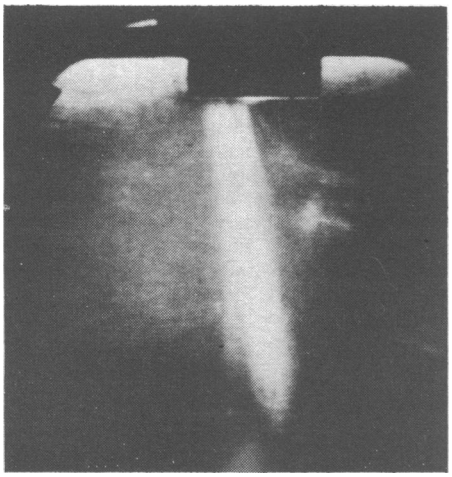

rather columnated, but it diverges rather rapidly once leaving the crystal.

Thus, when we manufacturers discuss focal point, we unknowingly lead people to the wrong interpretation because the way the instrument is constructed there is no such thing. I believe that the differences between Mr. Macintosh's study and the investigations of others are best explained by the in vitro environment—that is, the size of the container. The smaller the container the greater the sheer forces that are going to be created from the walls of that container, so that it makes it very difficult to separate ultrasonic effect from sheer force effect. In contrast, I refer you to Bernstine's work, in which he insonated human tissue cultures in a tank constructed to compare favourably to the products of conception.[1] Eighteen hours of exposure to ultrasonic energy at diagnostic levels turned up no observable effects.—I am, etc.,

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[1] Bernstine, R. L., *Obstetrics and Gynecology*, 1969, **34**, 707.

Persistent Phenothiazine Dyskinesia and Tetrabenazine

SIR,—I read with interest Drs. R. B. Godwin-Austen and T. Clark's report (2 October, p. 25). I have used tetrabenazine in the treatment of a number of involuntary movement disorders, including Huntington's chorea and unilateral choreo-athetoid movements secondary to cerebrovascular disease. There is little doubt that the involuntary movements are reduced by tetrabenazine, but this reduction is to a degree a function of the duration of administration and dosage. In many patients demonstrable reduction in movements may not occur before a week or 10 days of treatment has elapsed. With regard to dosage, although improvement in movements may be seen with doses as low as 50 to 70 mg per day it is often necessary to use 150 mg per day or more of tetrabenazine.

Can I suggest, therefore, that the apparent lack of superiority of tetrabenazine in the above double blind trial is a function of the duration and magnitude of tetrabenazine dosage. It should be noted that depression and/or severe agitation as well as Parkinsonism may limit the therapeutic usefulness of tetrabenazine.

The use of tetrabenazine in combination with levodopa, as might be expected, produces converse effects in Parkinsonism and Huntington's chorea in that in the former the beneficial effects of levodopa and akinesia and rigidity are completely cancelled out, whereas in the latter condition the levodopa overrides the effect of tetrabenazine and produces a gross increase in choreo-athetoid movements.—I am, etc.,

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Air Embolism during Haemodialysis

SIR,—We read with interest the paper on "Air Embolism during Haemodialysis" by Dr. M. K. Ward and others (10 July, p. 74). In order to diminish the risk of air embolism we never give infusions or injections into the arterial line between the patient and the blood pump. During unattended night dialysis using arteriovenous fistula, however, there is always a risk of the patient accidentally disconnecting his arterial line while sleeping—for example, if the fistula needle slips out of the arm. We have tried photoelectric devices applied on the bubble trap and agree with the criticism made of these by Dr. Ward and collaborators.

For the past six months we have been testing an air detector which measures the capacitance of the bubble trap. The bubble trap is placed in a holder which contains two capacitor plates (Fig. 1). A signal which reads the blood level in the bubble trap is transmitted between the plates through the trap. Any abnormal quantities of air collecting in the bubble trap are detected by the capacitor, resulting in the automatic clamping of the blood circulation by the blood clamp, switching off the blood pump, and triggering an alarm (Fig. 2).

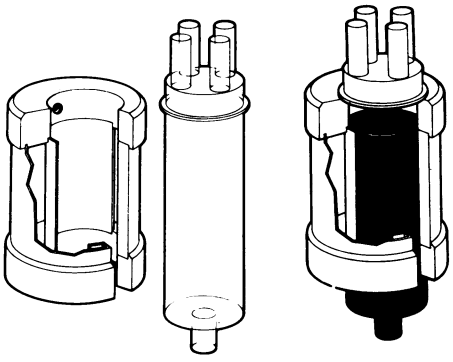

FIG. 1—Air detector for haemodialysis bubble trap.

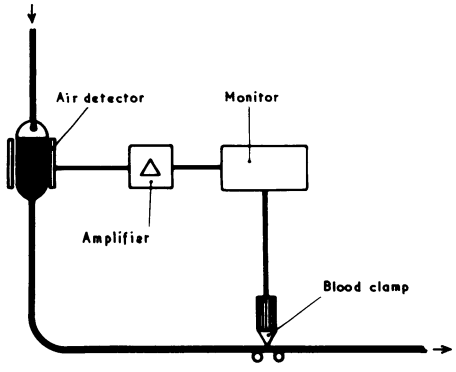

FIG. 2—Diagram of the air detector circuit.

The sensitivity of the device can be changed in the amplifier. We have used an alarm limit of 22 ml air in the bubble trap with a total volume of 44 ml. Illumination in the holder's upper edge also facilitates visual monitoring of the blood level in the bubble trap. We have found the equipment quite safe in use; it also allows the possibility of flushing the blood in the dialyser back to the patient with saline or air. This equipment is now commercially available.—We are, etc.,

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Misadventure

SIR,—Your comment (18 September, p. 658) on the decrease in deaths from lightning, from 12·4 per annum in the decade 1901-10 to 3·6 per annum in 1961-7 is interesting, as is your suggestion that this cannot be wholly due to the fact that people congregate out of doors less frequently than formerly.

Surely the real cause of this decline lies in the now widespread use of rubber-soled footwear, which effectively prevents fatal electric discharge through the body to earth.—I am, etc.,

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Screening of Elderly Patients

SIR,—Screening of the over 65s for undiagnosed disabilities has been described on several occasions.[1] We felt justified on the evidence to offer it as a routine practice service. Screening must be done within existing resources if our present patients are to benefit. We wanted continuous screening rather than a short intensive campaign, and a system that was simple to operate.

The notes of the over 65s are filed separately by the Buckinghamshire Executive Council who kindly supplied the names and addresses of 176 patients. This represents 6·3% of my list, the county average being 10·9%. The district nurse and health visitor were briefed to visit one person each per week. Almost all patients were appreciative and gave a social history and brief financial details. Specific symptoms are sought and sight and hearing checked. Diet, dentition, and feet are looked at, and simple urine and where appropriate simple blood tests are performed. Nurse and health visitor refer suitable cases to each other, and the doctor is shown the record so any necessary action can be taken.

The inadvertent omission of significant information is being reduced by the introduction of the Stokoe card[2] in place of the less formal note-taking which we had evolved by trial and error. The card takes 10-15 minutes to complete, and covers medical, social, and psychiatric problems.

Of our first 63 patients, only 58% had consulted a doctor during the previous year. Four patients had major medical problems: disabling Parkinson's disease, congestive cardiac failure responding well to diuretics, and severe high blood pressure. Two further hypertensives were found who had defaulted on their treatment, and problems of sight,