Psychotropic Drugs

Edited by

S. Garattini and V. Ghetti

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PROF. E. TRABUCCHI

Institute of Pharmacology, University of Milan (Italy)

on the personality of the subject, are, in fact, conditioned by too many variable factors and, moreover, show themselves to be very labile and fluctuating. In contrast, therefore, to what happens when amphetamine is associated with barbiturates, where the effect of the former drug may develop in disinhibited conditions, in our tests the effect itself seems to have been rendered less significant, even if intense, by the fact that the conditions in which it was manifested were unexpected and artificial.

As to the therapeutic effect, it was manifested, by means of an evidently suggestive mechaninism, in two subjects (hysterical psychoneurosis) in a moderate degree.

We may therefore conclude that the interest of our observations seems to lie more on a theoretical plane than on a practical one, and that it consists, above all, in the demonstration of the possibility of revealing, via the "amphetamine-shock", symptomatologic elements of the experimental psychosis in a manner strictly analogous to what happens with those of spontaneous mental diseases.

Clinic for Nervous and Mental Diseases,
University of Padua (Italy)

A. BALESTRIERI

The action of Pervitin on the syndrome induced by LAE-32 in schizophrenics

Continuing our studies on the psychopathological action of the derivatives of lysergic acid and on any possible antagonistic action between them and other substances, we wanted to investigate from the clinical point of view the response to the action of a sympathomimetic amine in schizophrenics who had previously received LAE-32.

As is known, the principal effects of LAE-32 are the following:

(1) a derealizing and disperceptive action (in some cases also hallucinogenous);

(2) profound action on cenesthesia (with dismorphisms and cenesthopathic hallucinations);

(3) an adynamizing and catanoid action on the biological level of the instinctive pulsions (CALLIERI AND RAVETTA).

In report of previous investigations we emphasized the importance of the "sentiment of impotence", and of "vital asthenia". Also particularly striking, in our opinion, is what JANET calls "the conduct of commencement", which recalls to mind the psychomotorial inhibition of the *melancholic*.

Remaining on the descriptive psychopathological level, the sympathomimetic amines have, instead, a general psychotonic action (CALLIERI AND SEMERARI; BONHOFF). One observes an incitement of the impulse to talk, an increase in the current of thought, a facilitation of the formation of associations and verbal formulation, a "vital hypertone", and often a modification of humor in an euphoric sense. With pervitin, in particular, the responses seem more rich and are accompanied by a more adequate affective state, more so than one observes with other sympathomimetic amines. In schizophrenic psychoses many authors have observed a marked polymorphism of responses to the weckaminic stimulus; in catatonics, in particular, the blockage-signs are accentuated, while in paranoids the *psychotic* symptomatology increases, not so much in neoproduction of symptoms as in an increase of loquacity induced by the weckamine.

This disinhibitory effect with alteration of the structure of the conscience in the sense of a hypervigilance, with increase of tone of the instinctive pulsions and in general of the psychomotor activity, has induced us to study the antagonistic effects of LAE-32 and of pervitin (as was done by FABING for LSD and Frenquel).

Our investigation is limited to the psychopathological level, prescinding completely from the problem of the points of attack of the two substances, a question difficult to solve even with more accurate pharmacological and electroencephalographic investigations. Our observations were conducted on 19 youthful schizophrenics, in the first episodes, and frequently in a state of excitement. The results obtained by us are not conclusive, for even in this series of observations, as in the preceding ones, the characteristic individual variability dominated, not only in response to a single drug (LAE-32), but also as regards the results of the interreaction between the two substances. This confirms further how difficult it is to bring the results of an experiment on a normal man to a clinical level.

As is reported in Table I, 19 patients were treated, from 17 to 38 years of age, with an average age of 25.8 years. We must distinguish two effects of these two drugs; one we shall call the action proper of the drug, independent of the psychopathological state of the patient, and the other an action of reinforcement or of contrast with the preceding state. This distinction in practice is not always possible, since in many cases the effect (for example, sedative apathizing) coincides with the

general intonation of the subject. For example, in Case 2 the action of LAE-32 was completely atypical in the sense of determining an intense emotive manifestation, a true and proper disblock of the marked psychomotor inhibition pre-existing at the time of the injection. The same can be said for Case 16. It is therefore difficult to establish fixed rules of behaviour for these two drugs. On the other hand, our previous experience does not permit us to assign to the patient, maintaining the same mood, the effects of these psychotropic drugs in normal individuals.

TABLE I

Cases	*Age in years*	*Proper effect of LAE*	*Pervitin*
1	17	±	±
2	30	++	+++
3	24	+++	+++
4	25	++++	++++
5	27	++	+++
6	27	+	+++
7	38	+++	—
8	32	+++	±
9	18	+++	+
10	26	—	+++
11	31	+++	++
12	18	±+	+±
13	22	++++	—
14	35	+	±
15	31	++++	+++
16	24	++	+++
17	21	±+	++
18	27	+++	++
19	17	++	—

The variability of response of schizophrenics to LSD-25 and LAE-32 is, in our experience, really marked. In the present series of observations we witnessed many different effects: for example, on a previous hebephrenic symptomatology, we observed an LAE-32 syndrome, the effects of which were exclusively cancelled by the successive action of pervitin; or vice versa, that is, the action of pervitin exclusively accentuated the pre-existing psychotic contents without minimally attacking the effects of LAE-32.

We can say that the LAE-32 syndrome was present in all of its manifestations in 9 cases, appeared rather indefinite in 6 cases, very slight in 3, and completely absent in 3. The proper effect of pervitin was very evident in 9 cases, slight in 3, very slight or absent in 7. Only in 3 cases did both drugs show a slight action or no action; the production of opposite effects was more or less verified; for example, intense lysergic effect, scarce pervitinic effect (Cases 7, 8, 9, 13 and 19) or scarce lysergic effect and marked pervitinic effect (Cases 2, 6 and 10). The action of LAE-32 in general was clearly more prolonged than that of pervitin. In some cases this latter completely cancelled the lysergic effect, which was at times very marked (Cases 4 and 15); the action, however, was of short duration, and the LAE-32 syndrome quickly returned. Only in 4 cases out of 19 did pervitin completely antagonize the action of LAE-32, in the sense that, when the pervitinic effect was terminated, that of lysergic acid had disappeared. This consideration seems to be of importance to the scope of our investigation. As a matter of fact we must conclude that LAE-32 and pervitin, although demonstrating two psychopathological actions of opposite nature, cannot be considered as antagonists. If considerations on a purely pharmacological and physiopathological basis tend to make us conclude that these two drugs demonstrate opposite actions and are therefore probably antagonistic, clinical and psychopathological experimentation does not permit us to arrive at the same conclusion.

Neuropsychiatric Clinic, University of Rome (Italy)

B. CALLIERI
M. RAVETTA