In your reference to spectacles what you say certainly applies to lenticular spectacles with their very narrow field of vision and the 30° ring of blindness inside the spectacle frame. No wonder the patient will not accept this! I would not and finally was able to get full-sized, minimum thickness, bifocal spectacles which are no heavier than the ordinary spectacles now fashionable. As the peripheral ring scotoma is outside the spectacle frame my field of vision is adequate to drive in London every day, which I could not do wearing my lenticular spectacles.

J B MORWOOD

Wandsworth and East Merton
Teaching District,
St James's Hospital Balham,
London SW17

Peptic ulceration, gastric secretion, and renal transplantation

SIR,—We wish to comment on the paper by Mr G D Chisholm and others (25 June, p 1630) concerning peptic ulcer and gastric acidity in renal transplantation. The results concerning the incidence of peptic ulcer in dialysis patients are at variance with the main body of literature on this point.¹ Using both radiology and endoscopy we found that 15 (48%) of 31 dialysis patients had ulcer disease.² Coarsening of mucosal folds was a frequent barium meal finding in our series and this has been noted in other studies of uraemic patients.³ We found that eight of 10 such patients had endoscopic evidence of ulcer disease and we would therefore question results based on radiology alone. We would not agree that the high incidence of gastrointestinal bleeding and perforation seen after transplantation can be attributed to immunosuppressive drugs causing peptic ulcer⁴; rather we feel that it is due to (1) steroid-induced complications of already existing ulcer and (2) steroid- or aspirin-induced gastric erosions.

We confirm the findings that gastric acidity in chronic renal failure tends to be higher than in controls but that the difference does not attain statistical significance. We have found, however, that the distribution pattern of peak acid output in uraemic patients is abnormal—there is an increase in both acid hypersecretors and hyposecretors. We therefore accept that a significant proportion of uraemic patients have a tendency to hyperacidity. We have also confirmed the findings of McConnell *et al*⁵ that regular dialysis (not renal transplantation as stated) produces a significant rise in gastric acidity, and it would therefore be interesting to know when pentagastrin tests were carried out on the Hammersmith patients relative to commencement of dialysis. In addition it is probable that the height of the blood urea concentration influences gastric acidity,⁶ although differing opinions are held on this.^{7,8} We feel, however, that it may be relevant to the varying results of studies on this topic and have therefore carried out gastric acidity studies on the same day—in relation to dialysis—for all patients (in view of the saw-toothed pattern of blood urea in the dialysed patient).

With regard to upper gastrointestinal complications in renal transplantation we agree that attempts to predict patients at risk is a misdirected approach, but we cannot agree that routine screening is therefore of no practical value. We recommend that the emphasis should be on improved detection of existing

ulcer disease (endoscopy) and scrutiny of other relevant factors. We have seen upper gastrointestinal complications in five of 70 renal transplant patients—three were associated with antirejection treatment during the early post-transplant period and two with aspirin ingestion. Drugs with an erosive influence (steroids) should therefore be given sparingly and those which may contribute a bleeding tendency (actinomycin C, cyclophosphamide, azathioprine, and antilymphocyte globulin) avoided if possible. In patients with peptic ulcer and high or normal gastric acidity the prophylactic use of cimetidine should be considered during the first six months after transplantation and also during subsequent rejection episodes. There is no point, however, in giving an acid-lowering drug to patients with no acid, and to suggest the blanket use of such a drug is not justified.

C C DOHERTY
MARY G MCGEOWN

Renal Unit,
Belfast City Hospital,
Belfast

¹ Langman, M J S, and Cooke, A R, *Lancet*, 1976, **1**, 680.

² Doherty, C C, *et al*, *Proceedings of the XIVth European Dialysis and Transplant Association*, 1977. In press.

³ Weiner, S N, *et al*, *Radiology*, 1969, **92**, 110.

⁴ Conn, H O, and Blitzer, B L, *New England Journal of Medicine*, 1976, **294**, 473.

⁵ McConnell, J B, *et al*, *Lancet*, 1975, **2**, 1121.

⁶ Lieber, C S, and Lefevre, A, *Journal of Clinical Investigation*, 1959, **38**, 1271.

⁷ Fitzgerald, O, and Murphy, P, *Irish Journal of Medical Science*, 1950, p 97.

⁸ Gingell, J C, *et al*, *British Medical Journal*, 1968, **4**, 424.

Donor insemination

SIR,—Drs G W Pennington and Sandra Naik (21 May, p 1327) state that “as the law stands in England today a child born as the result of AID is illegitimate.” This is not so and it is surprising that, although the authors quote Lord Kilbrandon¹ at the end of their article, concluding in his words, that “AID is here to stay,” they do not quote his very emphatic statement at the beginning of the symposium that the law of England is perfectly clear on this matter—“everything in England is legal until it is made illegal.”

The advice that I have given for the past 30 years in all the cases of donor insemination I have treated is that adoption proceedings are unnecessary and can cause much distress plus the additional risk of a breach of confidentiality.

Until the law of England is altered from that as stated by Lord Kilbrandon, I shall continue to advise my patients that such a child is not illegitimate and can only be made so by a decision of a court of law; such case law in England does not yet exist.

BERNARD SANDLER

Manchester

¹ Kilbrandon, Lord, in *Law and Ethics of AID and Embryo Transfer*, Ciba Foundation Symposium 17 (new series). Amsterdam, Elsevier, 1973.

Comparison of treatment with fast neutrons and photons

SIR,—The second report on results of a clinical trial of fast neutrons in the treatment of advanced head and neck cancer in the MRC cyclotron unit at Hammersmith Hospital by Dr Mary Catterall and her colleagues (25 June, p 1642) is of considerable importance to the

evaluation of the oxygen effect in radiotherapy. It is generally accepted that the beneficial effects of neutrons in cancer treatment is due to the presence in tumours of hypoxic cells, which are much more radioresistant to photons than to neutrons. The first definitive measure taken to counteract radioresistance due to tumour hypoxia was to give x- or γ-ray treatment under hyperbaric oxygen (HPO).¹ Because it was widely agreed that hypoxia was largely responsible for the poor response of advanced cancers to photons such tumours have been principally selected for trials by treatment with photons in HPO and with neutrons. It is particularly interesting, therefore, to find that the results of the current neutron trial closely resemble those previously obtained in several centres with photons in HPO. Thus complete and persistent clinical regression of disease in the irradiated region resulted in 76% of the 82 cases treated at Hammersmith with neutrons (53% one-year survival, 14% radionecrosis) and in 77% of 138 comparable patients reported in 1968 who were treated in HPO with photons (63% one-year survival, 18% radionecrosis).² Furthermore, the results of conventional radical treatment of the control patients treated with photons in air were comparable in the two series—namely, tumour clearance rates were 19% (neutron series) and 15% (HPO series), but survival rates did not differ significantly from treatment with neutrons or with photons in HPO.

It follows that advanced (T₃, T₄ stage) head and neck cancer is essentially incurable but that very much improved palliation can be obtained equally well with photons in HPO and with neutrons. Yet one finds that radiotherapy with photons in HPO, pioneered in Britain by Churchill-Davidson *et al*,¹ has received little support here and abroad. Also, preliminary reports on neutron therapy trials in the USA do not show much enthusiasm. The clinical trials with photons in HPO seem to have suffered from attempts which had to be made to sort out—largely by trial and error—the imponderables associated with prescription of optimal fractionation of radiation dosage in general. This problem has complicated all attempts made to confirm or disprove the advantages to radiotherapy of using HPO reported on more than a decade ago.^{1,2} Irrespective of the type of fractionation used to treat patients in air in such trials, the objection is invariably raised that results would have been better if some alternative regimen had been employed.

One must stress that HPO radiotherapy can be given with safety and made widely available at negligible cost compared with neutron therapy. Indeed, the difficulties associated with providing facilities for neutron radiotherapy are formidable in view of the complexity and cost of apparatus, which will inevitably limit availability and practical applications. Consequently one cannot help but feel that the use of HPO warrants renewed enthusiasm. But this will depend primarily on radiotherapists coming to terms with fractionation of dose. The advantage of prolonged daily fractionation over fewer larger fractions has not been resolved. Any future national radiotherapeutic trials should aim to define, once and for all, the advantages (if any) of prolonged fractionation regimens for photons administered *in air*. After many years of trial devoted to the problem of fractionation of treatment in HPO a tentative conclusion seems to have been reached that in HPO fewer larger x-ray fractions, administered over shorter overall times (as originally advocated and adopted¹), give the best results. The time is now long overdue for a systematic examination by clinical trial confined to fractionation schemes for conventional photon therapy in air, to determine if a particular regimen can be formulated which will cause complete and persistent clinical regression of advanced (T₃, T₄) head and neck cancer in about 75% of cases with no more than a 20% necrosis

rate and thus afford equally as good results as for photon therapy in HPO or irradiation with fast neutrons. Such a trial might conflict with the individual preferences of radiotherapists but not with ethical considerations. Also it should be undertaken before less advanced, more curable cancers are submitted to trial by radiotherapeutic management by the techniques of HPO-photon or neutron therapy, whose advantages necessarily remain sub judice for lack of decisive information about optimal fractionation of dose "in air."

This baseline would also greatly assist the experimental radiotherapist, who seeks to apply clinically knowledge derived from laboratory experiment of differential radiosensitisation of tumours by physical and chemical means (including HPO and neutrons). Radiobiologists have provided much useful information which clinicians can tentatively use to plan radiotherapeutic treatments which vary in the number and size of dose fractions. But no amount of further test-tube or animal experimentation will serve to provide a definitive answer to the question of optimal dose fractionation using conventional x- and γ -ray facilities to treat cancers in humans and thus pave the way to the trial of new modalities.

H A S VAN DEN BRENK

St Thomas's Hospital
Medical School,
London SE1

¹ Churchill-Davidson, I, Sanger, C, and Thomlinson, R H, *Lancet*, 1955, **1**, 1091.

² van den Brenk, H A S, *American Journal of Roentgenology*, 1968, **102**, 8.

Commitment to oncology

SIR,—I am glad Professor K D Bagshawe has written (18 June, p 1597) about the development of "medical oncology." No single specialty either can or should make an exclusive claim to the "control of non-surgical cancer work." Even surgeons themselves do not wish to restrict their work to the operating theatre only. Many in my own specialty, however, naturally feel that many years' whole-time experience of treatment of cancer has some value and that too extreme advocacy of cancer chemotherapy should not be accepted uncritically. There are hawks and doves on both sides, as the correspondence columns show.

British radiotherapy departments have created some of the recent advances in cancer treatment (including some in chemotherapy)—the treatment of lymphoma, testicular tumours, the early introduction of random controlled trials, and technical aspects such as the use of fast neutron therapy and of computers are examples I should not need to quote or amplify. Radiotherapy has achieved this in spite of suffering for too long not only from having a heavy service work load but also from having far too few properly staffed academic university departments. The initiative of the cancer research funds in supporting departments of medical oncology has been of value, but it would also now help if there could be endowment of a few more similar departments of radiation oncology. Many of our best young people also emigrate for lack of opportunities in Britain.

Our training in radiotherapy and oncology has been changing steadily and will continue to do so, both in terms of syllabus and examination content and examination framework, with even greater emphasis on cancer management in general—that is, "oncology." Some medical

oncology trainees themselves have already asked whether they may come to the Royal College of Radiologists' London day release course. No detailed proposals have yet been made for any common pathway for training in medical and radiation oncology, but it would surely be of great value for there to be combined training for at least part of the time. We ought to discuss the idea, with the views of senior and junior oncologists of all disciplines being welcomed. The present training of radiation oncologists lasts as long as that of a medical oncologist. The techniques of radiotherapy and of chemotherapy only take up a part, even though they are very important. The major part for all oncologists should be the clinical care of cancer, its natural history, diagnosis, and management, and the relevant basic sciences, pathology especially in the widest sense, medical statistics, and research aspects.

The number of patients being referred to radiotherapy and oncology departments continues to increase, and chemotherapy so far seems needed not to displace but to supplement either radiation or surgery or both. I do not think many of us will wish to replace radiotherapists with chemotherapists but we will support new posts of any kind in oncology if their value is demonstrated.

May I repeat that collaboration is needed rather than competition? I would personally be extremely glad to receive detailed suggestions from anyone interested.

KEITH HALNAN

Glasgow

. This correspondence is now closed.—ED, BMJ.

Incidence of animal bites in Leeds

SIR,—Since the publication of my note on this subject (2 July, p 53) it has been pointed out to me that the figure of £2m I quoted as an estimate of the cost of bite injuries in Leeds in a year seemed very high. I must apologise for a misunderstanding here. The figure represents my best, admittedly very rough, estimate of all costs to the Leeds metropolitan community, direct and indirect, arising from bites and not, as the article suggested, direct costs alone.

I would recall that it was clear from inquiry that bites treated in hospital are only a fraction of the total. Considerable general practitioner work is also involved; bites caused time lost from work; dogs wasted school-teachers' time and in a number of ways gave rise to calls on the public services. Nevertheless I regret the misleading impression. Direct costs to the hospital services would be about £30 000 for the year investigated.

ELIZABETH HERVEY

Department of Physiology,
University of Leeds

Impacting the wax

SIR,—May I use a short space in your columns to condemn the use of cotton-tipped "buds" in ears?

My experience in conducting busy otological clinics has impressed me with the increasing number of patients who have wax impacted in the deeper part of their bony meatuses. They have admitted to using cotton-tipped "buds"

which are sold over the counter in chemist's shops or in supermarkets. Many of them have followed advice passed on from previous generations of the importance of cleaning the ears thoroughly. This advice has been given without the knowledge that the meatal skin has the natural tendency to extrude the wax as part of the self-cleansing mechanism. A cotton-tipped "bud" acts as a plunger and pushes the wax into the deeper part of the body canal, making removal by direct vision very difficult. I have also had to deal with ear drums that have been damaged when the patient has been cleaning the ear with such a "bud" but has had to answer a telephone call without removing the "bud" and then pushed the probe against the wall and consequently through the drum.

In order to avoid such further problems, I would suggest that a warning notice be printed on each packet restricting the use to the orifice of the external canal. I personally have advised all my patients against them and hope that their use in the future will be seriously discouraged.

J SIEGLER

Liverpool

Schistosomal myelopathy

SIR,—The evidence presented by Dr J Cohen and others (14 May, p 1258) on the acute necrotising schistosomal myelitis of their Greek patient being "partly mediated by the immune response to either worm or ova antigen or both" did not convince me. With regard to diagnosis as well as prognosis I found the term "necrotising" especially disturbing. We should not speak of a "necrotising" process unless we have seen the histological evidence. I understand that the patient is still alive. I wonder also if the term "ascending myeloradiculopathy" would have described the clinical picture more accurately as compared with "transverse myelitis."

A single negative myelogram never proves that a granulomatous schistosomal lesion of the spinal cord is lacking. A negative myelogram may become positive in the course of time.¹ Neither does a positive myelogram exclude myelitis. The article does not make it clear how the authors came to the conclusion that the IgG of the CSF included antibodies to *Schistosoma mansoni* ova and worms.

I beg to disagree with the authors on the relevance of their citations of the literature. (1) The article by Phillips and Draper² deals only with immune complexes, which were not found to be present in this patient. (2) The article by Wakefield *et al*³ has been wrongly cited: "the characteristic findings in the CSF of lymphocytic pleocytosis with raised protein concentrations. . . ." But Wakefield *et al* wrote: "we feel that the important finding in our cases was the presence of eosinophilia in the spinal fluid. . . ." (3) The article by Bird⁴ has been wrongly quoted: "The importance of the individual allergic response to acute infestation with *S. mansoni* has long been recognised. . . ." But Dr Bird writes: "it would appear that direct invasion by worms is more likely to occur within the spine than within other organs because of the venous anastomoses referred to. The distribution of the lesions in the lower parts of the cord, not only in our cases but also in all those referred to in the literature, tends to confirm this hypothesis. . . ."

(4) It remains unproved that the myeloradiculopathy in this patient was in fact due to an allergic process alone. It may be more logical to assume that the myeloradiculopathy in this patient was the result of direct invasion by ova or worm or both.³ (5) Long before the claim of Cohen *et al* to priority