Apart from avoiding social approval, great care is therefore needed in prescribing these drugs, but particularly in any repeat prescriptions. A totally different state exists where addiction is established, for the registering of addicts and the permitting of doctors to give addicts supplies is both a complete negation of treatment and a total failure to look after the patient.

Treatment of the addict requires treatment of all three phases of the disease—the withdrawal phase, repersonalization, and rehabilitation of the patient and his family.

Most people now agree that we may use an order under the Mental Health Act in the acute phase, the parallel here being the severe depressive who, when ill, wishes to destroy himself but when well cannot understand that state. In practice most patients who are destitute, under family or legal duress, or in occupational difficulties will come into hospital voluntarily merely for sanctuary, but it does not follow that they are motivated towards, or indeed able, to accept the treatment which is in fact necessary. They fail to realize that if they were volitional and could control their state the foregoing position would never have occurred. Nowhere in medicine is the revolving-door policy found as frequently as in addiction; nowhere in medicine is the disease disaster so widespread, for the family suffer as well as the patient; and nowhere in medicine is there so often greater potential for full recovery.

The problems of the addict are as severe as any illness in medicine, and for the foregoing reasons I believe that when a patient is addicted he requires an order, having lost nearly all his true free will in the disease process.

The order is more important in treating the second and third phases. Often the patient does not wish the causes leading to the addiction to be explored, let alone remedied, but unless he is repersonalized and rehabilitated and thus enabled to manage his life and problems he cannot upon discharge do other than relapse into the only adaptation he knows—his addiction.

The plea, therefore, is (1) for recognition of the severity of addiction and the addict's inability to help himself, and the need to use the Mental Health Act in this rehabilitation; (2) for treatment within a hospital which is itself a therapeutic community, and then within a community which is therapeutic; (3) the provision in the mental hospital of flats for the families of addicts, where they can live while they are being repersonalized and rehabilitated; (4) the full aftercare of the addict (including Alcoholics Anonymous where necessary) with proper follow-up by the out-patient department; (5) the need to realize that this repersonalization and most important the occupational rehabilitation and follow-up can only be accomplished by a hospital fully equipped and not by isolated alcoholic units, often remote from the areas where the patient has to re-establish himself.—I am, etc.,

JOHN HARDING PRICE.

St. John's Hospital,
Lincoln.

SIR,—Dr. P. D. Scott's plea for common sense in the approach to alcoholism (29 January, p. 291) needs support, not only on

account of the misguided professional views that exist, but also because of the layman's interest in the treatment for alcoholism.

There are very few indications for the admission of an alcoholic to an acute psychiatric bed. They can be summarized as follows:

- (1) An acute alcoholic toxic confusional state.
- (2) The alcoholic who asks to be weaned off large doses of liquor.
- (3) Alcoholism associated with underlying psychiatric illness.

Once "dried out," the patient is then free to go on drinking, or to seek help. Such help can be based only upon a firm belief by the patient that he must live without alcohol entirely; moreover, such individuals must be prepared to be truthful, both to themselves and others, in the pursuit of this aim.

The Mental Health Act of 1959 provides adequate cover for admissions under the categories mentioned. What then is the purpose of further compulsory powers? Is it considered possible to compel people to be truthful? Or is it believed that compulsory powers can deprive people of liquor?

The proponents of an extension of compulsory powers must say for what reasons they are needed. It is no wonder that the Inebriates Acts of 1888 and onwards have fallen into disrepute as does any Act which cannot be enforced. Beds in special alcoholic units are needed much more urgently than greater compulsory powers.—I am, etc.,

Hellingley Hospital,
Sussex.

R. MAGGS.

Effect of Atromid-S

SIR,—The demonstration by Dr. J. M. Goodhart and Dr. H. A. Dewar of no correlation between blood fibrinolytic activity and the serum cholesterol in a series of patients with ischaemic heart disease before and after Atromid-S therapy (5 February, p. 325) is of no surprise to those of us who have already reported on aspects of this subject.^{1 2}

It seems likely that the importance of reduced fibrinolytic activity in the pathogenesis of atherosclerosis and coronary heart disease has been greatly exaggerated.—I am, etc.,

London W.1.

M. A. PEYMAN.

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Exfoliative Cytology

SIR,—A quotation from the *Medical Gazette* of 7 May 1847, p. 831, may amuse those interested in the diagnosis of cancer by exfoliative cytological examination (and which of us is not?). It was written by Dr. J. H. Bennett, of Edinburgh. He first complains that in the living subject with a surface growth a piece for section cannot be obtained, though he does not state the reason. He then goes on: "Over most of the surface generally, for instance, where the diagnosis

most concerns the surgeon, a group of such cells cannot leave us in doubt, because the epidermic scales in such cases never resemble them, as they do in internal organs, as the bladder, stomach, or brain. . . . Various ulcerated and fungoid tumours of the surface may be diagnosed with certainty, from an examination of the cells alone, whilst in fluids discharged from the stomach, bowels, or bladder, this means of diagnosis is not so certain."

One hundred and twenty years is a long time for a man not to have received recognition. He was not the first to have used exfoliative cytology, for he quotes others.—I am, etc.,

Newcastle upon Tyne 2. FRANK STABLER.

Phrynoderma

SIR,—We have read with interest the article on phrynoderma by Dr. A. L. Shrank (1 January, p. 29). The Nutrition Research Laboratories have carried out several clinical, biochemical, and therapeutic studies in an attempt to determine the aetiology of this condition. Other studies¹⁻⁵ have all pointed out that deficiency of vitamin A was not involved in the aetiology of this condition and that levels of serum vitamin A in phrynoderma were indeed normal.⁴ The observation made by Shrank that B-complex vitamins could cure the condition is in line with earlier observations made by these laboratories. We had found that, though the B group of vitamins were effective in curing the condition, thiamine, nicotinic acid, and pyridoxine when given singly (either orally or parenterally) had no beneficial effect. But riboflavin alone did produce a good degree of improvement in several subjects.⁵

The finding that both the B-complex group of vitamins and fats rich in linoleic acid can cure phrynoderma may be interpreted to mean that (a) phrynoderma is a disease that can develop as a result of deficiency of either of these nutrients; (b) the metabolism of essential fatty acids and B-complex vitamins are closely interrelated. It is interesting in this context that the children with phrynoderma studied by Shrank were in fact consuming fair amounts of linoleic acid. The metabolic interrelationship of essential fatty acids and the B-complex vitamins therefore need more intimate study.—I am, etc.,

Indian Council of
Medical Research,
Hyderabad.

S. G. SRIKANTIA.

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Pigmentation and Busulphan Therapy

SIR,—Dr. B. P. Harrold's case report (19 February, p. 463) was rather similar to our experience with a patient who had myeloid leukaemia treated with busulphan.

The patient, a woman aged 34 years, had been treated for just over two and a half years, the

dose of busulphan being regulated according to the white count. The dose varied considerably from nil to 8 mg. daily. During the last few months she became increasingly pigmented, had recurrent nausea, vomiting, and diarrhoea, lost a considerable amount of weight, and was very lethargic. Her blood-pressure tended to be low—about 105/60. The pigmentation was generalized, but in addition she had marked pigmentation in the palmar creases. As in Dr. Harrold's patient, and patients reported previously,^{1,2} the buccal mucous membranes were spared. Our patient showed a normal excretion of urinary 17-hydroxy-corticosteroids (10–12.6 mg./24 hrs. (Few)), which rose to 29.5 mg./24 hrs. on the third day of receiving Cortrophin-Zn 60 units intramuscularly twice daily. The patient had been off treatment with busulphan for five weeks prior to this test.

Another interesting feature in this patient was a very low serum calcium, the levels varying between 4.9 and 5.6 mg./100 ml. The patient complained of tingling in her limbs, and Chvostek's and Trousseau's signs were positive. The plasma proteins were normal—albumin 3.8 g./100 ml. and globulin 2.1 g./100 ml. There was no evidence of malabsorption, the xylose excretion test and the faecal excretion of fat being normal. The urinary calciums were low, being 3.5 to 13 mg./24 hrs. The serum calcium rose to 7.5 mg./100 ml. and tetany could no longer be elicited following the administration of calcium gluconate, 16 g. daily, and calciferol, 50,000 units daily.

Hypocalcaemia would seem to be a rare finding in patients with myeloid leukaemia, although one instance has recently been reported.³ In this patient the serum calcium was 7.4 mg./100 ml. and there were no signs and symptoms of tetany. We will be reporting our patient in more detail elsewhere.

We are grateful to Professor R. B. Hunter for permission to make this report.—We are, etc.,

J. GORDON SPRUNT.

C. R. RIZZA.

Maryfield Hospital,
Dundee.

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Pentose Shunt Activity and Cervical Smears

SIR,—Increased activity of 6-phosphogluconate dehydrogenase, one of the enzymes of the pentose phosphate pathway, has been claimed as a diagnostic criterion of gynaecological cancer.¹ However, increased glucose metabolism via the pentose route, and consequently increased activity of its enzymes, occurs in many physiological processes as well as in non-malignant pathological conditions.^{2,3} Hence, as we stated in a previous communication,³ it is not possible to relate the degree of activity of the dehydrogenase enzymes to a specific aspect of the biochemical process. Furthermore, since many other factors may influence activity of these enzymes,³ a test of this nature could not be of diagnostic value in neoplasia.

The unreliability of this test has subsequently been demonstrated by other investigators, both in the United States and Britain,^{4–6} a further 2,000 patients and well over 2,500 biochemical analyses being required, however, to prove clinically what was obvious, biochemically, from the outset.

Nevertheless, the theme returns in a recent communication (Mr. M. Cohen and Mr. S. Way, 8 January, p. 88) in which dehydrogenase activity in cervical smears is determined by histochemical instead of biochemical methods. Although the authors are careful to suggest their procedure allows the possibility "to develop a histochemical stain to assist interpretation of smears," they nevertheless state that "in the smears from malignant cases some activity was demonstrated even in cells which morphologically appeared to be normal squames."

It is here that the crux of the matter lies. Increased glucose metabolism via the pentose phosphate pathway with a resulting rise in the activity of its enzymes is not specific to the process of malignancy. It is in fact a daily biochemical function—to a greater or lesser degree—of most living cells.

Furthermore, histological examination of infectious lesions has shown a marked dehydrogenase activity,² even higher than that associated with most malignant processes. Similarly, smears from a mild chronically infected cervix, from one which is friable or inflamed, or after a cervical cap has been left *in situ* for more than 12 hours, or even after repeated intercourse, can give false positive results, quite apart from the normal physiological changes associated with the menses or pregnancy.

Thus, we must once again emphasize that, in view of the extent and variety of the biochemical reactions—whether physiological or pathological—in which the enzymes of the pentose pathway participate, assessment of their activity cannot represent a specific diagnostic tool or even be of assistance in the diagnosis or interpretation of cervical smears. Quite apart from the fact that, since histochemical procedures are usually more complicated than histological ones, they are not even suitable for screening purposes.—We are, etc.,

P. BEACONSFIELD.

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Trace Elements in Disseminated Sclerosis

SIR,—In conjunction with the Atomic Energy Research Establishment at Wantage we are investigating the levels of trace elements in neurological conditions, especially disseminated sclerosis. May we use your columns to appeal for specimens of brain tissue when these become available?

It is essential that pathology laboratories which are prepared to cooperate with us should have a supply of the special containers, which we will be happy to send in stamped addressed envelopes to minimize any inconvenience on their part.

We would like to say that this work has the full support of the Multiple Sclerosis

Society of Great Britain and Northern Ireland.—I am, etc.,

B. French Ltd.,
Pike Mills,
Green Street,
Kidderminster.

J. P. ADLAM.

Gastrostomy Tube for Vagotomy

SIR,—It is a sad reflection on the ultra-conservatism of British surgery that certain surgeons (5 March, p. 611) still advocate an indwelling gastric tube following such an operation as vagotomy and pyloroplasty.

In my own personal series, now approaching 1,000 cases, I have never required the use of an intragastric tube, and no patient has died because of its omission.

On the other hand, we all know that tubes are fraught with danger, so why complicate the issue, and why finish up with a stomach which is inevitably attached to the abdominal parietes anteriorly?

Do not let us modify the two-way gastrostomy tube, let us discard it.—I am, etc.,

London N.21.

W. GARDEN HENDRY.

Posture, Gravity, and Serum Levels

SIR,—Dr. D. J. Stoker and his colleagues (5 February, p. 336) pointed to the effect of posture on the serum levels of non-filterable elements in the blood, an effect due to the hydrostatic pressure—caused by normal gravity—working against the osmotic pressure of the non-filterables in the blood. The rise of the serum cholesterol levels on changing position from recumbent to standing was also found by one of us.¹ The changes in the serum calcium levels reported by Stoker *et al.* could be very well connected with the loss of bone density reported to have occurred in one of the astronauts during his prolonged period of weightlessness,² and play a role in the well-known occurrence of osteoporosis in patients confined to bed for longer periods of time, and in the later complications thereof, like stones in the urinary tract and calcifications in connective tissues, including the arterial walls. The mechanism of these effects is doubtless very complicated. A somewhat less complicated mechanism might be found in the concentration changes of foreign substances in the blood that are (partly) protein-bound, since there is no tendency to keep the levels of the latter constant, while this is essential in the case of serum calcium. It can be expected that the serum levels of protein-bound drugs—for example, antibiotics and sulphonamides—are liable to similar postural changes as those described above. It will also make a difference whether the substance itself is a filterable one or not. It would mean that for comparisons the activity of drugs cannot be accurately expressed in serum concentrations if the conditions on drawing the blood samples are unknown and not standardized. Conditions should be chosen in such a way that reproducible results can be obtained. The standing—highest—levels are found in about 15 minutes after changing posture from recumbent to standing; the lowest levels—in recumbent posture—are only reached in a much longer time after the posture change: 1.5 hours proved not always to be long enough