J.Pharmacol. 5, Suppl.2, p.36 (1974).

LSD

2540

C E 2 *bis*

EVIDENCE THAT THE EFFECTS OF APOMORPHINE ON BRAIN DA METABOLISM ARE OF PRESYNAPTIC ORIGIN. G.L. Gessa, G. Di Chiara, M.L. Porceddu and A. Tagliamonte, Institute of Pharmacology, University of Cagliari, Italy

Apomorphine (A.) inhibited DA deamination in the rat brain homogenates but did not influence COMT activity. A. increased DA and decreased DOPAC and HVA levels in normal rats; prevented DOPAC and HVA rise and DA depletion after reserpine; finally, A. decreased L-DOPA induced accumulation of HVA and DOPAC in brain. These results indicate that A. inhibits DA deamination both in vitro and in vivo. A. inhibits DA uptake by rat striatal synaptosomes. Moreover, A. in doses unable to reverse catalepsy, prevented the HVA and DOPAC rise induced by haloperidol. Finally, amantidine was capable to antagonize the stereotypy but not the decrease in DOPAC and HVA levels produced by A. The results indicate that the biochemical effects of A. are of presynaptic origin and independent from postsynaptic DA receptor stimulation. Three mechanisms are considered: MAO-inhibition following uptake of A. in DA terminals; inhibition of DA reuptake; stimulation of presynaptic DA receptors

J. Pharmacol. 5, Suppl. No. 2

C L 4

A COMPARATIVE STUDY OF DELTA-9-TETRAHYDRO CANNABINOL AND LYSERGIC ACID DIETHYL AMIDE ON HYPOTHALAMO-NEUROHYPOPHYSEAL NEUROSECRETORY SYSTEM OF MALE ALBINO RATS. J. J. Ghosh and BRATATI BISWAS, Department of Biochemistry and Physiology, Calcutta University, Calcutta - 19. India.

Acute delta-9-tetrahydrocannabinol (Delta-9-THC) administration (50 mg/kg, i.p.) produced a dose dependent accumulation of stainable neurosecratory materials (NSM) in the neural lobe (NL) region with a concomitant dispersion of stainable NSM in the neuronal perikarya of hypothalamic supraoptic nucleus (SON) and paraventricular nucleus (PUN) regions. Acute lysergic acid (LSD-25) treatment (50 µg/kg, i.p.) also caused accumulation of NSM in the NL, with no noticeable change in the SON and PVN regions. Chronic treatment with delta-9-THC (10mg/kg, 15 days) produced marked accumulation of NSM in NL with a concomitant degranulation of the neuronal perikarya of SON and PVN. On the other hand, chronic LSD-25 treatment (10µg/kg, 15 days) caused a marked increase of NSM in the neuronal perikarya of SON and PVN with no prominent accumulation in the NL.

C L 3

SHORT- AND LONG-TERM EFFECTS OF CANNABIS EXTRACT AND DELTA-9-TETRAHYDROCANNABINOL ON BRAIN SEROTONIN. J. J. Ghosh and M. K. Poddar, Department of Biochemistry, Calcutta University, Calcutta - 19, INDIA.

The intraperitoneal administration of cannabis extract (10 and 50 mg/kg) and pure delta-9-tetrahydrocannabinol (THC) (10 and 100 mg/kg) increased the serotonin (5-HT) level of rat brain without significant change in 5-hydroxyindole aceticacid (5-HIAA). The maximum elevation of 5-HT was found to be dose and time dependent. The turnover measurement showed that the per cent decrease of 5 HIAA turnover was greater than that of 5-HT synthesis rate.

Unlike acute treatment, chronic treatment for 25 days with either of the agents (10 mg/kg) showed no significant change either in the level or turnover rates of rat brain 5-HT and 5-HIAA. The enzyme activities viz, monoamine oxidase (MAO) and 5-hydroxytryptophan decarboxylase of brain were found to be increased during both acute and chronic treatments.

C V 8

(1974) OLONGEE EN THE-LACUNES ET BE-

SOINS. D. Ginestet, M. Secret et P. Deniker. S.H.U. Santé Mentale et Thérapeutique, 100-102 rue de la Santé 75014 PARIS.

Le modèle le plus accompli de ce type de médicaments est actuellement celui des neuroleptiques d'action prolongée (N.A.P.) Certains syndromes cibles sont privilégiés : inertie schizophrénique (dérivés du pipotiil ou du flupentixol), idées délirantes (dérivés de la fluphénazine). Par contre, l'action sédative n'a pas été retenue comme bénéfique dans les perspectives de traitement prolongé et nous manquons encore de N.A.P. dont l'action hallucinolytique soit comparable à celle de l'halopéridol.

Dans le domaine des antidépresseurs des progrès apparaissent nécessaires. On peut souhaiter des produits dont l'action soit réellement puissante, la durée d'action supérieure à 24 h ou 48 h, éventuellement sous forme d'embonate ou par voie I.M. pour limiter le risque suicidaire. Des recherches sont en cours pour obtenir des correcteurs antiparkinsoniens à action prolongée ; il en va de même pour les sels de lithium dont certaines formes après une prise unique permettraient une lithiémie stable au cours du nycthémère.