evaluated as moderate in one boy, marked in five, severe in 3 and most severe in one. Their psychopathology consisted of inappropriate behavior, and language, thought, emotional, mood, motor and perceptual disorders. No psychotropic drugs were given for 2 to 12 weeks (mean 5 weeks) prior to fluphenazine administration. Trihexyphenidyl (2 mg. daily) was given for 3 weeks prior to and then concurrently with fluphenazine. Fluphenazine was given from 4 to over 45 weeks (mean 23 weeks). Daily maximum dosages ranged from 5 to 30 mg. (mean 14.5). All patients showed significant global andsymptom improvements, and social behavior, learning, speech therapy, and occupational therapy were facilitated.

C J 4

HYPERACTIVITE MOTRICE INDUITE CHEZ LA SOURIS PAR UN ANTICHOLINERGIQUE CENTRAL. ANTAGONISME PAR LES BENZODIAZEPINES. P.Simon, P.Soubrié et J.R.Boissier. Unité Rech. Neuropsychopharmacol. INSERM, 2 rue d'Alésia, F 75014 Paris

Un anticholinergique central, le trihexyphénidyle, augmente de façon significative l'activité motrice de la Souris (actographe à cellules photoélectriques, voir Arch. int. Pharmacodyn. 1965, 158, 212) à partir de 2mg/kg i.p.; cette augmentation est maximale 15 mn. après l'administration et dure environ 2h.

L'hyperactivité induite par le trihexyphénidyle (8mg/kg ip 15mn. avant le test) est

- réduite par l'α-méthyltyrosine
- non modifiée par la fenclonine
- diminuée par les neuroleptiques (fluphénazine, halopéridol) et les parasympathomimétiques (pilocarpine, oxotrémorine, ésérine), mais seulement à des doses voisines de celles qui diminuent par elles-mêmes la motilité
- diminuée par les benzodiazépines (oxazépam, diazépam, prazépam) à des doses éloignées de celles qui exercent par elles-mêmes une incapacitation. Cet antagonisme nous paraît d'autant plus remarquable que les benzodiazépines ne modifient pas l'hyperactivité induite par l'amphétamine, la p-chlorométhamphétamine ou la morphine.

C J 5

PROBLEMS-PROGNOSIS & DIAGNOSIS OF TARDIVE DYSKINESIA. George M. Simpson Ervin Varga M.D.

The problem of tardive dyskinesia and our knowledge of it to date is reviewed and the incidence in a total hospital population presented. Over 300 patients were identified, we used our rating scale for quantification of the severity of this syndrome, and characteristics associated with tardive dyskinesia evaluated, namely drugs, dosage, length of therapy, length of hospitalization, diagnosis race, sex, and the presence or absence of organic factors. The problem of defining it as one or more syndromes is discussed as is the prognosis and early warning signals and also what is not tardive dyskinesia.

C J 5

THERAPEUTIC ANTAGONISM BETWEEN NEUROLEPTICS AND ANTIPARKINSONISM AGENTS IN SCHIZOPHRENIA AND ITS PROGNOSTIC AND NOSOLOGICAL SIGNIFICANCE. M.M.Singh and S.R.Kay, Bronx, N.Y. State Hospital, 1500 Waters Place, Bronx, N.Y. 10461 (USA).

Our previous work has shown that anti-Parkinsonism (AP) agents tend to reverse therapeutic gains with neuroleptics involving basic social, emotional, cognitive, motor and psychophysiological processes. This report focuses on the differential significance of this phenomenon.

The data are from 3 multidimensional, longitudinal studies involving 47 schizophrenic patients. The effects of adding AP medication to ongoing neuroleptic treatment were systematically studied using an ABA design. Data on therapeutic reversal with AP drugs were analyzed in terms of paranoid vs non-paranoid and schizophreniform vs nuclear distinctions and therapeutic outcome. The results showed that non-paranoids were much more involved in these reversals than paranoids ($p < .05$) and that whereas most of the schizophreniforms showed this reversal ($p < .05$) only half the nuclears were so affected. The reversal however did not significantly discriminate between schizophreniform and nuclear psychosis. Almost all patients showing reversal had a good therapeutic response, while only half the others responded favorably to treatment ($p < .01$).

C E 7

SIMILITUDES ET DIFFERENCES DANS L'ACTIVITE DE DEUX HALLUCINOGENES, LA MESCALINE ET LE LSD. J.Sivadjian, Institut Pasteur, Paris, France.

Si la mescaline et le LSD se rapprochent par leur propriété majeure, l'action hallucinogène, on trouve encore d'autres analogies, mais aussi des différences dans leurs effets secondaires. On assiste aux mêmes

comportements stéréotypés des cobayes après l'injection de l'une ou de l'autre de ces substances : se gratter le museau ou l'abdomen, mordre les parties saillantes de leur cage et surtout l'émission unique ou répétée d'un son rauque, comme la toux.

Mais, tandis que le traitement successif des souris par les injection i.p. de priamide (iodométhylate de 2.2.-diphényl-4-diisopropylaminobutyramide) et de LSD provoque chez ces animaux des tremblements continuels pendant 20 min., l'injection de mescaline exerce un effet paralysant. Le LSD, injecté à la dose de 2.5 mg/kg et par voie i.p., aussitôt après l'injection de 30 mg/kg de priamide, affaiblit la transpiration de la patte de la souris et empêche sa disparition totale. Si l'injection a lieu 15 min. après celle du priamide, le LSD entraîne la reprise de la transpiration, arrêtée par le priamide.

Par contre, le sulfate de mescaline, à la dose de 25 mg/kg, par voie i.p. arrête en moins de 10 min. la transpiration plantaire chez la souris.

C E 25

RESPONSE OF COGNITIVE DISORDERS IN PROCESS & REACTIVE SCHIZOPHRENIA TO CHLORPROMAZINE & THIOTHIXENE. R. Sloane, M. Maloney, J. Razani & I. Tessler. LAC/USC Med. Center 1934 Hospital Pl. L.A., CA USA

Thirty schizophrenic patients were divided into "process" & "reactive" on the basis of history. Process pts were hypothesized to have a lower level of cortical arousal while reactive pts have a high one both reflected in different cognitive disorders. Differential responsiveness of these pts to pharmaceutics involving varying degrees of cortical arousal (or sedation) would be expected. Chlorpromazine, more sedative per equivalent potency dose, was expected to have a negative effect on process pts (lower arousal) & a positive effect on reactive pts. Thiothixene would benefit both. Results indicated significant improvement with reactive pts. improving more than process (across drugs) & pts receiving thiothixene (across schizophrenic subtypes) improving slightly more than those on chlorpromazine. The hypothesis that process pts would have a negative effect from chlorpromazine was not supported. Process pts were lower in intelligence & more distractible than reactive pts. Subtypes were equivalent in psychomotor speed, concretistic thinking & frequency of unusual responses.

C J 1

DIURNAL VARIATIONS IN THE PHARMACOLOGICAL ACTION OF MORPHINE. R. Smith. Psychology Department, Univ. of Louisville, Louisville, Ky. (USA).

CF-1 male mice were injected with 700 mg/kg morphine sulfate(MS)subcutaneously in oil-water slow release suspension on a single occasion or on two successive days in order to produce physical dependence. They were subsequently challenged with 10mg/kg naloxone interperitoneally either 24 or 48 hours after MS administration. Half were morphinized and challenged at 1500 hours & half at 0300 hours. The mice were then placed in groups of 4 atop a tower 46cm high and abstinence was quantified by determining the number of jumps made by each mouse during a 30minute interval immediately following naloxone. Acute morphine toxicity was greatest in those receiving the injections during the day. Two injections spaced 24 hours apart were more toxic than a single injection. The jumping syndrome was more intense at night A second study was done in which slow release MS injections were given over several days to maximize dependence. MS Administration occurred at the same time each day. Then separate groups of mice were challenged with 10mg/kg of naloxone every three hours around the clock for 48 hours in order to determine whether diurnal variations in withdrawal severity occurred. Such variations were found.

C E 37 *bis*

BROMAZEPAM (Ro 5-3350-LEXOTANIL). Lass Mahler Sonne, Overlaege, Dr.Med. Tulipanvej 6, 6440 Augustenborg, Denmark

Bromazepam (Ro 5-3350 -lexotanil) is a benzodiazepinderivat, which pharmacological has the same profile as other benzodiazepinderivater.

25 anxiety neurotics have been tested in a placebo cross-over experiment with a steady dosis, where bromazepam has been compared to diazepam. The experiment shows a better effect of bromazepam (lexotanil), but the difference is (may be caused by the smallness of the material) not significant.

Furthermore there is shortly explained a pilot study, which seems to show, that bromazepam is working well with anxiety neuroses, but what seems more important - also has an effect on obsessive compulsive neuroces with a long-term treatment.