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FLUPHENAZINE DECANOATE IN CHRONIC SCHIZOPHRENIA

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Introduction of chlorpromazine by Delay and Daniker in 1952 revolutionized the treatment of acute schizophrenia. However, chronic form of the illness still remains a challenge, mainly because of non-compliance of the patients with the therapeutic regimen (Diamond and Marks, 1960; Olson and Peterson, 1960; Hare and Willcox, 1967 ; Wilson and Enoch, 1967 and Ayd, 1975). Another factor is the erratic absorption of neuroleptics in these cases (Lewis *et al.*, 1971). Long acting phenothiazines were developed to overcome these problems. Fluphenazine enanthate, probably the first such preparation, though useful in chronic schizophrenia, had a rather short (1-2 weeks) duration of action and marked extrapyramidal effects (Miller and Daniel, 1967; Shah *et al.*, 1971 and Bagadia *et al.*, 1972).

Fluphenazine decanoate, a newer product, has been claimed to produce less extrapyramidal effects and has an action lasting for 3-4 weeks (Falton *et al.*, 1978 and Silverstone and Turner, 1978). There are still rather few reports on its efficacy and safety-particularly from our country (Gahlot *et al.*, 1977 and Bagadia *et al.*, 1979). Further, these reports have been of rather short duration—lasting over 4-5 months only—thus making it difficult to assess the efficacy of the drug in an illness continuing over years with unpredictably fluctuating course. This presentation, therefore, aims at reporting the results of a long term (1-3 years) trial of the drug in a group of chronic schizophrenics.

MATERIAL AND METHODS

The study was carried out in the Psychiatric Clinic of M. L. B. Medical College, Jhansi from July 1977 to June 1980. Schizophrenics with illness lasting for two years or more, with no or incomplete recovery and frequent relapses despite treatment with oral neuroleptics and/or E.C.T. were included in the trial. A detailed history taking and thorough mental status examination were carried out to have a baseline record for future comparison. Fluphenazine decanoate (Anatensol decanoate) was administered intramuscularly in the dose of 25 mg. at intervals of three weeks. No other neuroleptic was given. As far as possible, the patients were hospitalized for the first injection to observe untoward effects, if any. Antiparkinsonian medication (Trihexyphenidyl or Procyclidine) was started only if the patient developed extrapyramidal effects. These drugs, if needed, were given only for up to 10 days following every injection. Acute dystonic reactions were managed with intramuscular promethazine (Phenargan).

The patients were checked and injection was given at intervals of three weeks. During every visit, the progress was recorded with respect to salient clinical features, general adjustment and side effects—taking into account the findings of examination and the report of a reliable relative. A 'good response' meant an improvement in general behaviour to the near normal level, disappearance of symptoms like excitement, thought disorder, delusions, hallucinations and emotional inappropriateness. Patients with partial or no improvement were rated as showing 'poor or no response'.

RESULTS

Out of 65 cases taken up for the trial, 25 (38.5%) had to be excluded from analysis

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because they did not come regularly for assessment and/or injections. In six of these, injections had to be discontinued because of side effects in form of restlessness, anxiety and dystonia. Antiparkinsonian medication had no effect in these cases. Even reduction of the dose to half did not help. The analysis henceforth will be limited to the remaining 40 (61.5%) cases who came regularly for follow up and injections.

Therapy was found to be markedly effective in nearly two third of cases (25, 62.5%) while the rest (15, 37.5%) showed poor or no response (Table I). In general, the response was better in cases with onset of illness after the age of 20 years. Two thirds, half and all the cases in the age groups 20-40, 40-50 and beyond 50 respectively, showed good response. On the other hand, only 25% of the cases below 20 years had good response. The response was almost equal in the two sexes, 62.9% and 61.5% of males and females respectively, showed a good response.

The response was best in cases with illness lasting 2-5 years beyond which it declined with increasing duration of the disease. While 70.4% of cases with 2-5 years showed a good response, only 50.0% or less of those with a longer duration did so. Cases with paranoid and undifferentiated forms of illness had best response, nearly 70% showing marked improvement. Two thirds (66.6%) of catatonics showed good response while habephrenics and simple schizophrenics did worse, only 41.6% and 25.0% respectively, showing good response. The response to the drug was sustained over the period of study, there being almost equal response in patients followed up for 3, 2 and 1 year (Table I).

Side effects encountered have been listed in Table II. The commonest was parkinsonism in the form of tremors and rigidity (22, 55.0%). Dystonia occurred in 8(20.0%) cases while akathesia was seen in 11 (27.0%). All these could be ameliorated by antiparkinsonian medication which was needed only for up to 10 days

TABLE I—*Showing the variables of duration of illness, type of schizophrenia and duration of follow up of patients showing good response**

Variable	Number of cases (N=40)	No. with good response (N=25)
(a) *Duration of illness (in years):*		
2—5	27	19 (70.4)
5—10	8	4 (50.0)
10—15	3	1 (33.3)
15—20	2	1 (50.0)
(b) *Type of Schizophrenia:*		
Simple	4	1 (25.0)
Hebephrenic	12	5 (41.6)
Catatonic	6	4 (66.6)
Paranoid	11	8 (72.5)
Undifferentiated	7	5 (71.4)
(c) *Duration of follow up (in years):*		
3	8	5 (62.5)
2	15	9 (60.0)
1	17	11 (64.7)

*Figures in parantheses denote percentages.

TABLE II—*Frequency of side effects (Total no. of cases 40)*

Side effects	No.	%
I. EXTRAPYRAMIDAL SYMPTOMS		
—Parkinsonism	22	55.0
—Dystonia	8	20.0
—Akathesia	11	27.5
II. PSYCHOLOGICAL SYMPTOMS		
—Anxiety	13	32.5
—Drowsiness	9	23.5
—Depression	4	10.0
III. MISCELLANIOUS SYMPTOMS		
—Weight gain	7	17.5
—Loss of appetite	5	12.5
—Impotence	2	5.0

following injection. Psychological symptoms occurred in form of anxiety (13, 32.5%), drowsiness (9, 23.6%) and depression (4, 10.0%). Anxiety and depression were mild and could be managed with diazepam and imipramine respectively. Drowsiness, though persistent, was rather inconsequential, weighed against the improvement in psychotic symptoms. Some other side effects which the patients attributed to the drug were impotence (2, 5.0%), loss of appetite (5, 12.5%) and weight gain (7, 17.5%). These again did not bother the patients much and could be ignored.

COMMENTS

The treatment of chronic schizophrenia still remains far from satisfactory. The mainstay of management are phenothiazines but ensuring that the patient takes his medication regularly is difficult.

Fluphenazine decanoate would appear to be immensely useful in such cases. Its long action, relatively low cost and certain administration make it perhaps the most suitable therapy in chronic schizophrenia. The treatment was effective in nearly two thirds of the cases. This is an impressive figure in view of the fact that only chronic and rather refractory cases were included in the trial.

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