

patient was in the hospital and was thought to be mittelschmerz (the patient had had her last menstruation two weeks previously).

Mercury deposited in the lung can be absorbed into the blood stream because elemental mercury readily diffuses through the lipid-containing alveolar walls. This, however, is not necessarily fatal.¹ The hazard of broken thermometers would be mainly from the broken glass rather than the mercury itself.² So far as we can determine from various sources it is a common practice for nursing personnel to put thermometers in patients' mouths and leave them unattended both in the inpatient and outpatient department. This can also be construed from the case report of Johnson and Parker.³ Though we did not find a case similar to ours in the literature and believe this to be a rare occurrence, an unfortunate event like this could easily be prevented by taking proper precautions, at least in the vulnerable population.—We are, etc.,

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Maternal Blood Group A and Pre-eclampsia

SIR,—Blood group A predisposes to a number of pathological states. These include carcinoma of the stomach,¹ venous thromboembolic disease in pregnancy and oral contraceptive therapy,² coronary artery thrombosis,³ and chorion carcinoma.⁴

In clinical practice severe fulminating pre-eclampsia was noted to be commonly associated with group A blood. Two retrospective surveys were therefore undertaken to see whether group A mothers were more likely to develop pre-eclampsia than those with blood of group O. In the first study the incidence of pre-eclampsia in group A and group O primigravidae was compared. Pre-eclampsia was defined as a rise of diastolic blood pressure to 90 mm Hg or more on two or more occasions in the second half of pregnancy, associated with either oedema or proteinuria. Hypertension occurring for the first time in labour was not included. In the second study the incidence of group A was determined in patients with moderately severe or severe pre-eclampsia. In these patients the diastolic blood pressure was 100 mm Hg or more and proteinuria was present. In 400 unselected maternity patients the incidence of group A was 43% and of group O 45.5%.

In the first study 35 out of 103 group A primigravidae developed pre-eclampsia compared with 18 out of 101 group O primigravidae. The relative risk (A:O) of pre-eclampsia was therefore 2.7:1. In the second study 31 out of 47 patients with moderately severe or severe pre-eclampsia were of group A and 10 were of group O. Without allowing for the greater frequency of group O in normal maternity patients this gives a relative risk rate of 3.1:1.

The pathogenesis of pre-eclampsia is not fully understood. It is known, however, that the level of fibrin breakdown products is elevated, suggesting a process of disseminated intravascular coagulation, and Page⁵ suggested a hypothesis for the pathogenesis of pre-eclampsia based on this process.

It is interesting to note that the relative

risk (A:O) for developing venous thrombosis while on oral contraceptive therapy—2.8:1²—is similar to the risk found in this study for the risk of pre-eclampsia—2.7:1. The increased risk to patients with group A of developing pre-eclampsia may therefore be another manifestation of an increased tendency to intravascular coagulation in this group.—I am, etc.,

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- 2 Jick, H., et al., *Lancet*, 1969, 1, 539.
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- 4 Dawood, M. Y., Teoh, E. S., and Ratnam, S. S., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1971, 78, 918.
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Influenza Vaccination

SIR,—With reference to the letter from Dr. J. D. Avison (10 November, p. 358) quoting Tauraso *et al.*¹ on the effects of giving influenza vaccine intradermally, it is important that the conclusions of these authors are examined fully. In accepting that an intradermal inoculation of vaccine in an amount equivalent to one-fifth the subcutaneous dose should be considered, Tauraso *et al.* mentioned that a disturbing feature about the use of the intradermal route is that it is technically complicated and requires well-trained personnel to perform the injections.

If one were to administer a 0.1-ml dose by the intradermal route but inadvertently to inject it subcutaneously, the recipient, instead of receiving his immunization by the better route, would receive it by the less favourable one. With the jet injector a small amount of leakage may occur. Small leakage from a subcutaneous injection makes little difference to the immunity conferred. A similar leakage from an intradermal dose would result in little or no protection.

One further factor to consider is that the intradermal vaccination appears to be more painful and has a higher rate of local reactions, thus reducing the acceptability of such injections.—I am, etc.,

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- 1 Tauraso, N. M., et al., *Bulletin of the World Health Organization*, 1969, 41, 507.

Ventricular Dysrhythmias and Thioridazine in Alcohol Withdrawal

SIR,—The occurrence of ventricular dysrhythmias associated with the use of thioridazine hydrochloride in patients withdrawing from alcohol reported by Dr. M. A. Sydney (24 November, p. 467) demands comment since his conclusions are questionable.

He correctly points out that severe hypokalaemia is a recognized complication of chronic alcoholism, producing ST-segment and T-wave abnormalities and U waves in the electrocardiogram. Vetter *et al.*¹ reported that in a series of 50 patients 64% were hypokalaemic and 18% severely depleted in

potassium (less than 2.5 mEq/l). Of these patients 28% had cardiac dysrhythmias on admission and in one case death occurred following irreversible ventricular tachycardia. I would therefore endorse that determination of serum potassium levels and routine electrocardiograph recordings form part of the basic management of patients after acute alcohol withdrawal.

It is unfortunate, however, that the ventricular dysrhythmias arising in the two patients reported should have been aetiologically linked to thioridazine hydrochloride administration. There is no information in either case as to the clinical features prior to the episodes and one patient was on other drug therapy. In particular, in delirium tremens agitation, irritability, and convulsions commonly occur² and particularly when associated with severe hypokalaemia may contribute greatly to inducing ventricular dysrhythmias. In these two patients thioridazine hydrochloride, a useful and relatively safe drug, was given in modest dosage and there is little, if any, reason to conclude that its administration was implicated in the problems that arose.—I am, etc.,

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- 1 Vetter, R., Cohn, L. H., and Reichgott, M., *Archives of Internal Medicine*, 1967, 120, 536.
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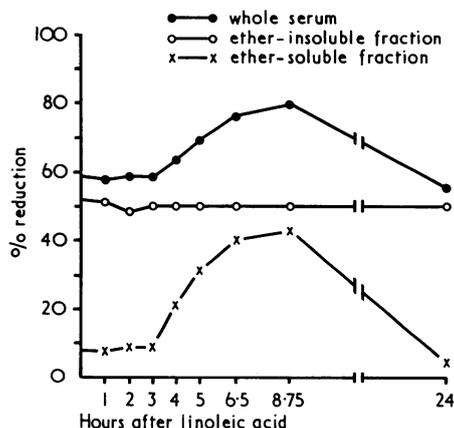
Effect of Polyunsaturated Fatty Acids on Lymphocyte Activity

SIR,—With reference to the letter from Dr. J. Mertin (10 November, p. 357) it is important to bear in mind that polyunsaturated fatty acids (PUFA) are only one of a number of factors which may influence the interaction of sensitized lymphocytes with specific antigen *in vivo*, and that the final intensity of the reaction may represent the algebraic sum of enhancing and inhibitory influences. Important among the latter may be a serum factor which appears to be "tailor-made" to the autologous lymphocytes in that it is more effective in suppressing these cells than those from another individual.¹ This lymphocyte depressing factor (L.D.F.) may well be identical with the α_2 -macroglobulin described by Cooperband *et al.*² as immunoregulatory. Despite its being a potential physiological regulator, no serious attempts appear to have been made to manipulate L.D.F. therapeutically.¹ In general the level of L.D.F. is elevated in all conditions⁴ which lead to lymphocyte sensitization so that it may act in "dampening down" over-reaction to biologically unimportant stimuli.

That the L.D.F. mechanism is distinct from that of PUFA is shown by some recent studies in which a rise in linoleic acid-like activity after an oral dose of linoleic acid was followed with the macrophage electrophoretic mobility (M.E.M.) test⁵ on the interaction of normal lymphocytes with thyroid (F1) antigen. Serum was prepared at intervals after an oral dose of 10 ml of a purified linoleic acid (kindly supplied by Bio-Oils Research, Ltd., Nantwich) and separated into an ether-soluble fraction (containing linoleic acid) and an insoluble fraction (containing protein). It can be seen

from the figure that the rise in the inhibitory activity of the whole serum is the result of increased linoleic acid-like activity, the inhibitory activity of the protein fraction remaining unaffected.

Clearly, in applying the analytical methods of a modern biochemical approach, it is important to realize the frequently multifactorial origin of an end effect and assess or attempt to assess individual influences. In this case the activities of PUFA and linoleic acid-like activity appear disjunct, but this may not always be so.



Heavy animal fat meal at beginning of experiment. Serum separated into ether-soluble (linoleic acid-containing) and ether-insoluble (L.D.F.-containing) fractions. 1 in 60 whole serum or fractions added to the in vitro test system in the M.E.M. test. The ordinate shows the percentage reduction in lymphocyte-antigen interaction. The rise in effect of whole serum is entirely due to the linoleic acid-like activity in the ether-soluble fraction, the L.D.F. fraction remaining unchanged.

The illustrative figure is part of a study designed to evaluate the effect which saturated fat may have on the absorption of a dose of linoleic acid. At zero time in the figure a heavy animal fat meal was taken followed immediately by the unsaturated acid. For many years it has been urged that cutting down animal fat intake may have a beneficial effect upon the course of multiple sclerosis.⁷ Clearly, before embarking upon a prolonged double-blind study of the effect of linoleic acid supplementation of the diet in multiple sclerosis (where it has been reported to be beneficial,⁸) it is important to know whether reduction in the ingestion of saturated fats might facilitate the development and maintenance of high linoleic acid-like activity in serum. Our first results do in fact show that the presence of animal fats does delay and diminish the plateau of linoleic acid in blood.—We are, etc.,

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Return of the Foster-child

SIR,—Like a large number of medical men I have been distressed to read the recurring accounts of children weeping bitterly when taken from foster-parents and returned to parents they have often not seen for years. This has culminated in the tragic case of Maria Colwell and no doubt there are many similar ones which have not been given publicity.

It seems to me that this is a matter which cannot be properly investigated by social workers, who have so often failed in the past. The judges and magistrates are often ignorant of psychiatry and paediatrics so they cannot have a proper understanding of the traumatic results of tearing a child away from someone it has learned to love and putting it into the care of those it considers strangers—even if they are close blood-relations. Surely this matter rests to some extent on the medical profession and we should make ourselves heard regarding it. Might I suggest that we should state loudly and clearly that children should not be separated from those they love unless it has been shown without doubt that they are in some sort of moral or psychiatric danger, and if separation is considered necessary by the courts their decision should be confirmed by psychiatric opinion.

Those of us who have practised psychiatry are only too well aware of the neurosis, criminality, and psychological instability which occur later on as the result of such cases.—I am, etc.,

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Deliberate Injury of Children

SIR,—Your leading article on deliberate abuse of children (13 October, p. 61) draws attention only to the effects of physical battering, which are for the most part visible. It makes no mention of the other more subtle and sinister form of battering—namely, psychological abuse.

This form of injury is just as real and probably just as prevalent as its physical counterpart. Some parents, who cannot vent their feelings in physical violence, can often execute a vicious campaign of psychological attack performed in the name of discipline, good behaviour, or proper upbringing. We find it hard enough to convince ourselves that a child is being physically abused, though our standards of physical behaviour towards children have evolved considerably in the past century. We are much less expert at spotting a situation in which the emotional growth of the child is being wilfully distorted. After all, who are we to decide what kind of behaviour is appropriate for our children? Where does deliberate neglect become distinct from ignorance? When has an authoritarian upbringing given way to primitive excesses?

For the children with physical abuse we can at least mobilize the social agencies and call on the law when necessary. It is far more difficult to be persuaded in cases of psychological abuse; the idea of this type of battering is so novel that we still seem to demand tangible evidence before being able to take legal action. And yet the consequences of this kind of wilful abuse may be longer lasting than some of those associated with

physical damage. The emotional turmoil produced by a vindictive parent may persist into adult life long after the trauma has occurred.

This letter is a plea that we become aware of this problem and that we try to explore the psychological aspects of child abuse in order to develop a better medical, social, and legal system for handling such cases.—I am, etc.,

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I.Q. of Parents of Battered Babies

SIR,—In a recent report by Dr. Selwyn M. Smith and others on "Parents of Battered Babies: A Controlled Study" (17 November, p. 388) they report that nearly half of the mothers were "of borderline subnormality or below." They base this claim on the averaged scores of four of the subtests from the Wechsler Adult Intelligence Scale (W.A.I.S.). I would suggest that this is not a permissible way to use the subtest scores. Either the subtests maximizing factor differences should be used or a full-scale test carried out in the usual way.

The failure to distinguish between verbal and non-verbal abilities has bedevilled even such little research of this kind as has been carried out into the intellectual functioning of battering parents. It prolongs the myth that simple stupidity explains their behaviour. In a recent study (to be published), in which a short form of the W.A.I.S. was used, I found no differences in the battering and control parents' spatial-perceptual abilities. It was in their ability to use verbal concepts that differences emerged. This verbal inability was not, however, nearly as gross as that reported by Dr. Smith and his colleagues and appears to be part of a consistent personality pattern in the batterers reflecting withdrawal, depression, and non-communicativeness. This was borne out by their scores on Cattell's 16 PF test.

While my findings on the mothers' youth and psychological immaturity confirm those of Dr. Smith and his colleagues, I believe that it would be mistaken to take their findings on global I.Q. at face value, based as they are on a statistical misunderstanding of the test construct validity.—I am, etc.,

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Glucagon and Duodenal Ulcer

SIR,—Your leading article on "Glucagon Therapy in Acute Pancreatitis" (1 December, p. 503) reflects the increasing interest in the use of pancreatic glucagon among clinicians, and the encouraging reduction of mortality reported by Condon *et al.*,¹ albeit in a small and uncontrolled study, will no doubt add to this interest. It is most important that further clinical assessment of this promising treatment should be undertaken, but it may be salutary to bear in mind that the actions of glucagon are multiple and could lead to undesirable complications in some situations. In particular its powerful action as a