Safety of Vinyl Ether

SIR,—Some years ago attention was drawn to the safety of vinyl ether as a sole anaesthetic for short operations,¹ inasmuch as it appeared that since the war there had been over 500,000 administrations with only one death. Vinyl ether ("vinesthene") is put up in ampoules of 3 and 5 ml., and in bottles of 25 ml. for longer operations. Thanks to the courtesy of the sole manufacturers in stating the number of ampoules that have been issued it is possible to estimate the number of anaesthetics given with a fair degree of accuracy. This number now stands at over 800,000. And from information supplied by the Registrar-General for England and Wales it may be stated that no further death has occurred. This is a remarkable record of safety which is not remotely approached by any other anaesthetic. Furthermore, there has been no death at all since the war in cases where vinyl ether has been used in conjunction with nitrous oxide and oxygen.

It may be argued that sometimes more than one ampoule may be used during one administration, but against this can be set the fact that over 100,000 bottles of 25 ml. have also been issued, so that the figure of one death in 800,000 cases is probably an overestimate. When comparing vinyl ether with other anaesthetics used for short operations it is not possible to obtain a mortality rate as they are not put up in single doses. The popularity of ethyl chloride is waning, as, although it may be the anaesthetic of choice for anaesthetists trained to recognize signs of an overdose, the fact that there have been 71 deaths since the war should be sufficient to discourage its use by trainee anaesthetists. Halothane, on the other hand, is increasing in popularity as an anaesthetic for young children, but it is about five times more expensive than vinyl ether, and the recovery time is much longer. And at the moment there is some concern that repeated administration may result in hepatitis. At one time vinyl ether was suspected of causing liver damage as five cases of acute yellow atrophy were reported in the United States before the war; but there has been no further case. However, because of this most textbooks recommend that it should not be given for longer than half an hour. But in view of my own experience in giving it on many occasions for more than three hours without untoward result this seems an unnecessary precaution. Convulsions of brief duration may occur after the use of vinyl ether, but as there has never been a fatal case the aetiology remains obscure. It is unfortunate that the drug is not pleasant to inhale and that attempts to mask the smell have not proved satisfactory. But this seems a small price to pay for such a high degree of safety. And I hope this letter may remind anaesthetists of the virtues of an unjustly neglected anaesthetic.—I am, etc.,

London W.1.

MASSEY DAWKINS.

REFERENCE

- ¹ Dawkins, C. J. M., *Brit. med. J.*, 1958, 1, 1116.

Nicotinic Acid and Serum Lipids

SIR,—My colleagues and I are obliged to Dr. E. N. Glick (1 February, p. 308) for his reference to our paper. We feel that he must

have misinterpreted both the purpose of the paper and the implications of the reference to gout. This purpose was entirely concerned with the value and risks of the use of nicotinic acid as a lipid-lowering agent. The references to gout only dealt with the problem of the control of hyperuricaemia and the resultant tendency to develop gout in two of our patients while on long-term nicotinic acid therapy. We did not think it necessary to refer to our treatment of the actual episode of gout. Attacks were, of course, treated in the accepted manner with phenylbutazone. We used uricosuric agents in an attempt to prevent that rise in serum uric acid which might finally declare itself as an attack of gout. We cannot entirely accept Dr. Glick's statement that acetylsalicylic acid is only effective as a uricosuric agent in doses greater than 4 g. The literature states otherwise,¹ and we have experience of considerable uricosuria at a dose level of 3 g.

Dr. Glick has indicated how complex the treatment of gout should be, but we might point out that it is even more subtle than his letter would indicate. Dr. Anne Cruess-Callaghan and myself are preparing for publication data which point towards a specific disturbance of uricolysis, rather than uricosuria by nicotinic acid, as at least playing some part in the causation of nicotinic-acid-induced hyperuricaemia.—I am, etc.,

OLIVER FITZGERALD.

Department of Medicine
and Therapeutics,
University College, Dublin.

REFERENCE

- ¹ Yü, T. F., and Gutman, A. B., *J. clin. Invest.*, 1959, 38, 1298.

Vitamin Therapy

SIR,—I wish to draw attention to one or two "deficiencies" manifest in your recent articles on vitamins in the "To-day's Drugs" series (18 January, p. 165, and 25 January, p. 227). I refer to the use of vitamins in psychiatric practice.

(a) Vitamins, especially those of the B complex, are used in large dosage in the treatment of confusional states (toxi-infective, senile, etc.), as well as avitaminotic states such as Wernicke's encephalopathy, which was in fact mentioned). In addition there is an established place for the use of vitamins in the prophylaxis of confusional states during prolonged narcosis.

(b) The neuritis complicating therapy with imipramine and phenelzine, as well as that associated with iproniazid administration, is thought to be based on pyridoxine deficit; relevant implications for treatment of this side-effect are obvious.

(c) In aversion therapy of alcoholism, disulfiram is frequently used, employing test reactions with alcohol. The termination of such a reaction is achieved by the intravenous administration of ascorbic acid.—I am, etc.,

Epsom, Surrey.

E. B. GORDON.

* * We have shown Dr. Gordon's letter to our expert contributor, who replies as follows.

Dr. Gordon is, of course, correct in saying that vitamins are used in the treatment of confusional states due to causes other than vitamin deficiency. That their use is empirical is suggested by the failure to state which vitamin should be used for which confusional

state. As far as I am aware there are as yet no well-controlled trials providing conclusive evidence of the value of vitamins in such patients.

Iproniazid, phenelzine, and other compounds closely related chemically to isoniazid may well have similar mechanisms to account for the occurrence of peripheral neuritis.

The use of test reactions with alcohol in disulfiram therapy is a procedure unlikely to be indulged in by the general reader, but the use of vitamin C to end the reaction is again empirical; most reactions would terminate spontaneously and it is therefore difficult to assess the value of vitamin C in this state without extensive and well-controlled trials.—Ed., *B.M.J.*

A.C.T.H. is not a Steroid

SIR,—In the current number of the *British Medical Journal* (8 February, p. 351) appears an excellent paper on steroids in the treatment of nephrotic syndrome in adults by Drs. H. Gotze, W. T. E. McCaughey, and R. A. Womersley. In their discussion of their results the authors state, "Both these reports refer to short courses of steroids using either A.C.T.H. or one of a number of other steroids." In another context in the same number (p. 359) the answer to a question concerning early multiple sclerosis includes the statement, "It is probable that corticosteroids—and perhaps especially corticotrophin— . . ."

In the first of the above statements there is obvious confusion. In the second there could be some degree of ambiguity, which might also be confusing.

In 1962 Professor J. H. Gaddum¹ expressed his horror that A.C.T.H. and steroids should be confused in the minds of some doctors. In confirmation of Professor Gaddum, and for the guidance of the unenlightened, I would emphasize that A.C.T.H. is *not* a steroid. It is a polypeptide which causes the release of steroids.—I am, etc.,

J. L. S. COULTER.

Armour Pharmaceutical Company,
Eastbourne.

REFERENCE

- ¹ Gaddum, J. H., *Brit. med. J.*, 1962, 1, 940.

Deadly Cigarettes

SIR,—Much is written about the possible carcinogenic properties of tobacco, but one searches in vain for mention of the one cause of cancer that we are really sure of, and that is repeated or constant irritation of a tissue by a foreign body. Surely smoke, consisting presumably of millions of tiny particles of carbon, is such an irritant, and the effect of its inhalation is abundantly obvious to anyone conversing with a chain-smoker and trying to avoid the spray of his bronchitic cough every few seconds. I should think it is more than probable that the inhaled smoke from any other herb would prove to have the same effect on the vulnerable bronchial tubes as does tobacco smoke were it possible to carry out a 10-year test under comparable conditions.—I am, etc.,

Thame, Oxon.

C. H. BARBER.