

problem. The use of phenothiazines quite often does not make for easier management because of the side-effects encountered with their use.

With oxypertine in doses of 60–100 mg per day, I have found that good control can be obtained in most cases whilst avoiding the side-effects commonly encountered with phenothiazines. This may well be due to the different mode of action of oxypertine compared with the phenothiazines (Van Praag and Korf, 1975). Oxypertine does not block reception sites of catecholamines but depletes presynaptic stores of those transmitters and within a certain dose range, has a predilection for nor-adrenaline (NA) stores having little influence on dopamine or serotonin. It could be argued that the behaviour disturbances of fear, flight and flight type met with in dementia could be due to an imbalance of neurotransmitter substances, in that NA systems became more prominent. If this were so then this could explain the apparent differences in results when using oxypertine as against the phenothiazines.

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THE ABUSE OF ANTI-CHOLINERGIC DRUGS IN ADOLESCENTS

DEAR SIR,

Mental disturbances resulting from the use of anti-cholinergic drugs are widely recognized and well documented (1). Their potential for abuse, however, is still not widely appreciated. In 1967 Stephens (2) reported the misuse of benzhexol among adolescents, and there have been more recent reports describing abuse of anti-Parkinson drugs, taken for their exciting and euphoriant properties (3). Rubenstein (4) has described a case in which extrapyramidal symptoms were feigned in order to obtain such medication.

I would like to report further the case of a 19-year-old male who was referred to psychiatric out-patients because of his explosive outbursts and threatened self-harm. He had been prescribed a depot flupenthixol injection by his general practitioner, presumably for its anxiolytic and anti-depressant properties. He was also given a supply of benzhexol (5 mg) tablets, which he found induced euphoria and excitement. He returned to his GP for more tablets and took five or six at a time. On one occasion he reported developing a painless, swollen abdomen which only subsided after several hours. A friend to whom he

introduced the drug also obtained a supply by stealing a sheet from his general practitioner's prescription pad whilst he was out of the room. He also reported developing a swollen, painless abdomen on one occasion, together with similar psychological effects of excitement and euphoria.

The extent of abuse of anti-cholinergic drugs is still probably quite small, but I report these cases in order to draw attention to its existence. Their psychotropic effects may also account for the reluctance some patients have in discontinuing them. We are aware of the association of these drugs with the onset of tardive dyskinesia, and their effects on plasma levels of phenothiazines, and now the potential for abuse further strengthens the case for using them more cautiously. The possibility of abuse should also be borne in mind when, in a casualty department, an adolescent presents with a picture of pseudo-obstruction of the colon.

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THE DISABILITIES OF CHRONIC SCHIZOPHRENIA

DEAR SIR,

We thank Dr Watt (*Journal*, July, 1980, **137**, 102) and Drs Cheng and Cristoveanu (*Journal*, August, 1980, **137**, 197) for their interest in our paper (*Journal*, April, 1980, **136**, 384–395). We hope that the following information will answer their queries. The various assessments were carried out as follows:

Cognitive testing (Withers and Hinton)—ECJ; Neurological—DGCO; Mental State (Karwiecka *et al*)—ECJ and DGCO independently; Current Behavioural Schedule—ECJ and DGCO independently; all were tested on the same day.

The Current Behavioural Schedule is a means of recording nurses' descriptions of their patients' behaviour in a standardized way. The inter-rater

reliability between the two authors is high. Reliability with other interviewers has not been tested. The differences between the NS and DS groups shown in Table V were present and have therefore been included in our report of the results. We felt it necessary to make it clear that the differential between these groups is bound to be less than perfect when it relies upon clinical descriptions made before the criteria on which the differential is based had been devised. We are happy to inform Dr Watt that it was feasible to arrange for an independent examiner to assess the neurological status of the subjects. Before the project was begun DGCO attended Professor C. D. Marsden's neurological clinics at the Maudsley Hospital in order to perfect a standardized examination technique, and Professor Marsden came to Shenley Hospital and independently examined some of the patients in the series. There were no major discrepancies between his assessments and those of DGCO. While a control series may have been desirable, we were unable to think of any group who would resemble such chronic schizophrenic in-patients sufficiently closely for any degree of blindness to be maintained.

We are sorry that Dr Cheng and Dr Cristoveanu think that our statement regarding the relative intractability of the deficits is unjustified. We thought that we had made it clear that this was not a statement of fact but rather one of opinion which we fully appreciate others may not share. All of the patients in the study have participated in a full rehabilitation programme, as this is part of the policy of the hospital. This study was not designed to assess the benefits of rehabilitation and makes no attempt to do so. The patients in the survey represent that part of the schizophrenic population for whom all therapeutic measures have been of limited avail. Our earlier paper (Johnstone *et al* (1979) to which Dr Cheng and Dr Cristoveanu refer concerns patients

with acute illnesses which with one exception responded sufficiently well to treatment for discharge to be possible. The findings of the two studies are therefore not comparable.

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SERUM IMMUNOGLOBULINS IN DEMENTIA

DEAR SIR,

In this *Journal*, January 1980, 136, 33-45, Cohen and Eisdorfer describe their findings that serum immunoglobulin levels were significantly raised in cognitively impaired elderly patients. We have studied eight patients (two males and 6 females; mean age 76 years) with senile dementia.

An extensive serum auto-antibody profile and series of thyroid and liver function tests give normal results except that serum antibody to thyroglobulin was detected in one patient and antinuclear factor in two. The serum IgG concentrations were slightly raised in only one patient, but the mean IgG, IgM and IgA concentrations were all within normal limits, so we found no indication of immune or autoimmune disturbances in senile dementia.

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