the best of our knowledge been reported previously.

Two cases occurred at laparoscopic sterilisation. In one the broken metallic bit was retrieved by emergency laparotomy, while in the second case the broken fragment could not be located at laparotomy but was removed with the aid of the x-ray image intensifier five days later, when a repeat laparotomy was performed. There was no obvious peritoneal or omental reaction seen at operation. The third case occurred in mid-December 1978, during application of silastic rings to the round ligaments for ventrosuspension. After unsuccessful attempts at removal with the Palmer forceps, the foreign body was left behind. To date, no adverse effect has been noted.

Since the forceps prongs of the ring applicator are made of surgical grade stainless steel, which should not cause a toxic reaction,¹ removal of the broken metallic fragment by laparotomy is probably unnecessary if laparoscopic retrieval fails. However, the possibility of its migration is an unsettled question.

The metallic prongs are constantly subjected to stress and it would be advisable each time to check their condition prior to use. They should be replaced if the tips are malaligned or are bent as either would indicate excessive strain.²

T H GOH

Department of Obstetrics and
Gynaecology,
University Hospital,
Kuala Lumpur, Malaysia

¹ Schofield, S R, personal communication.

² KLI Inc, Technical Bulletin 000685-2, Ivyland, PA, USA, KLI Inc, 1976.

Primary screening for visual disorders in children

SIR,—Mrs A V MacLellan and Dr P Harker reported a highly successful method of screening preschool children in a rural area for visual disorders (14 April, p 994). I should like to reinforce their recommendations by relating that a very similar service has been given in the urban London borough of Barnet, with great relief to ophthalmologists in the hospital and to mothers of small children, who for obvious reasons preferred an immediate appointment nearer their homes. A succession of orthoptists over approximately 10 years have had no difficulty in arranging sessions and have proved that "case finding" at an earlier age is more thorough than the orthodox hit and miss.

Mrs MacLellan quotes three very apt histories of children likely to be missed except by such a system as hers and ours. I would draw particular attention to case 1, where near vision was reduced, which is seldom tested in young children, and to case 3, which shows the importance of testing siblings.

The main difficulty in arranging such a service appears to be lack of liaison and interest on the part of the community and hospital administrators and ophthalmologists.

P A GARDINER

London W1N 3FA

Continuous narcotic infusions for relief of postoperative pain

SIR,—I was delighted to read the paper on relief of postoperative pain by Dr Jeremy J Church (14 April, p 977). His technique will be a most useful contribution to the problem. But there are two points that I wish to raise.

Firstly, if Dr Church could find the time to titrate his loading doses¹ he would not have to adjust the infusion rates so often. And his results would be even better.²

Secondly, his technique is cheap, effective, and simple; however, it needs at least intensive nursing care. I use a less demanding technique when patients have to return to general surgical wards on operation days. I give buprenorphine (Temgesic), 0.1 mg/20 kg body weight less 0.1 mg for each decade of age over 70 years, intravenously during induction of general anaesthesia. If no more than 0.5% halothane is used and it is stopped 30 minutes before the end of the operation respiration is not depressed and recovery is quick. I give papaveretum, 20 mg intramuscularly, when the patient's reflexes have begun to return but before pain is felt. Neither the level of consciousness, the respiratory system nor the cardiovascular system is depressed. This is due to the antagonist action of buprenorphine. This regimen ensures that patients feel no pain for 2-12 hours after operation, the majority lying within the range 6-8 hours. There is ample time for further injections of analgesics, usually buprenorphine, since pain develops gradually. It is my experience that if pain is prevented during the first 24 postoperative hours by this or any other technique pain on the second and subsequent days is much reduced.

E N S FRY

Department of Anaesthesia,
North Tees General Hospital,
Stockton-on-Tees,
Cleveland TS19 8PE

¹ Fry, E N S, and Desphande, S, *British Medical Journal*, 1977, 2, 870.

² Fry, E N S, *Annals of the Royal College of Surgeons of England*, in press.

Oligoclonal immunoglobulins and multiple sclerosis

SIR,—We read with interest the article by Dr E J Thompson and others (6 January, p 16) entitled "Oligoclonal immunoglobulins and plasma cells in spinal fluid of patients with multiple sclerosis." We would like to draw attention to one aspect of interpretation when looking for the presence of oligoclonal bands in the cerebrospinal fluid (CSF).

Using Thompson's modification of polyacrylamide gel electrophoresis¹ and staining with Coomassie Blue, we have examined the CSF of 131 patients whose provisional diagnoses on admission included multiple sclerosis, and 33 control CSF samples from patients who clinically had no neurological disease. Of the 33 control samples, 10 showed one or more oligoclonal bands in the γ region following electrophoresis. In five of these 10 a serum sample (100 μ g protein) was run with the CSF sample (100 μ g protein) and the bands present in the CSF were found to correlate in position with bands in the serum sample. In eight other control samples where serum and CSF samples were run simultaneously, oligoclonal bands present in the serum were not found in the CSF, which showed only a diffuse pattern. The remaining 15 control CSF samples showed only a diffuse pattern. Over one-third of our 131 patients CSF samples have shown bands which correlated with bands in their serum. These patients, with two exceptions, have subsequently not been diagnosed clinically as having multiple sclerosis. We therefore assume that in these cases the discrete bands found in the CSF are due to diffusion into the CSF of immunoglobulins or other proteins present in the plasma.

As a consequence of these findings, we routinely perform electrophoresis on CSF and serum from each patient and disregard (for diagnostic purposes) those oligoclonal bands in the γ region of the CSF

electrophoretogram which correlate in position with those of serum. It has also been found that CSF samples left more than 24 hours at 4°C are not suitable for electrophoretic analysis, as the bands become indistinct.

In summary, to avoid false positive results, it is necessary to run a fresh serum sample simultaneously with each fresh, red-cell-free CSF sample. Only those bands in the CSF which do not have a corresponding band in the serum should be called abnormal oligoclonal immunoglobulins.

B R CASEY
A J MASON

Wellington Hospital,
New Zealand

Beta-blockers and renal function

SIR,—The letter from Dr R Wilkinson (3 March, p 617) commenting on the paper by Dr A D Wright and others (20 January, p 159) regarding reduction in renal function with beta-blockers aligns with observations that propranolol caused a reduction in renal plasma flow from 213 to 184 ml/min/100 g in 12 patients with essential hypertension.¹ However, such studies and the controversy over the relative effects of cardioselective and non-cardioselective agents only tend to highlight the fact that all beta-blockers studied to date have been shown to reduce renal function.

Recent studies with nadolol,² using a xenon-133 washout technique have shown maximal increases in renal blood flow compared with control ranging from 16% to 26%. Eight volunteers on a low-sodium diet were studied, three normotensive and five hypertensive. Dosage ranged from 0.3 to 10 μ g/kg. Mean renal blood flow increased from 270 ± 19 ml/100 g/min in the control state by a mean of 46.9 ± 9 ml/100 g/min at 1.0 μ g/kg, by 72 ± 4 ml/100 g/min at 3 μ g/kg, and 70 ± 5 ml/100 g/min at 10 μ g/kg—an increase of 26%. In addition, a dose-ranging clinical study of the treatment of hypertension with nadolol³ showed an increase in 24-hour sodium excretion from a pretreatment average of 203 mmol(mEq) to 258 mmol after 14 weeks' treatment.

As Dr Wilkinson points out, such an effect on renal function may well be of importance in patients with renal disease on treatment with beta-blockers.

D A JACKSON

E R Squibb and Sons Ltd,
Twickenham, Middx TW1 3QT

¹ Sullivan, J M, Adams, D F, and Hollenberg, N K, *Clinical Research*, 1976, 39, 532.

² Hollenberg, N K, et al, *British Journal of Clinical Pharmacology*, 1979, 7, 219.

³ Frithz, G, *Current Medical Research and Opinion*, 1978, 5, 383.

Treatment of exophthalmos and pretibial myxoedema with plasmapheresis

SIR,—The observations of Dr Dandona and others (10 February, p 374) on treatment of exophthalmos and pretibial myxoedema by plasmapheresis are certainly interesting, but the emphasis on attributing the beneficial result to a drop in the concentration of thyroid-stimulating immunoglobulins (or ophthalmogenic IgG or dermatogenic IgG) is not justified by the data.

Plasmapheresis obviously could lower the concentration of many different proteins present in plasma—for example, thyroglobulin

and antithyroglobulin, to mention just two others, for there is at least evidence to support a pathogenetic role in ophthalmopathy.¹⁻³ In my opinion the data presented do not permit any conclusions to be drawn regarding the pathogenetic agent for either the ophthalmopathy or the dermatopathy.

JOSEPH P KRISS

Division of Nuclear Medicine,
Stanford University School of Medicine,
Stanford, California 94305, USA

¹ Konishi, J, Herman, M M, and Kriss, J P, *Endocrinology*, 1974, **96**, 434.

² Mullin, B R, et al, *Endocrinology*, 1977, **100**, 351.

³ Kriss, J P, and Mehdi, S Q, *Proceedings of the National Academy of Sciences, of the United States of America*, in press.

What shall we teach undergraduates?

SIR,—This was an interesting paper (24 March, p 805) but, while many of the conclusions might have been predicted, we were disappointed not to find in the paper the need to teach undergraduates the problems of the management of the dying patient or terminal care. Much has been learned about this recently¹ but undergraduates still do not receive adequate formal instruction about it. They are often bewildered when the need to treat such patients in hospital or general practice arises. We make a strong plea for this subject to be included in all undergraduate medical curricula.

K N V PALMER

University Department of Medicine,
Aberdeen AB9 2ZD

L A M WILLS

South Grampian Health District

¹ Wills, L A M, *Postgraduate Medical Journal*, 1978, **54**, 391.

SIR,—We were interested in the article by Professor V Wright and others on what to teach undergraduates (24 March, p 805) but we cannot agree with their methods or conclusions. To ask a group of people trained in a rigid, didactic system to evaluate it will only tend to perpetuate that system. Moreover, to ask 85 questions of 600 randomly selected practising doctors does not allow for anything but the simple answers requested to these questions; neither could busy persons be expected to devote time and deep thought to add extra comments. Furthermore, the division of whole "specialties" into high and low priorities is spurious.

We do not believe that it is helpful to continue training medical students under a series of headings such as "general medicine," "general surgery," etc. The sooner clinical medicine gets away from a "Big Five" attitude the better patients will be served, as categorisation in this way is an administrative convenience which obscures the true needs of the population. Patients have particular problems such as low back pain, a burn, sepsis, or trying to adjust to the knowledge of their impending death from carcinomatosis. Therefore a topic-based approach to clinical undergraduate training would be more appropriate.

There are a few essential facts (that is, high priority) that an undergraduate has to learn and the identification of these leaves little room for argument. Above and beyond these basics what should be taught could be agreed locally, depending on local needs and on the able teachers available. To this end a league table of teachers, compiled by the students taught and by the "curriculum committee" based on

performance, would identify those capable of furthering student education. We also suggest that recently qualified graduates should be asked about the deficiencies and strengths of the course they followed, in the light of their postgraduate experience of three to four years.

ARTHUR M MORRIS

Dundee Royal Infirmary,
Dundee

IAN M MORRIS

Northamptonshire Hospitals

Baragwanath Hospital, 1978

SIR,—Mr Wasily Sakalo's *Letter from . . . Soweto* (17 March, p 739) recounting his experiences at Baragwanath Hospital, 1978, made interesting reading. I should like to present the most recent developments regarding the question of equal pay for equal work in the medical profession in South Africa.

In 1977 the Minister of Health made it clear that it was government policy to close the wage gap between the races in all work categories (but no undertaking was given that it would in fact be closed). In the mean time, the Medical Association of South Africa continued to press for wage parity, which it had been doing since 1967. It has now been announced in Pretoria that 400 black doctors, mainly specialists, employed by the Department of Health would be paid the same as their white colleagues; and that in the next round of salary increases for doctors wage discrimination would be all but eliminated. The details are not yet available, but it is expected that the increases will be similar to other recent Civil Service increases: 10% for whites, 12.5% for coloureds and Indians, and 15% for blacks. This has been hailed as a major breakthrough and to a large extent it is now anticipated that salary discrimination among full-time professional staff will now disappear.

Without going into the finer details of South African taxation, it should be remembered, however, that in South Africa whites and blacks are so differently taxed that when they are paid the same salary, the black would be better off by far in terms of his net salary after tax. This is due to the Bantu Taxation Act of 1969, which makes no provision for taxing income above R20 129.00 in blacks (while whites earning more than R28 000.00 are taxed 72% for every R1 in excess). Furthermore a married black couple are taxed separately and not jointly as are the whites, which is a highly profitable situation to be in if the wife is in employment. This disparity in taxation is present at all salary levels, and will obviously need to be revised in the not too distant future, when it appears that salaries will, in fact, be equal for all the racial groups. At the moment it appears as though the coloureds and Indians are the worst off, as they are taxed and assessed the same as whites, and yet earn less than them.

I would like to take issue with Mr Sakalo's statement that "the South African government's racist policies are again clear in that the white hospitals have monetary preference over the black . . . and that almost a decade of talks have failed to finalise a new 2000-bed black hospital." Not only has this hospital now been built, but it is attached to a new medical school just outside Pretoria, which will admit black medical students from within and outside the borders of the Republic.

In general, however, his paper is well

balanced as undeniably we do have major problems in health care in South Africa which will take time, energy, and dedication to solve.

ERROL M CORNISH

Cape Town,
7405 South Africa

World Medical Association

SIR,—I am mystified at the decision of the BMA Council to recommend withdrawal of the BMA from membership of the World Medical Association at the end of 1979. As a member of the BMA for some 30 years, who retained membership for many years after my own association, the Australian Medical Association, had cut the apron strings, I have always looked on the BMA as a leader in the world of medicine. I repeatedly said as much, and more, in print during the 20 years I was editor of the *Medical Journal of Australia*. I also regarded the BMA as one of the bulwarks of the World Medical Association, on whose council many distinguished members of the BMA have served.

At the 1978 World Medical Assembly in Manila the BMA initiated and carried through a number of resolutions of major importance on a world level. It would have taken a very cynical observer to infer from a reasonable observation of that assembly that the BMA considered the WMA to be other than the important, and indeed indispensable, international medical body that it is.

The Annual Report of Council (*BMJ*, 7 April) conveys a similar impression (p 18) right up to the extraordinary anticlimactic recommendation for withdrawal. The reasons given are an exceedingly vague reference to "objections" to the WMA's new constitution and the desire to save £18 000 per annum. In the same report (p 3) is the official announcement that the Council has awarded the Association's Gold Medal to Mr Walpole Lewin and the recommendation that he be elected a vice-president of the Association. Mr Lewin is the present Chairman of Council of the World Medical Association. He would have to resign that office immediately if the BMA ceased its membership.

The BMA Council's recommendation of withdrawal from the WMA if adopted by the Representative Body would deprive the WMA of a founder member which has contributed (and could go on contributing) invaluable to the cause of medicine and the medical profession in the world. It would also deprive the WMA Council of some of the best chairmen it has had for many a year. The reasons given seem unbelievably flimsy. I hope that the Representative Body will see them to be so.

RONALD R WINTON

Drummoyne,
New South Wales, Australia

The new consultant contract

SIR,—The draft implementation circular has rekindled debate on the new consultant contract. Legalistic in form, it has inevitably given rise to fears and some misconceptions, which were highlighted in the letter from Dr D Hunter Smith and colleagues (31 March, p 895). Their points need answering.

The problem with the present open-ended contract is that it defies definition and therefore has never been and will never be properly