# LEVOMEPROMAZINE IN THE TREATMENT OF NEUROLEPTIC RESISTANT PSYCHOTICS

By

**PETER PAYNE, M.B., Ch.B.**

and

**DAVID VERINDER, M.B., Ch.B.**

*Brandon Hospital for Mental Diseases, Brandon, Manitoba, Canada*

LEVOMEPROMAZINE, levo-3-methoxy-10(2′ methyl-3′-dimethylamino-1′ propyl) phenothiazine is a phenothiazine derivative which was isolated in the Rhone-Poulenc Laboratories and studied pharmacologically by Sigwald *et al.* (2) in 1956.

Early reports, Deschamps (1), on the use of this compound in psychiatric conditions indicate that it is of particular value in the treatment of patients refractory to other neuroleptic agents.

A limited trial was undertaken to assess its usefulness in such patients within the mental hospital setting.

## SELECTION OF PATIENTS

One hundred chronically disturbed patients were selected for treatment. Eighty-six of the patients selected fell within the category of Schizophrenia, seven within the grouping Endogenous Depression, three were diagnosed Chronic Brain Syndrome, two Mental Deficiency and two Epilepsy with Psychosis. All patients had previously received other forms of therapy including seismotherapy, insulin shock therapy and other neuroleptic agents without appreciable benefit. The average age was thirty-nine years, minimum nineteen years, and maximum sixty-seven years. The duration of hospital stay ranged from two to thirty-one years with an average of seven years.

## TREATMENT

Levomepromazine was administered by mouth in the form of 25 mg. tablets. Each patient commenced with an initial dose of 25 mg. twice daily, this dose being increased on alternate days by 25 mg. to a maximum of 600 mg. daily. The subsequent dosage necessary for the maintenance of optimal improvement was found in most patients to be of the order of 50 to 100 mg. daily.

The patient's ward environment remained constant throughout the duration of the trial. No measures other than drug administration were used during the period of the investigation.

## RESULTS

For purposes of assessment, patients were rated according to the following criteria:

1. *Social Recovery.* Complete absence of psychotic symptoms. Rapid social and economic readjustment allowing of early discharge home.



https://doi.org/10.1192/bjp.106.445.1429 Published online by Cambridge University Press

2. *Much Improved.* Psychotic symptoms encapsulated and no longer apparent to the untrained observer. Socially more integrated allowing of the institution of rehabilitative measures and subsequent consideration of discharge from hospital on probation, and permitting the extension of such privileges as "leaves of absence" and "open ward" residence.
3. *Improved.* Partial remission of symptoms allowing the extension of parole privileges and facilitating ward management.
4. *Unimproved.* Self explanatory.
5. *Worse.* Regression to a level of adjustment inferior to that existing prior to the institution of therapy.

In only one case did improvement merit the application of the rating "Social Recovery".

Fifty-six patients manifested a lesser degree of improvement such that nineteen fell within the category "Much Improved" and thirty-eight within the category "Improved". Of the improved patients eleven were subsequently discharged from hospital.

Forty-one patients did not benefit from the therapy and were designated as unimproved.

Two patients, one epileptic and one defective, showed a marked deterioration following the commencement of medication. The former showed an increased impulsiveness and combativeness, whilst in the defective the deterioration was characterized by a reduction in spontaneity and the onset of excreta carelessness which had not previously been observed.

Discontinuation of Levomepromazine resulted in a rapid return to the pre-treatment level of adjustment.

With regard to diagnostic categories, no definite trends were observed which would indicate any distinct specificity of action of Levomepromazine.

*Side-effects.* Varying degrees of drowsiness were encountered in thirty-six of the patients. This was transient in all but one patient in whom psychomotor inhibition became so marked as to necessitate termination of therapy.

With doses in excess of 400 mg. daily, urinary retention was occasionally seen, necessitating reduction of dosage. Five patients complained of dizziness, two of dysphagia and one of oedema of the face. Four patients exhibited tremor which was confined to the hands, these benefited from the concomitant administration of benztropine methanesulphonate (Cogentin) in doses of the order of 1 mg. twice daily.

Weekly urinalysis failed to show any abnormalities throughout the duration of the study. Liver function tests remained within the normal limits and no blood dyscrasias were observed.

## Conclusion

In this study, Levomepromazine was used to treat one hundred chronic psychotic patients who had not previously responded to other somatic therapies. Like its parent drug, chlorpromazine, Levomepromazine appears possessed of potent neuroleptic activity. Present indications are that Levomepromazine has a definite place in the treatment of a significant number of patients resistive to other therapies.

Side-effects are encountered fairly frequently but are seldom troublesome, requiring little more than a reduction of dosage; and only rarely interfering with therapy.

ACKNOWLEDGMENTS

We wish to express our gratitude to the staff of the Brandon Hospital for Mental Diseases, whose co-operation made this investigation possible, and to Poulenc Limited, of Montreal, for generous supplies of Levomepromazine required for our study.

REFERENCES

1. DESCHAMPS, A., and MADRE, J., *Psychiatric Therapy with a New Neuroleptic* (R.P. 7044), La Presse Medicale, Vol. **65**, 46; 1071.
2. SIGWALD, J., *et al.*, *Activité d'une nouvelle phénothiazine en psychiatrie et en neurologie*. Presse Médicale. 1 December, 1956.