The literary reports about the interaction of alcohol with the metabolism of biogenic amines stimulated our interest about the causes of weakened reactions to LSD in chronic alcoholics (Arnold and Hoff, 1953, Ditman and Whitesey 1959, Vojtěchovský et al. 1962a). Reported lowered levels of serotonin and noradrenaline in brain tissues after alcohol poisoning (Gursey and Olson 1960) induced an idea to improve this suggested depletion in alcoholics before LSD session by serotonin precursors. In previous papers concerning the interaction of 5-HTP and LSD (Braegelmann et al., 1958, Fare et al. 1962) was concluded, that LSD response, especially in its initial stage, is lessened by 5-HTP. The third paper (Kier et al. 1969) about the same topic rolers the equivocal results. In all above mentioned experiments rather low doses of 5-HTP (40–60 mg) by intravenous route of administration were used. No experiments with di-tryptophane pretreatment of LSD are reported.

Subjects and methods

13 alcoholics, males between 30 and 42 years, abstaining from 5 to 8 weeks in the Prague’s psychiatric clinic’s antialcohol ward as subjects in the experiments. The volunteers were randomly divided into two groups: the first, consisting of 7 persons passed one experiment with 100 mg of 5-HTP followed in 1 week interval by the second experiment with the same amount of 5-HTP administered 30 minutes before the administration of 200 mg of LSD. The second group of 6 persons followed the same course, instead 5-HTP receiving 10 g of di-tryptophane, diluted in 1 pint of sour milk. All drugs were administered perorally. In the experiments we used the clinical, physiological, psychological and biochemical methods. The results were compared by means of nonparametric statistical methods with the results obtained from another experimental group of 2 chronic alcoholics intoxicated only by LSD in the same dose.

Results

A. Effects of pretreatment substances

1. 5-HTP induced a moderate serotonine-like effect with vasomotor and gastrointestinal reactions in three Ss. The changes in remaining four subjects were nonspecific and equivocal.

2. di-tryptophane caused in three Ss signs of drunkenness resembling the alcohol intoxication, as mentioned in some earlier papers. The analysis of psychotropic effects of serotnine-precursors in our alcoholics is described in another paper (Vojtěchovský et al., 1967).

B. Interaction of LSD and 5-HTP

The psychotropic activity of LSD influenced by 5-HTP pretreatment was stronger, especially in the visual, vestibular and acoustic area. It resembled the intoxication very often observed in healthy volunteers.

C. Interaction of tryptophane and LSD

The influence of pretreatment by tryptophane on LSD course was more pronounced. To the specific effects of tryptophane, i.e. drunkenness and hangover, new symptoms appeared: tremors and blocking of thoughts. Similar to the influence of 5-HTP on LSD picture the symptoms of derealization and touch with unknown were abolished, also kinaesthetic illusions were not present. The most severe complication of this LSD pretreatment were two prolonged adverse reactions. The first subject was effectively treated by phenothiazine already during the third day of prolonged psychosis. The second subject had to be transferred to the closed ward of psychiatric clinic and the phenothiazine cure was effective not
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