*

SIR,—In treating their patient with septic arthritis due to *Mycobacterium kansasii* Dr S R Carroll and colleagues (8 September 1984, p 591) used systemic antituberculous treatment with three drugs (ethambutol, rifampicin, and isoniazid) initially and then added pyrazinamide. During the course of the treatment the patient developed hepatotoxicity. I want to emphasise the role of erythromycin, a much safer drug, in treating atypical mycobacterial infections.

Erythromycin has strong in vitro inhibitory activity against several atypical mycobacteria, particularly photochromogens, which are often resistant to many antituberculous drugs.^{1,2} Molavi and Weinstein found all strains of *Mycobacterium kansasii* and *M. scrofulaceum* and 50% of strains of *M. intracellulare* to be susceptible to erythromycin in concentrations readily produced by conventional doses.³ Erythromycin has been used, usually in a combination therapy, in human atypical mycobacteriosis.^{4,5} We have recently used erythromycin as a single drug in treating cold abscesses after BCG vaccination.⁶ I suggest that in an infection by *Mycobacterium kansasii*, as reported by Dr Carroll and others, erythromycin should be used as a drug of choice because of its obvious advantages over systemic antituberculous treatment. Standard antituberculous drugs should be started only if there is no response. A clinical trial is indicated.

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Monitoring drugs

SIR,—In response to the CSM Updates (5 January, p 58; 2 February, p 383) I also should like to emphasise the important role of clinicians in expanding the state of knowledge about new chemical entities and recently marketed drugs. One area I feel particularly strongly about is that of overdoses. We are currently evaluating a new as yet unmarketed antidepressant compound both in general practice and in hospitals. Reassuring though it is to know from animal toxicity studies that there is a much greater safety margin with this drug than with a standard tricyclic agent, data on how a patient would react to massive overdose can only be obtained from sporadic suicide attempts.

An accident and emergency departmental policy covering overdoses with newly marketed drugs or drugs under trial would solve the problem of how not to miss this valuable information, for the clinician concerned in the trial or the relevant drug company often only becomes aware of the event too late to make any suggestions. In particular, instructions to junior staff might be laid down about the collection and refrigeration of sequential serum and plasma samples, on admission and every six hours thereafter for the first day. Much valuable information would be obtained in this manner. If regulatory bodies and pharmaceutical companies are to make decisions on new chemical entities concerning their suitability as new medicines then they need this accurate and diligently collected data. Busy hospital junior staff would not be wasting their precious time doing favours for profit making organisations; the information they can make available concerning acute toxicity, as well as their adverse reaction data, would provide a valuable service to the community as a whole.

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Who should have an intraocular lens?

SIR,—In his leading article Mr P D Trevor-Roper has portrayed the conservative view regarding intraocular lenses, which is exemplified by his penultimate sentence (23 February, p 581). For many surgeons, however, lens implantation is a routine procedure for most patients using a material which has been in use for 35 years. He fails to mention that the real advance has been the revival of extracapsular cataract surgery (in which the posterior lens capsule is left intact) using modern microsurgical techniques. This has led to a lower

incidence of both the long term complications of macular oedema¹ and retinal detachment^{2,3} and also to the development of single plane posterior chamber lens implants. As with every new procedure, there has been a learning period for surgeons during which there has been a higher incidence of complications, particularly corneal endothelial damage, although these are usually related to the cataract extraction itself rather than the comparatively simple procedure of lens implantation. He has quoted three series for the rather high incidence of corneal oedema (12%), in each of which neither extracapsular surgery nor single plane posterior chamber lenses were used. Corresponding figures using modern techniques and lenses are 1-2%.⁴

The quoted market price of £100 per lens implant (although our current cost is £75) is a bargain for the National Health Service. The extracapsular technique allows a shorter stay in hospital and fewer outpatient visits, and afterwards patients obtain their spectacles from their own optician as they did before surgery. To achieve a similar quality of vision without a lens implant necessitates a contact lens, which costs the hospital eye service £50 to £75 and needs to be renewed several times in a lifetime. The decision of some British hospitals to curtail their use of lens implants is bureaucratic financial mismanagement. It is an injustice to suggest that commercial and social pressures have significantly influenced the increasing number of surgeons who, having mastered this new technique, have had such successful and gratifying results and who have consequently much broader indications for lens implantation than those quoted.

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SIR,—I am concerned that Mr P D Trevor-Roper's leading article on intraocular lens implantation will mislead the non-ophthalmic medical community. The article failed completely to indicate the unparalleled sharing of knowledge in this subject between experienced surgeons, the less experienced, and initiates. Indeed the UK Intraocular Lens Implant Society was established for that very purpose and to ensure that all our problems are revealed, in a subject where clinical trials are not possible. The major reason for this is the rapid advances in microsurgical techniques and in implant design, which are beyond dispute and therefore necessitate gradual modifications to our methods in successive groups of patients. Clinical trials intended to last for an appreciable time have had to be abandoned because accepted microsurgical progress has rendered the trial techniques clinically obsolete.

Education, by courses, live surgery, visits, round table discussions, regional, national, and international meetings as well as multiple publications, has ensured that the complications of intraocular lens implantation are diminishing; in any case the complication rate is only about 5%, not all of which are visually important.¹ A 95% success rate is a reasonable

proposition to offer a patient with the need for cataract and lens implant surgery. There is not one method of implantation, but all successful methods share the same attention to microsurgical detail and lens design, whose acceptable features have been learnt by hard experience.¹

Mr Trevor-Roper also failed even to mention the equally important development of "viscosurgery," which has a special relationship to intraocular lens implantation. The results of implantation before viscosurgery was developed (before 1980-1), which are most quoted because of the "test of time" factor, are not relevant to current implantations. The suggestion therefore that intraocular lens implantation should be confined to the elderly and to selected patients with unilateral cataract does not and should not obtain in practice. There is, fortunately, an inverse relationship between a surgeon's experience of implantation and the contraindications to its application.²

Two further points are worthy of mention—namely, the cost effectiveness of the procedure, which is immeasurable in terms of visual rehabilitation, and the sharp distinction to be drawn between the naturally conservative British ophthalmic surgeons and their USA counterparts, who to the outsider seem to be engaged in an unseemly commercial approach to intraocular lens implantation.

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Convulsions associated with cyclosporin A

SIR,—Neurological manifestations of cyclosporin toxicity have been recognised for several years but are now being reported with increasing frequency, and several points deserve further consideration. Convulsions, neuralgia, paraesthesia, motor spinal cord syndrome, cerebellar like syndrome, and tremor have been attributed to cyclosporin neurotoxicity. However, the evidence suggesting that cyclosporin is directly neurotoxic is very limited. In the continuing long term safety follow up study more than 3000 kidney transplant recipients and almost 800 bone marrow transplant recipients are being carefully monitored. The incidence of tremor is 21% and 16% respectively and that of convulsions 1.5% and 5.5% (data on file, Sandoz, Basle). In most reported cases the neurological manifestations resolve relatively quickly on reduction in dose or interruption of cyclosporin therapy, which would tend to suggest that degenerative neurotoxic effects are not occurring.

A number of factors seem to contribute to an individual's susceptibility to develop severe neurological side effects while on cyclosporin. In recipients of bone marrow transplants haematological malignancy, intrathecal methotrexate, and total body irradiation may increase the likelihood of neurological complications^{1,2}; the presence of hypertension,³ concomitant therapy with methylprednisolone,⁴ and the presence of a potential epileptogenic focus⁵ may also predispose to convulsions. Recently hypomagnesaemia has been reported in association with cyclosporin neurotoxicity,⁶ although it is clearly not a prerequisite for its occurrence.⁷ The cause of cyclosporin neuro-

toxicity will probably prove to be multifactorial, but clearly most serious neurological manifestations are broadly correlated with high cyclosporin concentrations, which often grossly exceed the upper limit of the recommended therapeutic range.

We therefore endorse the recommendation of Dr M Beaman and colleagues (12 January, p 139) that the use of cyclosporin should include regular monitoring of drug concentrations, but point out that the use of plasma or serum is subject to inaccuracies due to the temperature dependent uptake of cyclosporin by red blood cells.^{8,9} Recent evidence suggests that these problems may not be completely overcome by strict adherence to a standardised sample handling procedure.¹⁰ For these reasons we currently recommend the use of whole blood for the assay sample. However, as several analytical methods are in use authors should qualify all cyclosporin concentration values by indicating the specimen type and the method of sample preparation and assay.

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The antiprogesterones are coming

SIR,—The antiprogesterone property of RU 486 is a very important basis for "a real breakthrough in the regulation of fertility" as Drs David L Healy and Hamish A Fraser say in their leading article (23 February, p 580). Its antiglucocorticoid property is also mentioned as a possible new medical treatment for Cushing's syndrome, but I think a more likely clinical application is in the topical treatment of open angle glaucoma. We have already shown a small fall in intraocular pressure in rabbits with this new drug¹ and would expect a clinically useful fall in intraocular pressure in patients with, or hereditarily predisposed to, open angle glaucoma, whose trabecular meshwork is probably quite susceptible to their own physiological level of corticosteroids in their tissues and circulation.¹ Of course, the drug's antiprogesterone property may be the pressure reducing agency.

Further work to be published has confirmed our preliminary observations. Looking to the future, I can foresee the evolution of a large series of much more selectively antiprogesterone compounds, on the one hand, and, on the other, a series of selective