but for the same reason it gives us justification for teaching our younger colleagues local techniques under general anaesthesia. We would avail ourselves of this opportunity, but surgeons will need to be tolerant of slightly increased delays between cases.

As an anaesthetist I thank Dr Freedman, as a surgeon, for his compliment to British anaesthetists in his final paragraph and I applaud his caution in advising that local analgesic techniques be generally confined to less complicated or extensive procedures. I would, however, wish to emphasise that the responsibility of modern physician anaesthetists is often as much that of keeping the patient alive in the face of the twin traumas of pathology and surgery as of the equally important task of relieving pain. It is in the area of life support that "their talents [are often] most required."

T B BOULTON

Association of Anaesthetists of
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SIR,—Dare I suggest that there is no shortage of anaesthetists just as, a few years ago, there was not really a shortage of nurses? The alleged shortage would vanish with realistic payments for additional work—the sort of money which would deter one from playing at decorator, plumber, gardener, or car mechanic to keep going. Paying for this kind of help out of taxed income is prohibitive; why should anaesthetists be cheaper?

The technical books I used to pay £4.50 for now take £14.50 so I can no longer afford them and my educational growth is permanently stunted. We are becoming a nation of amateurs in a world where professionalism keeps you ahead. Thus while I admire Mr A W Fowler's "DIY anaesthesia" (27 August, p 576), I must state that a competent specialist can expect to produce far superior results in terms of convenience, comfort, and full return of consciousness than he can obtain with intravenous diazepam, Cyclimorph, and local anaesthetics. But how difficult it will be for me to substantiate this claim.

A S GARDINER

Folkestone, Kent

A case of intrinsic asthma

SIR,—Does no one check the accuracy of statements made in your pages, or at least edit the article by adding "in my (the writer's) experience . . ."? In your recent article "A case of intrinsic asthma" (23 July, p 250) Professor M D Rawlins states, "We don't yet know what the dangers of salbutamol are . . ." How long does he want a drug to be used before such statements are no longer necessary? Surely it is recognised that the advantages to the patient from a drug such as salbutamol far outweigh the problems of the disease it is used for?

Professor Rawlins also states that "cromoglycate . . . is of no value for intrinsic asthma." However, numerous publications have attested to the value of cromoglycate in intrinsic asthma. The report of the Northern General Hospital/Brompton Hospital/MRC collaborative trial¹ clearly states, "We have . . . not completely answered the question of whether patients with intrinsic asthma respond less well than those with extrinsic asthma. The results suggest, however, that SCG is almost

equally effective in both types of asthma." In a review of cromoglycate Grant² suggests that the individual patient with intrinsic asthma should not be denied even a one-in-three chance of improvement from it.

In general terms articles such as the one I am criticising are read with great interest. General practitioners in particular obtain much valuable information from them, and trying out a drug on the recommendation of such an article can often lead to considerable benefit in a particular patient and save valuable hospital time by not needing a consultant referral. But when such inaccuracies are allowed in print GPs not only fail to prescribe a valuable drug but the patient may remain inadequately treated.

P J KINGSLEY

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¹ Northern General Hospital/Brompton Hospital/MRC Collaborative Trial, *British Medical Journal*, 1976, **1**, 361.

² Grant, I W B, *Prescribers Journal*, 1973, **13**, 32.

* * * We sent a copy of this letter to Professor Rawlins, whose reply, together with comments on other letters already published, is printed below.—ED, *BMJ*.

SIR,—Your letters about this case (23 July, p 250) have expressed most eloquently the reasons why it should have been published "under the inappropriate and grandiose title of 'Community Clinics in Clinical Pharmacology.'" (Dr I W B Grant, 20 August, p 516).

Dr Kingsley seems to have missed the point about salbutamol. I do not dispute its value in the management of asthma and indeed I suggested that this particular patient should continue receiving it. I did, however, wish to convey a word of caution because of the possibility that (like isoprenaline) it might produce "tolerance" to β -agonists (both exogenous and endogenous).

The Medical Research Council trials^{1, 2} your correspondents quote were excellent in many respects. However, they do not demonstrate the value of sodium cromoglycate (SCG) in patients with intrinsic asthma. In the first place Dr David Honeybourne (20 August, p 516) is incorrect when he states that, using the FEV₁ as an index of improvement, the second trial showed benefit from SCG in both extrinsic and intrinsic asthma: the published figures relate to FEV₁ changes in all the patients studied and the excess of patients with extrinsic asthma treated with SCG (34 patients) could have easily "masked" the response of those patients with intrinsic asthma treated with SCG (10 patients). Secondly, the method used in the trials to define "therapeutic failure" with the drug is subject to major problems when applied to small numbers of patients: the 10 participating physicians withdrew patients from the trial if at any time progress was unsatisfactory, and such withdrawals constituted "therapeutic failure." As the authors of the report clearly state, the influence of the physicians' desire to persist with treatment was likely to have had an influence on the progress of some patients. With 10 physicians treating 10 intrinsic asthmatics with SCG it is not legitimate to draw positive conclusions. The fact that some studies³ with SCG have described individual intrinsic asthmatics who have derived "benefit" from the drug (mainly on subjective rather than objective criteria) is not helpful. The MRC trials showed that nearly one-third of

the extrinsic asthmatics allocated to placebo had not been withdrawn by 52 weeks. I do not conclude from this that the individual patient with extrinsic asthma should be given a one-in-three chance of improvement with placebo therapy!

M D RAWLINS

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¹ Brompton Hospital/MRC Collaborative Trial, *British Medical Journal*, 1972, **4**, 383.

² Northern General Hospital/Brompton Hospital/MRC Collaborative Trial, *British Medical Journal*, 1976, **1**, 361.

³ Brogden, R N, Speight, T M, and Avery, G S, *Drugs*, 1975, **7**, 164.

Vision screening in preschool children

SIR,—In his excellent letter (27 August, p 577), Dr P A Gardiner reminds us that defects of vision found in children who have already gone to school have in the vast majority of cases been present for some considerable time before the child actually reached school age, and he correctly reiterates the need to examine the visual function of children at as early an age as possible in order to improve the chances of obtaining benefit from treatment. Speaking of the problems of examining all children in this age group he makes the point that if the children who have a parental or sibling history of visual defect are examined, then probably the majority of children with such a defect can be identified. This of course is perfectly true, but the problems of examining all children in the preschool age group are not as great as might be supposed.

In a feasibility study conducted in Ayrshire during 1975 and 1976 some 500 children aged 3½ years were examined with a view to identifying those who had defects of visual function. The examinations were carried out by an orthoptist who took a history and a family history. She then assessed visual acuity, examined ocular movements, and performed a cover test and a prism reflex test. The primary objective of this exercise was to determine what the staffing requirements would be if such testing were to be adopted as a routine measure and also to discover whether the administration could organise such a screening procedure. As a result of the studies it was discovered that an orthoptist could handle four children an hour and that to examine all the children in Ayrshire, with a population of some 300 000, it would be necessary to have seven or at the most eight additional orthoptic sessions. The main problem experienced by the administration was that of discovering where the children lived, and indeed in the initial list of children drawn up some 39% had no known address, although this percentage was halved as the result of the efforts of the health visitors in the area. The final turnout was in the region of 70%, which is a not unusual figure for screening procedures, and probably this figure could be improved upon with more attention to public relations.

It is proposed to initiate a routine visual screening procedure for 3½-year-old children in South Ayrshire, commencing in January 1978. As the preschool screening procedure develops, so the ophthalmic unit's commitment to the traditional school eye clinics will be reduced and ultimately these clinics will disappear. Preschool children who have been found to have a defect will be referred to the hospital ophthalmic clinic, and once the pro-

cedure becomes established children who are found at the routine school eye test to have defects of vision will already have been identified and be under treatment, except, of course, for those missed in the initial screening. But they will be no worse off than they are at the moment and it is hoped that a considerable number of children who are being overlooked at present will benefit from the early treatment of their defects. It seems much more profitable to devote resources to a screening procedure of this sort than to the somewhat outdated task of purveying spectacle prescriptions at traditional school eye clinics.

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Evolution of poliovirus since introduction of attenuated vaccine

SIR,—Dr H V Wyatt (20 August, p 518) seeks the elusive paralytic rate of poliomyelitis with neurological manifestations in the period before the era of oral vaccination. Figures from the collaborative survey designed to study all cases of typical and suspected poliomyelitis, including non-paralytic "aseptic meningitis," in the Western and Eastern Hospital Board areas of Scotland during the first two years of introduction of inactivated vaccine may be helpful.¹

Polioviruses were isolated from 79 (71%) of 112 patients classified clinically as paralytic poliomyelitis and from 26 (11%) of 239 with non-paralytic meningitis. Thus 79 of 105 poliovirus infections with neurological disease were paralytic—a paralysis rate of 75%. Imperfections of the virus isolation procedure mean that the true rate may deviate from this estimate, but probably not by much: serological tests in parallel revealed only 16 additional poliovirus infections.² By similar calculations the paralytic rates were over 60% in 1958-9,³ the last major epidemic in this area, and 74% in 1962,⁴ the last outbreak before control was achieved by the general use of oral vaccine.

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¹ Grist, N R, *et al*, *Health Bulletin*, 1958, **16**, 27.

² Grist, N R, *et al*, *Scottish Medical Journal*, 1960, **5**, 355.

³ Sommerville, R G, MD thesis, University of Glasgow, 1959.

⁴ Green, D M, and Bell, E J, *Ninth Symposium of European Association against Poliomyelitis and Allied Diseases, Stockholm, 1963*, p 113. Brussels, Masson, 1964.

Atherosclerosis, Down's syndrome, and Alzheimer's disease

SIR,—In their very interesting paper Dr J C Murdoch and others (23 July, p 226) report a complete absence of atherosclerosis in all of five patients with Down's syndrome who went to necropsy. At the same time they report that the cause of death in 11 of 21 subjects not necropsied had been reported as cardiovascular in origin.

Some years ago I came across a similar situation in regard to Alzheimer's disease (senile psychosis, cerebral amyloidosis). Here too most of these cases are attributed to "cerebral arteriosclerosis" during life. Post-

mortem examination, however, invariably showed minimal atherosclerosis and occasionally complete absence of this disease. I was often astonished to note "lily-white" arteries in subjects over 80 years of age who had suffered from Alzheimer's disease during life.

Cerebral amyloidosis has been reported as a very common finding in elderly—aged 35 years and over—mongols. It would be very interesting to know if in fact Dr Murdoch and his colleagues found many plaques or tangles in their cases. Such a finding would be of great interest to those trying to probe the causation and mechanism of Alzheimer's disease.

WILLIAM HUGHES

Bristol

* * * We sent a copy of this letter to Dr Murdoch, who consulted Professor Hume Adams, who carried out the neuropathological studies in the cases referred to. Their joint reply is printed below.—Ed, *BMJ*.

SIR,—Four of the five subjects who went to necropsy had the brain submitted for neuropathological examination to the Institute of Neurological Sciences, Glasgow. In three (men aged 40 and 60 and a woman aged 66) there were large numbers of plaques in the representative areas of cortex examined, but in only two of these were there numerous examples of neurofibrillary change. In the fourth case (man aged 56) there were no significant plaques or examples of neurofibrillary change. These findings would accord with the previously reported high incidence of Alzheimer's disease in elderly subjects with Down's syndrome.

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HUME ADAMS

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Medical genetics

SIR,—Your readers may wish to know that copies of the memorandum on the training of medical geneticists (leading article, 30 July, p 279) prepared by the working party of the Clinical Genetics Society may be obtained from the undersigned.

A W JOHNSTON

Chairman of Working Party

Woodend General Hospital,
Aberdeen

Immersion and drowning in children

SIR,—Since the subject of airway warming in the treatment of accidental hypothermia has been raised in your leading article (16 July, p 146) and the subsequent letter from Dr C D Auld and Professor J N Norman (20 August, p 519) I feel that it is time to get the facts in perspective.

In my original article¹ it was suggested that if a non-shivering hypothermic person breathed an atmosphere which is warm and humid it might be possible to conserve 30% of the metabolic heat produced. On theoretical² and experimental grounds³ airway warming is only a supplement to insulation of the body. Nevertheless, in animal experiments³ and

clinical cases² airway warming has been shown to accelerate the rate of rewarming as compared with surface insulation alone. (This fact makes it potentially dangerous for continuous use in chronic hypothermia,⁴ for example, in the elderly if the patients are allowed to breathe spontaneously.) Though the rate of rewarming is of interest there are other factors important in the treatment of hypothermia. Airway warming appears to have a beneficial effect on cardiovascular status^{2,5} and cardiac rhythm^{2,6} out of proportion to the actual rise in temperature, and clinical observations suggest a similar improvement in cerebral function.² In spite of these possible benefits a lot of research is still required to establish the clinical value of airway warming and to allow its use in the treatment of accidental hypothermia to be accepted or rejected.

Since airway warming can act only as a supplement to surface insulation any equipment should be fail-safe, and this means, in addition to other factors, that the initial heat/moisture surge of the CO₂/soda lime reaction⁷ must be controlled. This is especially important since the equipment will be used infrequently by the non-medical members of the rescue services, usually under adverse conditions. I can therefore only repeat⁸ that, to my knowledge, though a number of designs have been described (some commercially available) and while these may be effective in the hands of their originators, there is still insufficient information available to allow any unit to be recommended for general use.

The equipment initially described¹ is *not* the Reviva despite the reference in the letter from Dr Auld and Professor Norman, and in fact the Reviva is a totally different design.

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¹ Lloyd, E L, *et al*, *Scottish Medical Journal*, 1972, **17**, 83.

² Lloyd, E L, *British Journal of Anaesthetics*, 1973, **45**, 41.

³ Lloyd, E L, Mitchell, B, and Williams, J T, *Resuscitation*, 1976, **5**, 5.

⁴ Bloch, M, *Brain*, 1967, **90**, 769.

⁵ Lloyd, E L, Mitchell, B, and Williams, J T, *Resuscitation*. In press.

⁶ Lloyd, E L, and Mitchell, B, *Lancet*, 1974, **2**, 1294.

⁷ Guild, W J, *Journal of the Royal Naval Medical Service*, 1976, **62**, 173.

⁸ Lloyd, E L, *Outdoors*, 1977, **8**, 9.

Doctors' errors

SIR,—In a recent leading article (7 May, p 1178) on reducing doctors' errors it was suggested that medicine of the future might include a computer-aided system sitting on the physician's shoulder. In the present state of the economy this would seem to be a pipe-dream and it is often rewarding to look at simple, cheaper alternatives which might go some way to reduce errors.

The device described here was developed for use in general practice, but that is not to say that its use is limited to that setting. The idea of the device was occasioned by my dislike of a too rigid concept of the decision-tree approach to diagnosis and treatment while being only too painfully aware that the amount of information available to bear on a given case was often so great that it might not be mobilised every time it was needed and that the growing complexity of interactions between different factors has become difficult to bear constantly in mind.

As there are dual pathways of diagnosis and