TRANQUILLIZERS IN MENTAL DEFICIENCY: HYDROXYZINE

By

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THIS paper reports a double-blind type of clinical trial with hyperactive low-grade mental defectives. Chlorpromazine has previously been used with this group but a high incidence of toxic effects has been noted (McColl (1)). Reports on reserpine have been conflicting but a careful trial by Kirk and Bauer (2) reports the action of this drug if anything to be detrimental.

Several accounts have appeared of the successful use of hydroxyzine in diminishing psychomotor restlessness and agitation (Henne and Henne (3); Fouks, Laine Francois and Pagot (4); Farah (5)). All reports emphasized the rarity or absence of toxic results. It was therefore decided to evaluate this agent in a particular problem in mental deficiency practice.

SELECTION OF MATERIAL

Three modern bungalow type low-grade villas contained the most restless, aggressive and destructive patients in a hospital group of some 2,000 patients. From these villas the 23 most aggressive and destructive patients were chosen. These were responsible for a considerable proportion of the monthly repair bill. By age group the patients could be divided into 10 adults and 13 children. By intellectual testing 21 patients had a Terman-Merrill I.Q. of less than thirty points, two patients had I.Q. 32 and I.Q. 36 respectively. The vast majority were active, ambulant idiots. Eight patients had grand mal epilepsy.

ACCOUNT

The trial period was divided into three parts, a preliminary observation period of 17 days and two periods (29 days and 30 days respectively) when the patients received either hydroxyzine or a placebo. During the two latter periods the medical and nursing staff did not know which of these was being administered to the patients. The behaviour of the patients was recorded daily by nursing staff under three headings—(1) Activity, (2) Aggression, and (3) Social Behaviour to other patients—each of these qualities being divided up into thirteen different classes represented by a rating scale varying from -6 to $+6$. Normal behaviour corresponded to the zero of this scale. Since the purpose of a tranquillizer such as hydroxyzine is to reduce both positive and negative abnormalities, for analysis only the deviations of the scale from normal were used, that is, all measurements on the scale were treated as being positive. In this particular series of experiments no differences in the conclusions presented below would have been adduced had the observations been treated as being both positive and negative.

A further series of observations on night behaviour was obtained, but these contained so few abnormalities that there was little point in analysing them further.

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General Average Deviations Derived from Analysis of Rating Scale

First villa patients:			
No. of observations	136	236	236
Activity	3·54	3·61	3·74
Aggression	2·06	2·12	2·36
Behaviour	3·78	3·90	3·94
Second villa patients:			
No. of observations	136	236	236
Activity	1·05	1·27	1·26
Aggression	0·49	0·53	0·62
Behaviour	2·08	2·15	1·97
Third villa patients:			
No. of observations	119	206	207
Activity	2·51	1·68	1·83
Aggression	1·51	0·50	0·61
Behaviour	2·25	1·25	1·12

Analysis of Results

For two villas the statistical analysis of results showed that there was no significant difference between the average deviations for the three experimental periods under review. In the third villa there was a highly significant difference between the preliminary observation period and the period of administration of drug and placebo. However, there was found to be no difference in the results of drug and placebo and it was concluded that the nursing staff had been optimistic in their assessment of the effects of the two agents.

There was no significant difference between test and retest results on the Terman-Merrill scale.

There was no change in the recorded weights of the patients.

There were no toxic effects and no sedation noted among any of the patients on doses increasing to 500 mg. daily, at which level they were maintained for up to two weeks.

Discussion

This trial was an attempt to give a clear answer to one circumscribed problem. It was evaluated entirely by objective methods which were subjected to detailed statistical analysis. The results showed that hydroxyzine appeared to have no significant effect upon psychomotor activity among hyperactive idiots and imbeciles under the circumstances outlined above.

Apart from sympathetic nursing staff the importance of environment was obvious throughout the trial. On fine days hyperactive patients dissipated their energies outdoors in the grounds whereas on wet days their enforced confinement was reflected in the mounting scores of the daily rating.

This paper does emphasize the need for controlled and blind trials, where the optimism of nursing staff can be taken into account. It is felt that further clinical trials are much needed in order to assess the place of tranquillizing drugs in mental deficiency practice.

Summary

A double blind type of clinical trial with hydroxyzine is reported upon hyperactive low-grade mental defective patients. No significant difference appeared in a rating scale assessing activity, aggression and social behaviour. No toxic reactions occurred.

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BIBLIOGRAPHY

1. McColl, *Amer. J. Ment. Def.*, 1956, **61**, 378.
2. Kirk, D. L., and Bauer, A. M., *Amer. J. Ment. Def.*, 1955, **60**, 779.
3. Henne and Henne, Congress of alienists and neurologists, Bordeaux, 30 August, 1956.
4. Fouks, Laine, Francois, and Pagot, *Ann. Méd.-Psychol.*, 1956, **1**, 605.
5. Farah, L., *Int. Rec. Medicine and G.P. Clinics*, 1956, 379.

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