expectations regarding the modification of MRs (per change in BZ) calculated using revised risk periods for the early-onset (15–40) and late-onset (40–60) disorders *vis à vis* currently reported MRs calculated using the full risk period (15–60, from Marten *et al.*, 1972). For early-onset disorder, relatives between 40 and 60 formerly weighted 0·5 for being in risk, on revision are weighted 1·0 as being beyond risk, increasing the BZ. For late-onset disorder, relatives between 15 and 40 formerly weighted 0·5 for being in risk are weighted zero as being pre-risk, decreasing the BZ. Relative to reported MRs for these subtypes, the effect of revised risk periods on the BZ and inversely on the MR implies a distinct tendency: a *convergence* in the extent of morbidity among relatives between subtypes. This suggests a possible reduction in the weight of evidence for separating affective disorders into these subtypes on the basis of genetic data.

Undoubtedly, the ultimate test of the validity of this typology is conclusive evidence supporting a correlation between age of onset in ill relatives and probands, providing at least that this correlation is not also the effect of environmental variation; e.g. the greater likelihood of life stress factors being involved in rearing by a mentally ill parent among early-onset probands. Such factors could also mediate this correlation if one does in fact exist.

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FLUROTHYL (INDOKLON) IN DEPRESSION

DEAR SIR,

Some seven years ago, Rose and Watson introduced into this Department the use of the inhalational convulsant agent flurothyl in the treatment of depressive illness, and published a report on their early experience with this drug (Rose and Watson, 1967). In this they claimed that previously reported undesirable post-ictal effects, such as severe headache, nausea and vomiting, could be avoided by strict control of the dosage and meticulous attention to the technical details of the administration. Since that time, flurothyl convulsant therapy has been available here as an alternative to electro-convulsant therapy; meanwhile clinical studies have continued, comparing flurothyl at first with bilateral ECT and later with unilateral ECT to the non-dominant hemisphere.

In this more recent investigation, the results indicate a statistically significant, and possibly clinically important, therapeutic advantage of flurothyl over unilateral ECT. It is the purpose of my letter to report this finding, preliminary to communication of results of the study in full.

The patients in this trial were mainly out-patients who had been referred for convulsive therapy with a diagnosis of primary depression by the consultant psychiatrists. They were allotted randomly to one or other form of treatment, which was given twice weekly under double-blind conditions. Prescribed antidepressant medication was not altered, so that these patients fell into four groups, according to whether or not they were also receiving drugs.

Assessment of depression by means of the Hamilton scale was made by the independent, blind, rating psychiatrist before treatments began, after four convulsive treatments, and at the end of the course of treatments. The 'course' was not set as any arbitrary number but depended upon the clinical judgement of the individual's psychiatrist as to the value of continuing convulsive therapy. In fact, the number of treatments given ranged from 2 to 16 for flurothyl, with an average of 7·6, and 4 to 17 for ECT, with an average of 8·6. Rating after four treatments was decided on before the trial started as being somewhere near half-way through an average course.

Hamilton Rating Score after 4 treatments

	N	Mean score	Mean improvement score	Mean no. treatments
Flurothyl with anti-depressive drugs ..	30	21.07	16.00	8.3
Flurothyl only	23	23.78	16.00	6.7
ECT with anti-depressive drugs	32	30.59	8.31	9.1
ECT only ..	19	26.1	10.79	7.8

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Prof. Hamilton very kindly undertook the statistical handling of the rating scale scores. Analysis of variances showed that the effect of drugs was not significant, neither was interaction between drug and treatment. There was no significant difference between the four groups before treatment or after treatment had finished (immediately post-treatment and two months later). However, after four treatments both the raw scores ($P < 0.01$) and the improvement in scores ($P < 0.005$) were significantly better in the patients treated with flurothyl.

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A CASE OF SCHIZOPHRENIA TREATED WITH FLUPENTHIXOL (DEPIXOL) INJECTIONS

Dear Sir,

We would like to report a case of schizophrenia treated, successfully and safely with flupenthixol (Depixol) injections in what we consider to be exceptionally high doses.

The patient was a 21-year-old male who presented in an aggressive and severely disturbed schizophrenic state. He had been treated at another hospital two years previously for a similar episode, but had stopped taking his medication approximately seven months before his admission to this Unit.

His initial treatment with flupenthixol consisted of a 40 mg. injection followed after two days by another 20 mg. and by a further 40 mg. at the end of the first week. This medication, however, proved insufficient to control his symptoms, and it became necessary to give him haloperidol. This controlled the aggressive episodes, but his thought disorder, delusions and hallucinations continued.

He was now given flupenthixol injections in a dose of 40 mg. daily, and his schizophrenic symptoms showed marked improvement. This treatment was continued for eight days, and thereafter the dose was reduced gradually. However, this led to the reappearance of schizophrenic disturbance, and so the dose was again increased to 40 mg. daily for a week. Subsequently a gradual reduction in the dose was accomplished with no return of symptoms. Thus, in a period of approximately seven weeks, he was given more than 1 gram of flupenthixol by injection.

As induration around the injection sites is apparently to be expected when frequent intramuscular administration is necessary, a change to the oral form of flupenthixol (Fluanxol) was now made, the dose being steadily increased up to 2 mg. three times a day. On this medication, together with appropriate anti-parkinsonian agents, he was finally discharged.

Finally, we should mention that throughout the period of treatment with such large doses of flupenthixol no ill-effects were either reported by the patient or observed by any member of staff. Routine investigations, which had been carried out on admission (haemoglobin, white cell count, erythrocyte sedimentation rate and blood urea), were all repeated shortly before discharge and showed no significant changes.

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BEHAVIOUR MODIFICATION IN ONE PSYCHIATRIC HOSPITAL

Dear Sir,

Despite the impressive number of journal articles and books concerned with behaviour modification, surprisingly little is known of the extent to which this type of treatment is practised. To this end, we have kept records of the referrals made for possible treatment, and the behaviour modification techniques used in the clinical psychology department of one hospital group. The information was gathered over a twelve-month period from October 1971 to September 1972. Treatment was undertaken by a team of four clinical psychologists.

Results

During the twelve months, 115 referrals were received for possible treatment by behaviour modification methods. These were 85 women, mean age 35·52 years, S.D. 13·29, and 30 men, mean age 32·20 years, S.D. 11·24 (total 115, mean age 34·65 years, S.D. 12·99). Seventy-three per cent of those referred were out-patients and 27 per cent in-patients.

Since behaviour modification evokes varying reactions among psychiatrists at the present time, information was collected at the time of referral as to why this form of treatment had been considered. Forty-eight per cent of the referrals were from psychiatrists who considered this the treatment of first choice, but 37 per cent were made on the basis of other treatments having failed. A further 12 per

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