multidose bottles with normal saline and 0.4% phenol solution took time to prepare and sterilise even though the influenza solution was the A and B mixture on the shelf. Miller started using the dilutions with cases of influenza and gave the discovered dilution if the symptoms recurred subcutaneously. He has been studying this phenomenon since 1968 on herpes simplex virus type 1 and type 2 and finds it effective in the acute phase. He is also trying the regimen in infectious mononucleosis.

I hope that this technique of the allergist will help Dr Ian Calder say to his patient who feels that ice is better than the local witch doctor: "Dr Miller has a better way still."

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¹ Miller, J B, *Annals of Allergy*, 1979, 42, 295.

Benign recurrent vertigo

SIR,—Your leading article on benign recurrent vertigo (29 September, p 756) reviews a timely paper on the significance of this symptom complex and makes several assertions which, while they represent standard and established teaching, may be incorrect and do bear further examination.

What evidence is there that disordered function of the labyrinth is the commonest cause of vertigo? In the article under review, for instance, the results of caloric tests were normal in all instances and the changes on electronystagmography might have denoted central rather than peripheral defects.

Even more debatable is the statement that Ménière's disease is the commonest form of labyrinthine vertigo. In Aberdeen at least, where we have a practice of free cross-referral between otology and neurology and have the benefit of expert and detailed neuro-otological investigation in a high percentage of such patients, the consultant staff involved estimate that no more than 20-30 cases of Ménière's disease have been seen in the last two years out of over 200 patients investigated for vertigo. It is my impression that many more cases of positional vertigo of the benign paroxysmal type are seen than of Ménière's disease. The patients described by Slater¹ and discussed in your article suffered from brief positional vertigo following a spell of more persistent vertigo. While such patients are seen I suspect that they represent no more than one point on a spectrum of disorders which range from "vestibular neuronitis" at one end to "positional vertigo of the benign paroxysmal variety" at the other.

The hypothesis that vascular disturbances may play a part in benign vertigo is not new but has considerable appeal. If a "migraine equivalent" or, more specifically, migraine of the vertebrobasilar system is involved in these disorders then it might explain why modern neuro-otological examination so often shows up puzzling and at times worrisome evidence of "central" rather than "peripheral" defects in people in whom no other evidence of serious disease of the central nervous system can be found.

Vertigo is neither an easy nor a very popular subject for investigation. Traditionally it has been regarded as the prime concern of the otologist, and indeed it is thanks to the work

of the neuro-otologist in particular and the somewhat unexpected findings that appear on his examinations that traditional teaching may now be questioned more with some objective support. Further advance in the understanding of vertigo may, however, require a multidisciplinary approach, as is necessary in the case of migraine itself. How this may be best organised is open to dispute and to different solutions in different areas. The time necessary for neuro-otological investigation alone is such that attempts to see patients in a joint "dizzy clinic" are likely to lead to inadequate time for other investigations. Apart from otologists, neurologists, physicians, and indeed psychiatrists may all be implicated in this problem but routine referral to each in turn would be impractical. A doctor interested in vertigo in any one or more of these disciplines may act as a focus for the investigation. It is doubtful whether interested general practitioners would see enough of such patients within their own practice to be able to develop sufficient experience to carry such investigation much further. No ready answer offers itself but I am uneasy that vertigo should continue in general to be deemed to be dealt with adequately by the prescribing of labyrinthine sedative drugs, and if this fails by referral primarily to an otologist (whether or not skilled in neuro-otology), which I think is still the common pattern in most areas. I would be interested in the reactions of other readers to these suggestions.

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¹ Slater, R, *Journal of Neurology, Neurosurgery and Psychiatry*, 1979, 42, 363.

Cimetidine and cardiovascular complications

SIR,—I read the article entitled "Life-threatening arrhythmias and intravenous cimetidine" by Dr J Cohen and others (29 September, p 768) with interest; however, it needs further comments.

I am not surprised that in case 1 five minutes after cimetidine was given intravenously the blood pressure fell abruptly from 120/80 to 80/60 mm Hg. Hypotension has been observed in patients who were given bolus injections of cimetidine. Therefore I have emphasised¹ that cimetidine should be administered in the infusion form to prevent this complication.

The anuric patient (case 2) developed hypotension, atrial extrasystoles, and cardiac arrest following 800 mg cimetidine given intravenously within three hours. Since the patient was anuric, the dose of cimetidine should have been reduced considerably because the principal route of excretion of cimetidine is renal.

Black *et al*² have shown that the chronotropic effect of histamine on isolated guinea-pig atrium could be selectively blocked by H₂-receptor antagonists. Therefore cardiovascular side effects have occurred in patients who have received high doses and who have renal impairment and in elderly patients. I believe that Dr Cohen and his colleagues have confirmed the recent French report of cardiac arrest after cimetidine therapy³ and that their case reports make determination of the causal role possible.

This letter is intended to emphasise the hazards of an intravenous bolus of cimetidine and stress that doses of cimetidine should be adjusted according to the renal status of the patient to prevent these complications.

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¹ Ahmad, S, *Southern Medical Journal*, 1979, 72, 509.

² Black, J W, *et al*, *Nature*, 1972, 236, 385.

³ Bournierias, F, *et al*, *Nouvelle Presse Médicale*, 1978, 7, 2069.

On-demand analgesia equipment

SIR,—A reply to Mr M Darbyshire's letter (3 November, p 1143) seems necessary as his points are inaccurate.

Firstly, the "safety regulations" referred to presumably mean the standards contained in *Hospital Technical Memorandum/8* for electrical and electromechanical safety; we did not refer to these aspects of the machine's design and the comment is not relevant. We do agree, however, that the equipment meets these particular requirements, as indeed it must.

Secondly, the thumbwheel switches on the front of the machine (a) are not "protected" in any way—they are fully accessible to anyone who cares to alter them; (b) the digital indicator above the switch shows the "dialled dosage" only when the patient makes a demand—otherwise it shows a row of bland zeros.

Thirdly, the "secure cover" on the rear switches is a simple, transparent plastic sliding panel.

Fourthly, the implication that the patient is safe because the maximum amount of analgesic she could receive is that contained in a full syringe perhaps reflects an engineer's point of view. It is to guard against the possibility that a patient could receive the total content of a syringe in one dose that we draw attention to the factors which could allow this to happen.

The implication of Mr Darbyshire's letter is that we as users "in the market place" did not share our views and anxieties with Pye Dynamics Ltd. This is not the case; we wrote more than once to this firm, but, apart from one brief visit by a representative after several months, no comments were ever received. It was for this reason that it was thought necessary to write the original letter.

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No comment

SIR,—I am surprised at the absence of any comment on two topics recently appearing in your columns.

On 8 September (p 607) there was a letter signed by 25 doctors from various countries who stated, after attending a conference in Japan, that there was overwhelming evidence that clioquinol can cause serious and irreversible injury to the nervous system. In 1972, after a month in Japan seeing cases of SMON (subacute myelo-optic neuropathy), I expressed the opinion that clioquinol was