Effects of mescaline, LSD-25, and adrenochrome on depth electrograms in man.

**PROBLEM:** Depth electrographic (DE) studies of the effects of LSD, mescaline and adrenochrome.

**MATERIAL:** Two patients with intractable epilepsy and psychosis, and 3 chronic schizophrenics.

**METHOD:** Extensive control studies (up to 2 weeks). DE studies after mescaline and LSD (all 5 cases) and after adrenochrome (1 epileptic, 2 schizophrenics). Simultaneous ECG and DE in 2 cases.

**DOSAGE:** 400 mg and 1 g. mescaline orally; 50-150 µg LSD orally; 50-75 mg adrenochrome i.v. At the presumed height of the reactions to LSD and mescaline, 50 mg chlorpromazine given i.v.

**RESULTS:** 1. Clinical findings.
   1. **Mescaline** (6 observations): The autonomic changes consisted of slight pupillary dilatation and facial flushing. Three negativistic patients became more communicative and euphoric. The reaction reached a maximum after 2-4 hours and subsided immediately after chlorpromazine i.v.
   2. **LSD** (6 observations): The clinical effects closely resembled those of mescaline. Inappropriate laughter and giggling were more common after LSD than after mescaline. On being returned to the ward after LSD and mescaline, the patients were in better mood and contact.
   3. **Adrenochrome** (6 observations): The epileptic appeared relaxed and became drowsy. One schizophrenic showed loosening of associations and increased disturbances in body image. The other schizophrenics experienced catalepsy on two occasions lasting for more than 30 minutes.

**II. Effects on DE.**
   1. **LSD and mescaline:** Generalized diminution in voltage of depth rhythms in 2 epileptics 30-120 minutes after LSD and mescaline. Increased paroxysmal activity in the 3 schizophrenics. No apparent correlation between dose and effect produced. In the 2 epileptics, foci of spike waves tended to decrease greatly after LSD and mescaline. In one epileptic, a double-spike focus was elicited by
mescaline and LSD deep in the temporal lobe. At this time, the patient was continuously disturbed, presumably with pronounced hallucinations. The other epileptic showed polyphasic spike discharges from the depth of the occipital region at the height of the reaction to mescaline and while having visual hallucinations. One patient had waxing and waning of the alpha-like spindles from the depths of the occipital region that corresponded with the rhythms of music. This appeared at the height of the mescaline effect but never appeared without music or in the control period with music. A few minutes after chlorpromazine, the recordings reverted to control pattern before LSD and mescaline. The reversal process in one case (mescaline) was characterized by complex changes.

2. Adrenochrome causes an increase in the existing paroxysmal activity in the 2 schizophrenics. In one case, focal sharp wave of maximal amplitude from the temporal region was persistent after adrenochrome, although it occurred rarely during control studies. In the epileptic, adrenochrome was followed immediately by high-voltage waves of 2 or 3 cps, associated with drowsiness. This was not accompanied by any clinical changes other than relaxation.

III. ECG.

No gross changes recorded in two schizophrenics between control states and states induced by LSD, mescaline and adrenochrome.

* * * * * * *

(Wirkung von Mescaline, LSD und Adrenochrom auf das Tiefen-EEG beim Menschen).


* * * * * * *

w11 (ED 10°023)
NKT/Dr.Spi/1k 856 ☞68