Among the many cases of children with ear-ache for which the GP's help is sought, it not infrequently happens that, having cried for some hours, the child went peacefully to sleep shortly before being seen. Usually, of course, the cause has been a blister on the drum, bursting or regression resulting in relief from the pain. Only a small proportion of such blisters are haemorrhagic and of the dark colour commonly described, most being like those elsewhere. Surely it was the bursting of the former kind which accounted for the blood in discharge mentioned by Dr Carne, if it was not from suppurative otitis media. They vary much in size from some quite small to others almost covering the drum. One wonders how often a large bulla has been mistaken for a true "bulging drum." Any degree of reddening may be present, as in non-vesicular inflammations, or there may occasionally be none. After bursting or regression the site presents a very characteristic, rather crinkly appearance, presumably the "grey mottling" mentioned by Mr Birrell. Once this stage is reached there is rarely any further trouble. The condition is usually classified as part of catarrhal otitis media, but the pathology is debatable. Clearly of virus origin (incidentally often the first intimation that yet another of the never-ending succession of such epidemics is prevalent), there is much to suggest that the vesicles are herpetic—in lay language, "cold sores on the drum." Pain is apt to be severe, but fortunately usually lasts only a matter of a few hours. In view of the virus origin it is doubtful whether antibiotics can achieve much, but as a few cases go on to more definite otitis media they would appear to be indicated while pain or other evidence of inflammation is present. When pain has gone and the drum clearly shows regression it is at least questionable whether treatment need be begun or continued.

May it be said that more than half the battle in seeing the drums of young children is won by having the head firmly held. In the absence of a nurse, many mothers soon get good at this. A convenient position is with the child on one side, then on the other, across the mother's lap, head to the observer's left. Rapid assessment is usually essential.

E A KNAPPETT

Litcham,
King's Lynn

Once-daily atenolol for hypertension

SIR,—I read with interest the paper by Drs A P Douglas-Jones and J M Cruickshank (24 April, p 990) in which atenolol is claimed to be effective in once-daily dosage in reducing the resting pulse rate and blood pressure after 24 hours in patients with mild or moderate hypertension. If such patients had been exercised, which the authors agree is necessary to assess beta-blockade, their findings might well have been different.

Our department has investigated the effect of metoprolol, a cardioselective beta-adrenergic blocking agent, given in a single daily dose to previously untreated hypertensive patients.¹ Although apparently controlled at rest by 100-200 mg daily, the post-24 hour exercise blood pressure and pulse rate in some patients tended to exceed normal limits but was subsequently well controlled by dosage increases to levels of 300-400 mg. These

results will form the basis of a future publication.

EDWIN BESTERMAN

Waller Cardio-pulmonary Unit,
St Mary's Hospital,
London W2

¹ Ablad, B, Carlsson, E, and Ek, L, *Life Sciences*, 1973, 12, 107.

Does anticonvulsant hypomagnesaemia exist?

SIR,—In two recent letters on this subject the authors—contrary to our findings in 1974¹—report that they were unable to demonstrate hypomagnesaemia in epileptic patients on anticonvulsant therapy. Dr S H Katz and his colleagues (7 February, p 341) believe that this difference may be due to our use of "an unmatched normal outpatient control population," while Dr M J Stewart (13 March, p 649) thinks this explanation unlikely. We tend to agree with the latter statement since serum magnesium values are independent of sex and age differences.²

Experts in the field of magnesium metabolism agree that the biological variation of serum magnesium concentration is quite small^{3,4}; furthermore, about 25% of serum magnesium is protein-bound. The latter fact infers that dehydration and/or venous stasis (which influences the serum level of protein) simultaneously may influence the serum magnesium level. In our study on 226 epileptic outpatients and 95 controls¹ these possible sources of variation were dealt with in the following way: all blood samples were drawn without stasis; the magnesium concentrations were corrected to a constant protein level; the blood samples were run in series of 60 duplicates, each batch containing samples from patients and controls; and the technicians were unaware of the clinical data. In the conflicting reports of Dr Katz and his colleagues and Dr Stewart (which contain data from a mixture of inpatients and outpatients) no information is given as to the blood sampling technique and apparently no correction for serum protein was made. This alone might explain the different findings, but it appears that this is not the sole cause.

In the accompanying table we have summarized data of interest from your correspondents' reports and from our own study. For the control subjects it is interesting to see that all three reports agree as to the mean values; only our biological variation is much smaller than those found in the other studies. The main reason for this is probably a larger inter-assay variation of the methods used by our opponents. The same remarkable difference in biological variation is found between our patients and those of Dr Katz and his colleagues and of Dr Stewart. But whereas we,

with our apparently superior laboratory method in a large population, can demonstrate a small but significant lowering of serum magnesium in epileptic outpatients, our opponents, with their methods in smaller series of inpatients (or mixed in- and outpatients) apparently cannot.

CLAUS CHRISTIANSEN

Department of Clinical Chemistry,
Glostrup Hospital,
Glostrup

PAUL RØDBRO

Department of Clinical Physiology,
Aalborg Sygehus,
Aalborg

STIG PORS NIELSEN

Department of Clinical Physiology,
Frederiksberg Hospital,
Copenhagen, Denmark.

¹ Christiansen, C, Nielsen, S P, and Rødbro, P, *British Medical Journal*, 1974, 1, 198.

² Petersen, B, et al. To be published.

³ Hunt, B J, *Clinical Chemistry*, 1969, 15, 979.

⁴ Wacker, W E C, et al, *New England Journal of Medicine*, 1968, 278, 658.

Benign proliferative lesions of the breast

SIR,—Confusion still exists over the conditions included under the above heading and the alternative terms you mention—cystic hyperplasia and mammary dysplasia—in your leading article (8 May, p 1106). May I suggest that this is largely due to a failure to differentiate between three separate and distinct entities?

The first is a purely histological condition, of importance as a field of study of the potential relation of various types of epithelial change to carcinoma but with no diagnostic clinical features.

The second is an objective clinical condition—the development of macroscopic cysts. These usually present as an obvious solitary lump in one breast, hard in consistency and thus simulating carcinoma. Further solitary lumps in either breast commonly develop over the years. Because of the suddenness of their appearance the proximate cause must be some temporary acute upset of intraductal hydrodynamics. The condition occurs in women from the late thirties to the menopause and is completely innocent, the one-time belief that it might be precancerous being due to a failure to separate the rare cysts developing secondarily to an intraduct papilloma or papillary carcinoma.

The third condition, which I have termed "the pain syndrome," is a purely functional one in both the physiological and psychological senses of the term. It arises from a hyper-awareness of the physiological and para-physiological cycle of changes in the female breast. As far as I can gather, it is not seen in societies in which women are unaware of the

Authors	Epileptic patients			Control subjects			Serum magnesium determination	
	No	Serum magnesium		No	Serum magnesium		Intra-assay variation (%)	Inter-assay variation (%)
		Mean (mmol/l)	Coefficient of variation (%)		Mean (mmol/l)	Coefficient of variation (%)		
Christiansen <i>et al</i> ¹ . . .	226*	0.78	6.4	95	0.81	4.9	0.9	1.6
Katz <i>et al</i>	100†	0.82	11.0	100	0.82	8.5	0.6	Not stated
Stewart	80§	0.84	10.3	71	0.82	10.2	Not stated	4.1

*Outpatients. †Inpatients. §In- and out-patients.

danger of development of carcinoma of the breast. Clinical examination reveals merely the usual wide variations in consistency and nodularity of normal breasts, and the condition has no organic significance.

DAVID PATEY

Hythe, Kent

Self-assessment tests

SIR,—Your leading article on "Antibiotics again" (8 May, p 1107) drew attention to the use in America of self assessment programmes in continuing education based on simulated patient problems. It concluded by commenting that "a British programme of this type might be difficult to finance." In the same issue another leading article, "Politics and pharmaceuticals" (p 1105) reported criticisms of expenditure in the pharmaceutical industry.

Over the past year a similar self-assessment exercise has been carried out in the United Kingdom¹ and this has been supported financially by a British drug company. A programme in six parts was mailed over a period of six months to 29 000 doctors. This presented the history of a patient with both physical and psychological disease. Readers were invited to make decisions about the management of the patient, including history-taking, examination, further investigations, treatment, and follow-up or referral for a specialist opinion.

The programme was so designed that the reader was able to compare his own decisions with those of his colleagues and of a panel which included general practitioners, general physicians, and specialists. It is estimated that 15 000 doctors took part in the programme, although some did not complete all stages of the series. As in the American study some surprising results emerged. For example, only half of the respondents wished to take a drug history in the patient with erythema nodosum and 20% did not arrange to see her for two weeks when she became depressed and potentially suicidal. A full report of the experience gained in the exercise will be published and a further programme is at present under way.

RONALD M HARDEN
ANN P DUNBAR

Centre for Medical Education,
The University,
Dundee

¹ *Medical Education*, 1976, 10, 138.

Fitness to drive

SIR,—There is a disquieting example of double standards in the assessment of applications for disabled persons' car badges as opposed to the assessment of medical fitness to drive. For the former a person declares his disability, be it an amputated limb, defect of spine or central nervous system, motor defect, or permanent and substantial disability causing difficulty in walking, and the disability is certified by his or her general practitioner or an authorised member of the social services department, without any reference to the person's fitness to drive.

It is evident from those applications referred to me for a further medical opinion by the social services department that many "relevant" or "prospective" disabilities are unlikely to have been notified to the licensing centre by

the applicant as the law requires. Furthermore, with the possible exception of the Greater London Council, authorities which issue badges are not prepared to pass on any information to the licensing centre. Much of the detailed and valuable advice which has gone into the booklet *Medical Aspects of Fitness to Drive*,¹ and the legislation to which it refers, is therefore inapplicable.

Until the situation has been clarified between the DHSS and the Department of the Environment the least that local authorities could do would be to require applicants to state whether or not they have declared their disability to the licensing authority. GPs and local authorities could also inform applicants of their obligations by means of a suitable leaflet.²

M J BALL

Hertfordshire Area Health Authority,
Hemel Hempstead

¹ Medical Commission on Accident Prevention, *Medical Aspects of Fitness to Drive*, ed P A B Raffle, 3rd edn. London, MCAP, 1976.

² Central Office of Information, *Driver Licensing System, Changes in Medical Assessment of Drivers*. London, HMSO, 1975.

Depot neuroleptics

SIR,—Dr J P R Young and his colleagues (8 May, p 1116) conclude that flupenthixol is a useful treatment for depressed outpatients and they raise the question of using depot flupenthixol in the management of depression.

Depot neuroleptics are marketed primarily for the management of chronic schizophrenia, but there have been reports on the use of these drugs for other conditions.^{1,2} Clinical experience at this hospital would indicate that depot neuroleptics can usefully be given to a variety of non-psychotic patients. By and large the patients so treated have been suffering from either severe behavioural disorders, aggressive psychopathy, or alcoholism.

A heterogeneous group of eight resistant neurotic patients have been given fluspirilene in a dose ranging from 2 to 4 mg each week. This type of intramuscular therapy has been successful in resolving symptoms where previous oral therapy with antidepressant drugs and benzodiazepines had not been successful. The responsive patients presented with paranoid, depressive, or phobic symptoms associated with behavioural irritability. Patients whose symptoms were entirely subjective did not respond to fluspirilene.

It does appear that the long-acting tranquillisers can be usefully prescribed in a variety of psychiatric conditions. We feel that this finding should be further explored because the intramuscular route of administration of tranquillisers has certain advantages over the oral route.

ERNEST H BENNIE

Leverndale Hospital,
Glasgow

¹ Bennie, E H, and Kinnell, H G, *Lancet*, 1975, 2, 1303.
² O'Flanagan, P M, *British Medical Journal*, 1974, 3, 258.

Daily antihypertensive therapy

SIR,—Drs A P Douglas-Jones and J M Cruickshank (24 April, p 990) suggest that mild hypertension could be adequately controlled by a single daily dose of the beta-adrenergic blocking drug atenolol.

We have recently completed a study of the pharmacokinetics of another beta-blocker, metoprolol, in a small group of young healthy volunteers. The beta-blocking effect of the drug was assessed by measuring the reduction in tachycardia induced by standardised exercise on a bicycle ergometer. After a single 200-mg dose of metoprolol there was a significant effect in 30 min ($P < 0.05$) which persisted throughout the day and was still significant at 12 hours ($P < 0.01$). Furthermore, the pre- and post-exercise pulse rates had not returned to those obtained 24 hours after placebo administration. These results suggest that when 200 mg or more of metoprolol is prescribed a single daily dose, particularly if taken first thing in the morning, would be rapidly effective and would maintain significant beta-blockade while the patient is awake and active and should provide adequate control of milk to moderate hypertension.

This suggestion will have to be evaluated by further clinical trials when the control of blood pressure over 24 hours and the incidence of adverse effects on once-and twice-daily regimens can be compared. Once-daily treatment with metoprolol and perhaps other beta-blockers is likely to improve patient compliance and make long-term therapy for hypertension and angina more acceptable.

M J KENDALL
R A YATES

Department of Therapeutics and
Clinical Pharmacology,
Queen Elizabeth Hospital,
Birmingham

Multiple sclerosis and poliomyelitis

SIR,—Your leading article (1 May, p 1030) does not mention the name of the person who first drew attention to the analogy between the epidemiology of acute anterior poliomyelitis and multiple sclerosis. This was Dr David Poskanzer,¹ who, with his colleagues Drs Schapira and Miller, published his ingenious hypothesis in 1963. It is important that this point should be made, as confirmatory evidence of an epidemiological pattern along the lines they suggested is now beginning to appear.

E D ACHESON

Faculty of Medicine,
University of Southampton

¹ Poskanzer, D C, Schapira, K, and Miller, H, *Lancet*, 1963, 2, 917.

Unexplained bitemporal swelling

SIR,—A minor but puzzling syndrome was recently encountered on our teaching medical service and we wonder if your readers have previously observed it or can give us any suggestions.

The patient was a 27-year-old white woman who presented with bilateral temporal swelling accompanied by blurred vision, sweats, nasal congestion, and an oral temperature of 38.6°C. There was no history of trauma, diplopia, tenderness, rashes, or joint complaints. She had a long medical and psychiatric history, including a seizure disorder for which she was maintained on diphenylhydantoin. The other medications included desipramine, chlorpromazine, loxapine succinate, and benzhexol hydrochloride.

She was a healthy, alert young woman, somewhat apprehensive but in no distress. Symmetrical areas of soft-tissue swelling about 4 cm in diameter were noted in the temporal regions protruding