

LETTERS TO THE EDITOR

Pemoline and neuroleptic-induced side effects

Sir, — We would like to describe the case of a 43 year old civil servant who was admitted to a general psychiatric unit with an acute psychosis. He was treated with high doses of various neuroleptics, including pimozide and haloperidol. He developed marked extrapyramidal side effects which proved resistant to various strategies including lowering the dosage of the neuroleptic, stopping the neuroleptic and increasing doses of procyclidine.

He was treated with pemoline, a CNS—stimulant which resolved the side-effects completely within seven days.

Case Report

Our patient was admitted compulsorily to a general psychiatric ward. He was extremely suspicious, hostile and aggressive on admission. He talked of “trouble at work, physical trouble and aggravation” which had resulted in his having several absences from work over the previous six weeks. He believed that people at work walked towards him in a threatening way. He also believed that someone at work had pick-pocketed him in the street and he knew this because he found two £10 notes and a cheque belonging to him on the street. He said that people in the street were talking about him. Ominously he talked of taking revenge and killing his workmates.

His mental state on admission revealed that he was extremely guarded. He was not formally thought disordered and his mood was euthymic. He had elaborate persecutory delusions partly related to third-person auditory hallucinations. Whilst on the ward he accused fellow patients of talking about him and he became very abusive and aggressive. He had no previous psychiatric history and no family history of mental illness. There was also clear evidence of personality deterioration from a bright honours graduate to a withdrawn, apathetic civil servant who had not been promoted for six years although working in the same department since graduating. He lives with his elderly mother and has no close friendships and no previous sexual experience. A diagnosis of schizophrenia was made and he was commenced on haloperidol 10 mg TDS increasing to 20 mg TDS. Over the next two months he gradually improved although tended to isolate himself on his bed.

A decision was made to change neuroleptic to pimozide due to its reported stimulating properties and this was commenced 8mg BD. Over the next month he became more lethargic and apathetic. He began to lose weight, developed pressure sores on his heels due to his prolonged self-inflicted bed rest and he became incontinent of urine.

Physical examination revealed marked cog-wheel rigidity, mask-like face and a resting tremor. He remained orientated in time, place and person and there were no signs of autonomic dysfunction. Routine investigations including haematological and biochemical profile (including CPK) were normal, VDRL was negative and he had a normal EEG. The malignant extrapyramidal side effects continued and the pimozide was stopped one week later.

Over the next two weeks he became more lethargic and it was difficult to differentiate negative symptoms from side-effects of the medication. Due to the severity of this man's reaction to the neuroleptics it was decided to try pemoline, a CNS-stimulant and he was commenced on 20mg BD. The parkinsonian side-effects disappeared gradually and he got off his bed and went for three long walks per day and became very sociable.

He remained on pemoline for the next two months while depixol 20mg per fortnight was commenced. After this it was

decided to tail off the pemoline. Unfortunately, doing this resulted in the return of the same side-effects which again improved when the pemoline was increased to 20mgBD. Depixol was then slowly titrated to a dose of 10mg monthly. After three months the pemoline was gradually tapered off without any adverse effect.

Over the last 2½ years he had remained on depixol and has not relapsed.

Discussion

Pemoline is a CNS-stimulant and is used mainly in the field of child psychiatry in the treatment of hyperkinesia. The structure of pemoline is similar to amphetamines but its potential for abuse is low. Like other psychostimulants, it acts predominantly by releasing biogenic amines from their storage sites in pre-synaptic nerve terminals and blocking their reuptake.¹

Psychostimulants have been used as adjuncts to the treatment of various psychiatric illnesses,^{2,3,4} and as a pharmacological probe to delineate sub-groups of patients with schizophrenia.⁵

Dopaminergic hyperactivity has been postulated in the biochemistry of schizophrenia and this has led to the use of neuroleptics which are potent dopamine receptor blockers.

We present this case of a man with an extreme sensitivity to neuroleptics who developed marked and resistant extrapyramidal side-effects. We excluded neuroleptic malignant syndrome (NMS) as he was never confused, never pyrexial and autonomic function was maintained.

We tried pemoline which increased dopamine in the synapse which had the desired effect of relieving this man's distressing side-effects. We also suggest that pemoline might be used as a pharmacological probe and might be of benefit to patients with negative schizophrenia.

Philip L. Huckle,
Senior Registrar in Psychiatry,
Glanrhyd Hospital,
Bridgend, Mid Glamorgan CF31 4LN,
Wales.

Roger Thomas, MRCPsych,
Consultant Psychiatrist,
Whitchurch Hospital,
Cardiff,
Wales.

References

1. Scheel-Kruger J. Comparative studies of various amphetamine analogues demonstrating different interactions with the metabolism of the catecholamines in the brain. *Eur Journal Pharmacol* 1971; 14: 47-59.
2. Chiarello RJ, Cole JA. The use of psychostimulants in general psychiatry. *Arch Gen Psychiatry* 1987; 44: 286-95.
3. Kiloh CG, Neilson M, Andrews G. Response of depressed patients to methamphetamine. *Br J Psychiatry* 1964; 125: 496-99.
4. Casey JF, Hollister LE, Kless CJ. Combined drug therapy of chronic schizophrenia. *Am J Psychiatry* 1961; 117: 997-99.
5. Lierberman JA, Kane JM, Alvin J. Provocative tests with psychostimulant drugs in schizophrenia. *Psychopharmacology* 1987; 91: 415-33.

Irish Journal of Psychological Medicine 1991; 8: 174-176

Irish general practice and clinical psychology

Sir, — The “Personal Report” in the last issue¹ had much to say of interest and importance. I should be grateful if Declan Aherne would clarify what he understands and would recommend by way of ‘adequate training’ for general practitioners in relation to ‘exploring in depth the human psyche’. He might also indicate in his reply what would be “highly dangerous” and to whom.

I would also have some difficulty in his statement in section 7 of his contribution where he says that ‘the clinical psychologist is similar to the psychiatrist in that they both specialise in the understanding of abnormal behaviour’ and then goes on to say in relation to their own particular areas of expertise, ‘for the psychiatrist it is the use of drugs as a treatment device and for the other it is psychometric assessment techniques’. That

PRESCRIBING INFORMATION CLOPIXOL INJECTION AND CLOPIXOL-CONC. INJECTION contain zuclopenthixol decanoate 200 mg/ml and 500 mg/ml respectively in thin vegetable oil. **Indications** Psychoses, especially schizophrenia. **Dosage and Administration** 200-500 mg every 2-4 weeks by deep intramuscular injection. Not recommended for children. **Side-Effects** Early (frequent) and late (rare) dyskinesias. Extrapyramidal effects sometimes require dose reduction or antiparkinson drug treatment. **Contraindications** Comatose states. **Precautions** Caution in patients with advanced renal, hepatic or cardiovascular disease, Parkinson's disease, pregnancy, car driving or machine operation. **Further information** Overdosage should be treated: (a) by anticholinergic antiparkinson drugs if extrapyramidal symptoms occur. (b) by sedation (with benzodiazepines) in the unlikely event of agitation or excitement. (c) by noradrenaline in saline intravenous drip if the patient is shocked. **Package Quantities** 10 x 200 mg/ml (1 ml) ampoules. 1 x 200 mg/ml (10 ml) vial. 5 x 500 mg/ml (1 ml) ampoules. PL Nos 0458/0017,0060. PA Nos 115/5/1,5,7.

75 YEARS



OF CARE



FACING

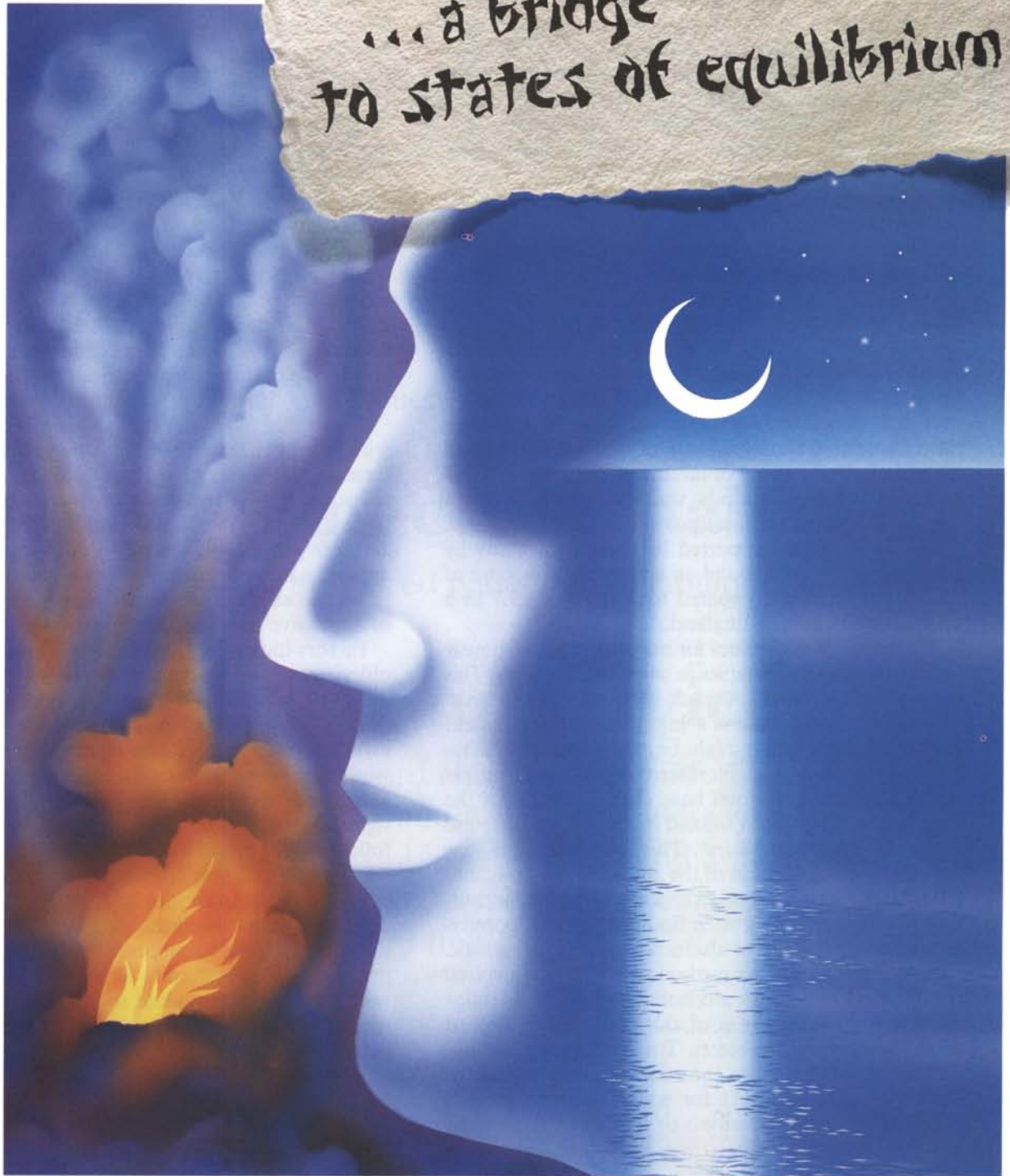
THE

FUTURE

TOGETHER

PRESCRIBING INFORMATION CLOPIXOL ACUPHASE INJECTION contains zuclopenthixol acetate 50 mg/ml in thin vegetable oil. **Indications** Acute psychoses, mania and exacerbation of chronic psychoses. **Dosage and Administration** 50-150 mg by deep intramuscular injection repeated if necessary after 1, 2, or 3 days. Maximum accumulated dosage should not exceed 400 mg. **Elderly** Dosage may need to be reduced and any single injection should not exceed 100 mg. **Children** Not recommended. **Side-Effects** Anticholinergic type effects including dry mouth, drowsiness and hypotension. Extrapyramidal effects which may require dosage reduction or antiparkinson treatment. **Contraindications** Comatose states. **Precautions** Caution in patients with advanced hepatic, renal or cardiovascular disease, Parkinson's disease, pregnancy, driving or machine operation. **Overdosage** Symptoms may comprise somnolence or coma, extrapyramidal symptoms, hypotension, seizures or loss of body temperature control. Treat by supportive measures. Adrenaline should not be used. **Package Quantities** 5 x 50 mg (1 ml) ampoules. 5 x 100 mg (2 ml) ampoules. PL No 0458/0063. PA Nos 115/5/9-10.

Fires rage
crisis overturned
... a bridge
to states of equilibrium



CLOPIXOL
ACUPHASE[®]
zuclopenthixol acetate

DEPOT
CLOPIXOL[®]
zuclopenthixol decanoate

A harmonious way to treat acute and chronic psychosis

Further information is available on request from: Lundbeck Ltd, Lundbeck House, Hastings Street, Luton, Beds LU1 5BE

perception would not be mine nor would I share the view that "psychiatrists train in psychoanalysis" and "psychologists train in cognitive/behavioural therapy and the humanistic therapies".

Paul E McQuaid,
Medical Director,
Mater Misericordiae Hospital,
Dublin 7.

Reference

1. Aherne D, Griffin M. Irish general practice and clinical psychology. *Ir J Psychol Med* 1991; 8: 75-78.

Author's reply

Sir, – I have not advocated that General Practitioners be trained to explore in-depth the human psyche. Let this be the work of psychotherapists. The danger, as I see

it, is in inadvertently promoting dependency, powerlessness and the lack of self-responsibility in the client. The General Practitioner's role is in developing a responsible public attitude to physical and psychological well being. This holistic approach to health needs to be developed at undergraduate level.

With regard to what I have said about the respective disciplines I feel I am stating no more than the obvious trend in the day to day practice of the majority of those professionals with whom I have made contact.

Declan Aherne
Clinical Psychologist,
St. John's Square,
Limerick.

Irish Journal of Psychological Medicine 1991; 8: 176-182

BOOK REVIEWS

BOOKS RECEIVED:

150 years of British psychiatry 1841-1991. German E Berrios, Hugh Freeman, editors. London: The Royal College of Psychiatrists/Gaskell, 1991. 480pp, £15.00. **A practical guide to cognitive therapy.** Dean Schuyler. New York & London: WW Norton & Company, 1991. 176pp, £14.95/\$27.00. **An uncommon casebook – the complete clinical work of Milton H Erickson, MD.** Summarized and compiled by William Hudson O'Hanlon, Angela L Hexum. London: WW Norton & Company, 1990. 364 pp, £24.00/\$42.95. **Antidepressants: thirty years on.** Brian Leonard, Paul Spencer, editors. London: CNS (Clinical Neuroscience) Publishers, 1991. 534pp, £38.50. **Atypical adolescence and sexuality.** Max Sugar, editor. London: WW Norton & Company, 1990. 244pp, £19.95/\$36.00. **Bulimarexia – the binge/purge cycle.** 2nd ed. Marlene Boskind-White, PhD, William C White, Jr, PhD. London: WW Norton & Co, 1991 pb. 280pp, £6.95/£13.50. **Carers, professionals and Alzheimer's Disease – proceedings of the 5th Alzheimer's Disease international conference.** Desmond O'Neill, editor. London: John Libbey & Company, 1991. 335pp, £21/\$41 pb. **Childhood dialogues and the lifting of depression – character structure and psychoanalytic technique.** Paul Graves Myerson. London: Yale University Press, 1991. 160pp, £14.00/\$25.00. **Cocaine addiction – treatment, recovery, and relapse prevention.** Arnold M Washington. London: WW Norton & Company, 1991. 256pp, £8.95/\$15.95, pb. **Concepts of mental disorder – a continuing debate.** Alan Kerr, Hamish McClelland, editors. London: The Royal College of Psychiatrists/Gaskell, 1991. 159pp, £7.50. **Conscious and unconscious – Freud's dynamic distinction reconsidered.** Patricia S Herzog. Madison CT: International Universities Press, 1991. 127pp, \$27.50. **Counselling same-sex couples.** Douglas Carl. London: WW Norton & Company. 182pp, £13.95/\$24.00. **Depression in primary care – screening and detection.** Clifford Attkisson, Jane Zich, editors. London: Routledge, 1991. 300pp, £35.00 hb. **Freud's "On narcissism: an introduction".** Joseph Sandler, Ethel Spector Person, Peter Fonagy, editors (for the International Psychoanalytic Association). London: Yale University Press, 1991. 256pp, £17.95/\$30.00. **Gender disorders and the paraphilias.** William B Arndt, Jr. Madison CT: International Universities Press, 1991. 496pp, US\$60.00. **Hermine Hug-Hellmuth – her life and work.** George MacLean, Ulrich Rappen. London: Routledge, 1991. 317pp, £35.00. **Improving health: what can psychology contribute?** Hannah McGee, Paul Gilligan, Dermot Rush, editors. Dublin: Psychological Society of Ireland, 1990. 56pp, £3.00 + 0.50 postage. **International perspectives in schizophrenia – biological, social and**

epidemiological findings. Malcolm Weller, editor. (International perspectives in schizophrenia research series: 1). London: John Libbey, 1990. 335pp, £40/\$78.00 hb. **Karen Horney – final lectures.** Douglas H Ingram, editor. London: WW Norton & Co., 1987, 1991 Norton pb. 128pp, £4.95/\$8.50. **Language, structure and change – frameworks of meaning in psychotherapy.** Jay S Efran, Michael D Lukens, Robert J Lukens. London: WW Norton & Company, 1991. 250pp, £17.50/\$32.00. **Living beyond loss – death in the family.** Froma Walsh, Monica McGoldrick, editors. London: WW Norton & Co., 1991. 310pp, £19.95/\$36.00. **Melanie Klein, vol II – the ego and the good object, 1932-1960.** Jean Michel-Petot. Madison CT: International Universities Press, 1991. 294pp, \$40.00. **Mental health in Ireland.** Colm Keane, editor. Dublin: Gill & Macmillan/Radio Telefis Eireann, 1991. 129pp, £6.99. **Moral luck in medical ethics and practical politics.** Donna Dickenson. Avebury series in Philosophy. Aldershot, Hampshire UK: Avebury, 1991. 161pp, £30.00. **My voice will go with you – the teaching tales of Milton H Erickson.** Sidney Rosen, editor & commentator. London: WW Norton & Co., 1991 pb. 256pp, £7.95/\$13.95. **Nine lives – the emotional experience in General Practice.** Kenneth Sanders. Strath Tay Old Ballechin, Perthshire, Scotland: Clunie Press for the Roland Harris Trust Library. 164pp, £8. **On Freud's "Analysis terminable & interminable".** Joseph Sandler, editor. London: Yale University Press, 1991. 132pp, £14.00/\$25.00. **Principles and practice of biological psychiatry (2 volumes).** TG Dinan, editor. London: CNS (Clinical Neuroscience) Publishers, 1991. 356pp (vol 1), 342pp (vol 2), £37.50 each. **Psychiatric disorders in America – the epidemiologic catchment area study.** Lee N Robins, Darrel A Regier, editors. New York: The Free Press (Division of Macmillan), 1991. 479pp. **Psychoanalytic group theory and therapy – essays in honor of Saul Scheidlinger.** Saul Tuttmann, editor. Madison CT: International Universities Press, 1991. 460pp, \$55.00. **Psychological & psychiatric problems in men.** Joan Gomez. London: Routledge, 1991. 137pp, £25.00 hb. **Psychological processes of childbearing.** Joan Raphael-Leff. London: Chapman & Hall, 1991. 576pp, £19.95. **Psychology of intergroup relations.** Stephen Worchel, William G Austin. Chicago: Nelson-Hall, 1986. 439pp, £22.25. **Psychopharmacology of sexual disorders.** Mark Segal, editor (Biological psychiatry – new prospects series: 4). London: John Libbey, 1985. 181pp, £38.00, \$74.00 hb. **Putting difference to work.** Steve de Shazer. London: WW Norton & Company, 1991. 206pp, £15.95. **Reweaving the family tapestry – a multigenerational approach to families.** Fredda Herz Brown, editor. London: WW Norton & Company. 334pp, £21.95/\$40.00. **Sources of the self – the making of the modern identity.** Charles Taylor. Cambridge: Cambridge University Press, 1989. 613pp, £32.50 hb. **Stories that heal – reparenting adult children of dysfunctional**