

patients, but three have made very serious attempts. All three required surgical treatment but have now recovered physically.

We have not been impressed by the idea suggested by Alarcon and Carney (3) that fluphenazine converts schizophrenia into an affective disorder. The patients who have made the most determined suicidal attempts have certainly shown the more obvious affective disturbance, but in general they have reverted to their former schizophrenic state.

Some of our patients had been in hospital for many years and had failed to show much response to the usual physical methods of treatment, including E.C.T., insulin coma, leucotomy and exhibition of phenothiazines and other drugs in substantial dosage. Quite unexpectedly, some of these patients have done well on intramuscular fluphenazine, to such an extent that they have been discharged from hospital. The suspicion is raised, of course, that these patients had not in fact taken the oral drugs prescribed for them.

To summarize, intramuscular preparations of fluphenazine appear to be an effective method of treatment for schizophrenia; particularly so for relapsed schizophrenics who have previously responded to oral phenothiazines and in cases where relapse has been associated with failure to take oral medication. The severity of extrapyramidal side-effects occasionally prohibits the use of fluphenazine, but severe depressive reaction, with the attendant risk of suicide, remains the biggest drawback. Our three most serious attempts occurred while the patients were in hospital, and it is difficult to see how they could have been prevented.

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REFERENCES

1. *Drugs and Therapeutics Bulletin*, Vol. 8, No. 18.
2. 'Annotation'—*British Medical Journal* (1971), *i*, 189.
3. ALARCON, R. DE, and CARNEY, M. W. P. (1969). *British Medical Journal*, *iii*, 564.

COMBINED THERAPY OF E.C.T. AND AMITRIPTYLINE AND L-TRYPTOPHAN IN THE TREATMENT OF SEVERE DEPRESSION

DEAR SIR,

Further to the report on L-tryptophan in cases of depression (1 Coppen, 1963; 2 Cocheme, 1970). I would like to report a case of severe depression

1 Alec Coppen, David Murray Shaw, John P. Farrell, *Lancet*, 12th January 1963, p. 79.

2 M. A. X. Cocheme, Alan D. Broadhurst, *Lancet*, 27th June 1970, pp. 1392-3.

associated with disturbed liver function, refractory to E.C.T. and tricyclic antidepressant drugs, who benefited by combined therapy of E.C.T., amitriptyline-L-tryptophan and pyridoxin.

A man of 64 years of age addicted to alcohol was on several occasions admitted to hospital between 1955 and 1962. From 1962 there were episodes of depression but less alcoholism. Previous treatment was with anti-depressants and Parentrovite. He is a publican by trade.

The present admission began in November 1970 with an episode of severe depression which was not relieved by tricyclic antidepressants and a course of E.C.T. (6) as an out-patient.

On admission he was very depressed and a further course of E.C.T. and amitriptyline were given with little effect. At that stage it was also discovered that his serum uric acid level was raised (12 mg./100 ml.; urea 86 mg./100 ml.) and his liver function test findings were slightly abnormal (as A.T. (G.O.T.) 202 μ /ml.; L.D.H. 230 μ /ml., Alk. phosphatase 25 μ /100 ml.; cholesterol 302 mg./100 ml.; ammonium sulphate turbidity 3.0 units; zinc sulphate turbidity 5.0 units). He was put on allopurinol for his raised serum uric acid. His condition deteriorated to the extent of refusing all food and medication over the period of a month. His speech was feeble and muttering and he was unable to answer simple questions. At this stage his general condition was so poor that there were fears for his life. In order to relieve his retardation and permit feeding, sodium amyltal 250 mg.—300 mg. was tried intravenously with good effect but which lasted for less than 24 hours. On 9 February 1961, L-tryptophan 7 gm. daily was commenced in a chocolate mixture, additionally pyridoxin 50 mg. daily and amitriptyline was given with a transitory effect lasting only for three days.

A further course of E.C.T. (8) and amitriptyline 50 mg. 3 times a day was tried with L-tryptophan 7 gm. daily in divided doses and pyridoxin 50 mg. daily.

A marked improvement after the 3rd E.C.T. (4.3.71) was noticed. The improvement was maintained on the above drugs, the patient became happy, sociable and enjoyed voluntary work in the hospital involving calculations, and was discharged home on 2 April 1971 in the above improved condition. The improvement has been maintained until the present time.

The special interest of this case lies in the failure to respond to E.C.T. and tricyclic anti-depressants over an extended period, but immediate improvement once L-tryptophan was added. It is tempting to speculate that due to his liver disease there was a deficiency in tryptophan which had prevented his response to

conventional treatment until the deficiency was rectified.

My sincere thanks to Dr. G. E. Langley, Consultant Psychiatrist, for his guidance, and to my colleague Dr. Brandwood.

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AN OBJECTION TO 'PARASUICIDE'

DEAR SIR,

Before 'parasuicide' becomes established as the word for attempted suicide and related actions, may I point out what seems to me a serious objection to the adoption of this term? This is the fact that there are two different 'para' prefixes, the one the Greek preposition signifying 'beside' or 'on the fringe of'; the other from the Latin 'parare', French 'parer', meaning 'to ward off', 'to parry'.

This second 'para' is a live prefix in French and Italian; in these languages the Greek 'para' is only used in compounds with a Greek second element; where the second element is a native word (i.e. of Latin origin) 'para' invariably has the 'ward off' meaning. We have taken over two of such words—'parasol' and 'parachute'; in French there is also 'paratonnerre', a lightning-conductor, 'paravent', a screen, and, of course, 'parapluie', and in Italian 'paramosche', a fly-flap.

Thus to a French or Italian reader 'parasuicide' could only mean, by analogy, 'suicide prevention'; so the word seems quite unsuitable for international use, and would lead to confusion even if one tried to confine it to the English language.

It is much to be hoped that someone—perhaps the International Association for Suicide Prevention (? 'Société du Parasuicide')—will now coin a more acceptable term for these manifestations of 'man against himself'.

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PSYCHOSIS-DYSKINESIA AND THE BASAL GANGLIA

DEAR SIR,

Various findings (1, 2) suggest that whilst ventrolateral thalamotomy may diminish parkinsonian tremor, rigidity and dystonia, it may be equally effective in diminishing the diametrically opposed condition (3, 4) of choreoathetosis. These and comparable phenomena (5) appear less contradictory if the monoaminergic-cholinergic balance (6, 7) of the basal ganglia can be related to the role these nuclei

play within the suppressor circuits (8), and if such balance in suppressors is equated with damping the range of a thalamic oscillator (9, 10). Central nervous function can then be seen to exhibit elastic properties (11), such as tone, tension or stress, and flexibility, rigidity or strain (5).

Carman's appraisal (9) is compatible with the concept that oscillating neurones in the ventrolateral thalamus provide the drive behind tremor and rigidity in parkinsonism, when deficiency of dopaminergic effects on pallidal thalamic input has led to over-suppression. (They provide the drive behind intention tremor when there is inadequate cerebellar input to the thalamus (9).) The diametrically opposed condition of choreoathetosis may depend upon the same ventrolateral thalamic drive, when excessive dopaminergic effects on pallidal thalamic input lead to under-suppression. In other words, over-damping leads to parkinsonian rigidity and tremor, under-damping to choreoathetotic overshoot.

The occasional mental accompaniments of chorea and of parkinsonism (in either case whether disease or drug induced), i.e. schizophreniform psychosis and obsessional phenomena respectively (3, 4), may also depend on such imbalance, although in relation to exteroceptive rather than proprioceptive input perhaps the parieto-occipito-temporal rather than the frontal lobes (10). The fact that the associated mental and motor phenomena do not invariably accompany each other may reflect a difference in vulnerability between, for the mental states, the tail of the caudate nucleus ending in the amygdala, and for the motor ones the body of the caudate arising in the striatum.

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REFERENCES

- HUGHES, R. C., POLGAR, J. G., WEIGHTMAN, D., and WALTON, J. N. (1971). *Brit. med. J.*, *i*, 7.
- HAWKINSON, J. (1971). *Brit. J. Hosp. Med.*, *5*, 91.
- CRAWFORD, J. P. (1969). *Lancet*, *ii*, 1014.
- CELESIA, G. G., and BARR, A. N. (1970). *Arch. Neurol.*, *23*, 193.
- LANDAU, W. M. (1969). In: *Recent Advances in Neurology* (ed. Plum, F.). Oxford.
- CRAWFORD, J. P. (1962). *Amer. J. Psychiat.*, *118*, 741.
- Lancet* 'Annotation' (1969). *i*, 871.
- FULTON, J. F. (1943). *Physiology of the Nervous System*. London.
- CARMAN, J. B. (1968). *New. Eng. J. Med.*, *279*, 919.
- CRAWFORD, J. P. (1966). *J. neurol. Sci.*, *3*, 117.
- WALSHE, F. M. R. (1944). *Diseases of the Nervous System*. Edinburgh.