In your reference to spectacles what you say certainly applies to lenticulus 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 lenticulus spectacles.

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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 ulcer[4]; 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.

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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 Kilbrandon[1] 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.

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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 (T_3, T_4 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 adopted[1]), 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 (T_3, T_4) head and neck cancer in about 75% of cases with no more than a 20% necrosis