to half of the maximum value (t 0.5) determined (changes after drug treatment were intraindividually evaluated by the Student t-test).

Values of t 0.5 in animals poisoned with the anticholinergics mentioned, untreated or treated with TA 03 are demonstrated in Fig. 1. TA 03 treatment had very favourable effects on autonomic, motor and central functions altered by psychotomimetic drugs used and shortened essentially the duration of intoxication.

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Treatment of alcoholism with psychotomimetic drugs. A follow-up study

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We have used LSD-25 and psylocybine for the treatment of chronic alcoholics since 1963. In 1969, however, we abandoned the treatment with LSD-25, as our experiments proved psylocybine to be more effective and much safer. The treatment was carried on in the form of a psycholytic cure (psylocybine 6—30 mg, usually 12, mean 15 shocks per patient, LSD-25 100—800 mcg per dose, mean 12 shocks, both drugs in 5—7 day intervals) combined with individual psychotherapy. Thirty-one men, age 23—62 (average 37.9 years) with a heavy type alcoholic disease who had at least once before undergone a cure but with different methods and no therapeutic effects were the subjects. The average follow-up period was 6 years. Analysis of the case record and inquiry data were verified and completed from various objective sources.

A satisfactory therepeutic effect was found in 18 patients (58 %). Ten of them became total abstainers which was associated with social, professional and home stabilization and the improvement of the somatic state. Ten of the remaining 13 patients reported at least a short period (6—12 months) of abstinency and longer lasting social improvement after the cure: according to the relatives and environmental opinion they had at that time still a chance to get out of the habit if the social factors had been more favourable and if the out-patient treatment could have maintained the effects of the cure.

The analysis of individual cases permits to establish the following prognostic criteria: The best results of the treatment can be expected in patients who reacted to the psychotomimetic shock with unpleasant feelings, who had mainly neurotic features with components of fear before the habit, in patients susceptible to suggestion and in those reporting aversion to alcohol in the period of drinking initiation; the worst response is to be expected in anti-social psychopathic personalities, in persons who felt pleasure in the

course of the psychotomimetic shock, less susceptible to psychotherapy, presenting "suicidal" or "heroic" style drinking.

The course of the treatment and the patient's behaviour after discharge from the department indicate that the experimental psychosis operates as a psychobiological shock, putting the patient into a crisis situation and forcing him to start up with maximal defence mechanisms on one side and increasing his susceptibility to psychotherapy on the other.

Alosteric changes in plasma proteins in healthy volunteers after administration of lysergamide

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The relationship between the quality and intensity of lysergamide induced psychopathology in healthy volunteers and the state of their plasma proteins was studied using the method of Podroužek (1965, Ztschr. Immunitätsforsch. 128 : 161—188).

Physically and mentally healthy experimental subjects (9 men and 1 woman, medical and psychology students and one graduated doctor, age 21—25 years) were given 0.1 mg of lysergamide per os before breakfast. Their venous blood was taken immediately before the administration and 3 and 8 hours after it.

The blood was kept at room temperature for a period of 24 hours and then serum was prepared. Serum (i. e. undisturbed symplex) was pipetted at the ratio of 1 : 20 into 0.85 % solution of NaCl and after further 24 hours (until stabilization of swelling equilibrium) the protein catalytical wave was measured amperometrically. The value of the catalytical wave was determined on mercury cathode. When this value decreases during the loading we speak about denativation of protein, when it increases we speak of its renativation. This process is reversible.

Mental changes were assessed using the 74-item questionnaire of Linton and Langs (1964, Arch. Gen. Psychiat. 10 : 469—485). The questionnaire was administered to the subjects between 3 and 4 p. m., i. e. in a phase when symptoms of intoxication disappear. Global score and scores of 4 emipirical scales (A, B, C, D of the questionnaire correlating with 4 psychopathological syndromes — elation, paranoid syndrome, somatic concerns and anxious syndrome) were used as criteria.

Mean Linton—Langs scores (global score, A, B, C, D) were 23.4, 8.3, 3.4, 6.66 and 2.6. Maximum values of the protein catalytical wave decreased at the peak of lysergamide intoxication in 6 subjects and increased in 3 (in an average from 68.75 to 67.35, mean differenc −1.4, i. e. −1.84 %). The correlation between global score and the change of the protein catalytical wave was close to significance ($r = -0.614$) for the absolute change and significant at the 5 % level ($r = -0.636$) for the relative change: the more the protein catalytical activity decreased (denativation) the greater was the subjective response to lysergamide. A similar trend of protein denativation was observed in schizophrenic patients (Podroužek, Taussigová and Vinař — unpublished data).

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