The abstracts that appear below are drawn from the computer-based information storage and retrieval system operated by the National Clearinghouse for Mental Health Information. They were selected for inclusion here on the basis of their direct relevance to schizophrenia: judgments about the quality of the article or book abstracted have been left to the reader. Foreign titles have been translated and the city of the journal's origin noted. Languages that use neither the Latin nor Fraktur (German) alphabets (e.g., the Slavic languages) have been transliterated. Titles of articles, books, and infrequently cited journals have been translated from these languages, and all other identifying information appears in English in their citations. The articles described in these abstracts are not available from either the Clearinghouse or the Center for Studies of Schizophrenia.

Attention, Perception, and Cognition


The grid test for schizophrenic thought disorder was administered to 149 psychiatric patients drawn from a population with a known base rate of schizophrenia and an estimated base rate of thought disorder. This allowed for calculation of population-specific cutting scores for the grid test. The findings from this test, in addition to data from previous studies, were analyzed for diagnostic efficiency using conditional probability formulae. It is concluded that the grid test for schizophrenic thought disorder is unsatisfactory as a diagnostic instrument as its identification of thought-disordered subjects was not significantly different from that obtained by random classification. (15 references)—Author abstract, modified.


The effect of acute and chronic lysergic acid diethylamide (LSD) on rat startle, a widely used behavioral measure of reactivity and habituation, was examined to evaluate arguments against the use of the LSD rat model of human schizophrenia. Challenges to this animal model have argued that while schizophrenia can be chronically debilitating, animal and human effects of LSD exhibit behavioral tolerance following chronic administration of this hallucinogenic drug. The results suggest that behavioral tolerance after chronic LSD administration is incomplete, with tolerance exhibited to the acute impairment of habituation, but potentiation of startle magnitude on both the first response and the first block of 30 trials. These results are interpreted as supporting the viability of LSD as a model for one or more of the group of schizophrenias. (15 references)—Author abstract, modified.

The role of eye movements in information gathering by the brain is discussed, and the connection between various patterns of eye movements and personality traits and schizophrenia is explored. The two main modes of eye movement, smooth pursuit and rapid jumps or saccades, are coordinated in the pontine reticular formation of the brainstem. Schizophrenics have been found to exhibit two variations on normal patterns of eye movement, the almost total replacement of smooth pursuit by saccades (the pursuit path was a series of staccato jerks), and the interruption of smooth tracking by small saccades (generating an arc with occasional cogwheel-like interruptions). A study of 250 college students found that poor tracking ability was correlated with introversion, an inability to keep friends, poor memory, irrational acts, and an incoherent unstable self-concept.

5660. Caudrey, D.J.; Kirk, K.; Thomas, P.C.; and Ng, K.O. (Psychology Discipline, School of Social Sciences, Flinders University of South Australia, Bedford Park, South Australia 5042, Australia) Perceptual deficit in schizophrenia: A defect in redundancy utilization, filtering or scanning? British Journal of Psychiatry, 137(October):352-360, 1980.

The perception by schizophrenic patients of stimuli with more than one feature (dimension) was investigated using psychiatric and nonpsychiatric control groups. Indices of the ability: (1) to make use of redundant stimulus cues, (2) to screen out or filter irrelevant stimulus features, and (3) to scan the perceptual field for relevant stimulus features, indicated that only filtering was consistently poor in schizophrenia. It is suggested that schizophrenics may perceive the environment in an undifferentiated holistic manner, rather than in an analytic manner, and the implication for the theory of left hemisphere pathology in schizophrenia is discussed. The performance of schizophrenics, however, did not differ significantly from that of the depressed subjects. This finding suggests that the selective attention deficits previously observed in schizophrenia are not specific to the disorder. (34 references)—Author abstract, modified.


Two studies investigated the hypothesis that for schizophrenics, predictability of trial presentation is a stressful condition that triggers transmarginal inhibition and produces a behavioral deficit—redundancy associated deficit. Although redundancy associated deficit is elicited by the use of regular trials in a test of simple reaction time, this study used the successive discrimination learning paradigm, since it involves the simultaneous development of excitation to the reinforced and inhibition to the nonreinforced. It was expected that in discrimination learning, with a predictable preparatory interval, both excitatory and inhibitory responding would be impaired relative to the same functions with an irregular format. Contrary to expectations, the performance of 40 male process schizophrenics indicated faster learning and better performance under regular as opposed to irregular format conditions. Differences in motivational demands exacted by simple and discriminative reaction time were considered to help explain these results. (25 references)—Author abstract, modified.


The resilience of the redundancy deficit (RD) pattern of schizophrenic reaction time performance was explored by examining the resistance of RD to an experimental manipulation of imperative signal strength. Subjects were 20 process (chronic) schizophrenic inpatients, administered a reaction time task under conditions of usual motivation and, 1 day later, under conditions of aversive motivation induced by high decibel levels of stimulation. The RD pattern was observed with usual motivation, but not with so-called biological motivation. The results are discussed from the point of view of the utility of the RD as an index of vulnerability to schizophrenia, implications for attentional and motivational theories of schizophrenia, and, finally, the more general role of aversive stimulation.
in schizophrenic deficit. The finding that RD is ameliorated by aversive motivation is consistent with theories suggesting that schizophrenics respond primarily to negative motivation. The theory of Garmezy that the common denominator of the multiplicity of schizophrenic deficits may lie in motivational factors, particularly the prepotent avoidance motive, is supported by these results. (55 references)—Author abstract, modified.


Analytic listening is discussed within the context of pertinent data from the analysis of a young schizoid patient who felt he had not dreamed for many years. In line with Bion's work, it is suggested that the most basic aspect of analytic listening is analogous to the maternal capacity to receive and elaborate early infantile psychic communications. This is essentially a projective identification of anxiety situations, overwhelming feelings (positive and negative), and psychic distress. At the earliest level, this maternal capacity is represented concretely by the maternal breast and its internal space, soon linked in the infant's mind with the maternal face and head (to become mental) space. It is felt that introjection of the breast in this perspective gives richer and more dynamic meaning to Lewin's concept of the dream screen as representing the internalized breast. Areas of agreement between the conclusions from work with this and other patients and the work by Fain and David on functional aspects of dream life and Kanzer's work on the communicative function of dreams are indicated. (25 references)—Author abstract, modified.


Within the context of a survey of research and theory into schizophrenia, the possibility and necessity for grounding the explanation of cognitive disturbance in the methodological concept of information processing is demonstrated. Following a summary of cognitive psychological theories of schizophrenic thought disorder, a review is presented of psychophysiological research, based on general information processing concepts, examining cognitive organization, strategies, and dysfunctions in schizophrenia. The identification of cognitive defect in schizophrenia is discussed and illustrated in studies of recognition memory and verbal reproduction deficit in schizophrenics. (41 references)—Journal abstract, modified.


Smooth pursuit eye movements (SPEM) were recorded in human volunteers before and after the administration of alcohol and chloral hydrate and quantified using a frequency analysis score previously employed in studies of schizophrenia. Single doses of 2.0 and 3.0 ml/kg of alcohol and 1500 mg of chloral hydrate resulted in SPEM disruption. Lower doses of these drugs failed to produce a significant measurable effect. The failure of doses of chlorpromazine in a previous study to disrupt SPEM considered together with the obvious disruption of SPEM by two central nervous system depressant drugs adds evidence that impaired SPEM in schizophrenics is not an artifact of neuroleptic treatment. A number reading task, known to normalize smooth pursuit impairments in schizophrenics, also significantly improved drug induced disruption. These findings weaken the interpretation that number reading improves pursuit only in the presence of poor motivation or inattentiveness. The sites of action of alcohol and chloral hydrate are discussed. (29 references)—Author abstract.


Saccades occurring when tracking a sine wave target and when fixating a stationary target were studied in the following three groups: schizophrenics, other psychiatric inpatients, and normal controls. Frequency of saccades when tracking and when fixating was significantly greater among schizophrenics than among the two comparison groups. The
pattern of occurrence of saccades within cycles of the sine movement was similar in the three groups: the greatest occurrence was at the highest target velocity and the lowest occurrence was at reversal points. The data are interpreted as consistent with the hypothesis of a failure of inhibiting mechanisms. (16 references)—Author abstract.


A reanalysis is presented of data from a recent study (Wood and Cook 1979) purporting to show an attentional deficit in siblings of schizophrenics compared with a matched control group. Attention is drawn to a statistical error in the original calculations. Reanalysis fails to support the previously reported levels of statistical reliability and questions the inference drawn from vigilance data in the study. (4 references)—Author abstract, modified.


The isolated and interactive functions of three attentional components were studied with 10 schizophrenic patients and 10 psychologically intact individuals using a letter matching task. As compared to normals, schizophrenic patients: (1) appeared to have a higher rate of processing capacity expenditures in the alertness task; (2) showed a deficiency in high level cognitive operations and parallel processing in the selectivity task; and (3) showed a more rapid depletion of attentional resources in the processing capacity task, particularly during response preparation. The results demonstrate that schizophrenic cognitive processes are not amorphous, but rather represent a variant of the attentional processes of normal individuals.—Journal abstract, modified.


Event-related potentials in two auditory target detection paradigms and two auditory paradigms without overt tasks were studied in 22 schizophrenic, 21 depressed, and 28 matched control subjects meeting Research Diagnostic Criteria. In the target detection paradigm, schizophrenics showed a pattern of reduced N120 amplitude and shorter P200 latency to frequently occurring tones, and reduced P300 and slow-wave amplitude to infrequent target and nontarget tones. This pattern is consistent with impaired selective attention for stimuli. For depressed patients, these variables were generally intermediate between those of schizophrenics and controls. In the other paradigm, N120 latency was greater for schizophrenics and P200 amplitude was less for depressed patients. (27 references)—Author abstract.


Three experiments were conducted using tachistoscopically presented stimuli in order to evaluate iconic storage and speed of processing stages of information processing in schizophrenic subgroups (good and poor prognosis), depressed inpatients (depressive neurosis and manic-depressive disorder), and normal controls. In recent years, the idea that schizophrenia involves a primary disturbance of higher cognitive (cortical) thinking processes has been challenged by findings suggesting that there may be a primary disturbance in the early stages of processing that occurs during the first few 100 msec after stimulus reaches the sense organs. Results support the hypothesis that, independent of iconic storage and sensory registration, slow information processing is a relatively stable deficit in schizophrenic patients with poor prognosis. Schizophrenic patients with good prognosis had a similar deficit which was reversible. Results are discussed as they relate to the early information processing deficit theories of schizophrenia. (31 references)—Author abstract, modified.

5671. Sweeney, J.A. (Syracuse University, Syracuse, NY 13210) Eye tracking in adolescent schizophrenia: The role of attention

Thirteen adolescent schizophrenics, nine adult schizophrenics, nine nonpsychotic acting-out adolescents, two adults with schizoaffective disorder, and three adults with primary affective disorder were compared on performance on two visual tracking tasks. Adolescent schizophrenics were found to initiate more saccadic eye movements than did nonpsychotic adolescents. The performances of adult and adolescent schizophrenics were strikingly similar on both tasks. The presentation of a number or letter embedded in the target resulted in similar reductions in saccade frequency for all subject groups. Subjects who received more medication demonstrated less reduction in saccade frequency than subjects who received less medication. The results suggest the presence of an inability to sustain focal outward directed attention in schizophrenia, and also suggest that deviant smooth pursuit eye movements may reflect a vulnerability to schizophrenia.—Journal abstract, modified.


The possible association between endogenous psychoses and reduced innate cognitive ability is discussed within the context of a study of 1,000 psychiatric inpatients of which half showed poor school performance. 3.3 percent had learning problems, 40.4 percent experienced school failure, and 6.1 percent attended a special school. With regard to the question of an association between reduced mental abilities and a disposition to schizophrenia, no firm conclusions can be drawn in view of the fact that unipolar depressive and cycling psychotic patients showed impairments in academic performance similar to those of the schizophrenics. It may be, however, that psychotic patients with reduced mental abilities are more likely to be hospitalized. In terms of vocational development, a similar pattern of results was found, with unipolar phasic and cycling psychotics showing no greater success than schizophrenics. Because of the large number of patients, it was not possible to ascertain the extent to which vocational failures were the result of premorbid intelligence or a beginning psychosis. (21 references)—Journal abstract, modified.


The performances of schizophrenic subjects, psychiatric controls, and normals on no distractor, irrelevant distractor, and associate distractor memory tasks were matched for length, reliability, and difficulty. The results were compared to evaluate the interference theory and a variation of the normal associate bias theory of schizophrenic thought disorder. The distractors had greater negative impacts on the performances of the schizophrenic subjects than on those of the other groups. However, the associate distractors did not interfere with the learning of schizophrenic subjects more than did the irrelevant distractors. The results offer strong support for interference theories of schizophrenic thought disorder, but the hypotheses developed from Chapman’s normal associate bias model of schizophrenic cognitive deficit did not assist in predicting results. (15 references)—Author abstract, modified.

Biology


The relationship between electroencephalogram (EEG) abnormalities and clinical psychopathological features was investigated in a consecutive sample of 159 patients who satisfied research criteria for schizophrenia or affective disorder and for whom an EEG was obtained. In the 44 patients with abnormal EEGs, significant correlations were found between left-sided EEG abnormality and the clinical features of formal thought disorder and emotional blunting; correlations which were independent of the variance associated with age, sex, past or present drug administration, or research diagnosis. The correlation for formal thought disorder was specifically related to the left temporal lobe, a finding which is discussed in terms of the similarity between formal thought disorder (defined as a language dysfunction) and fluent posterior aphasia. Because of the small sample size, these results, although statistically
significant, should be interpreted with caution and require confirmation by other workers. (23 references)—Author abstract.


The serum and cerebrospinal fluid (CSF) of 60 schizophrenic patients and 26 controls were analyzed for viral antibody against cytomegalovirus (CMV), vaccinia virus, herpes simplex virus type 1 (HSV), and type-A influenza virus. A CSF/serum antibody ratio more than 2 standard deviations above the mean of the controls suggested local antibody production in the central nervous system. Sixty-eight percent of the patients had an increased CSF/serum antibody ratio for CMV antibody, 14 percent for vaccinia antibody, 4 percent for HSV antibody, and 15 percent for influenza virus antibody. (23 references)—Author abstract.


In a controlled study, the activity of glucose-6-phosphate dehydrogenase (G-6-PD) in red and white blood cells, y-glutamyl transpeptidase (γ-GT), and lysozyme in serum and white blood cells was studied in 22 drug-free schizophrenic patients and 17 healthy volunteers. The activities of the above enzymes were found to be reduced in the white cells of schizophrenics compared with controls. The differences in activity of G-6-PD in red cells and of γ-GT and lysozyme in serum between the two groups were not significant. The observed low enzyme activities might provide a further basis for interpreting the reported functional deficiency in neutrophils of schizophrenics. Possible mechanisms of biological abnormalities in schizophrenics are discussed. (40 references)—Author abstract, modified.


Structural changes in and the morphology of the lipid/pigment neuronal degeneration of nerve cells of the ansa peduncularis in the substantia innominata were investigated in consecutively available cases of Huntington's disease (n = 43), Alzheimer's disease (n = 7), schizophrenia (n = 12), and neurologically normal controls (n = 35). Degenerating neurons were found in the substriatal gray matter of 43 of the Huntington's cases, all of the Alzheimer's cases, and 11 of the schizophrenics, but in only two of the controls. The significance of the lesion may be related to quantitative factors, analogous to granulovacular degeneration of the hippocampus. The cells showed massive distention with solvent extractable lipid/pigment vacuolar droplet material that imparts a distinctive light and electron microscope appearance. (51 references)—Author abstract, modified.


The metabolism of the endogenous hallucinogen N,N-dimethyltryptamine (DMT) was studied in rodent brain. The results of several experiments suggest that DMT-N-oxide (DMT-NO) is a major factor in the overall metabolism of DMT. A cyclic pathway for the in vitro and possible in vivo metabolism and synthesis of DMT is proposed. Following the identification of 2-methyl-1,2,3,4-tetrahydro-β-carboline (2-MTHBC) and its demethylated analog 1,2,3,4-tetrahydro-β-carboline (THBC) as in vitro metabolites of DMT, these compounds were identified as normal constituent of rat brain. Since THBC is present in blood serum from some schizophrenics, its implications for schizophrenia research are discussed. Several compounds blocking the behavioral effects of DMT were also created.—Journal abstract, modified.


Platelet monoamine oxidase (MAO) activity, psychiatric disorders, and family history of psychopathology were studied in 115 nonhospitalized, previously undiagnosed college students classified into two extreme*
groups: those with platelet MAO activity two standard deviations below the mean, or low MAO probands; and those whose activity was two standard deviations above the mean, or high MAO probands. Low MAO probands had a significant increase in the incidence of borderline schizophrenia and other psychiatric disorders compared to high MAO probands. First-degree relatives of low MAO probands were more often affected with psychiatric disorders and borderline schizophrenia than relatives of high MAO probands. The data suggest that reduced platelet MAO activity is associated with psychiatric vulnerability and that the spectrum of schizophrenia may be more closely related to this vulnerability than other psychiatric disorders. (22 references)—Author abstract, modified.


Recent research is reviewed concerning the possible role of neurotransmitters, other than dopamine, in schizophrenic symptoms. A major problem with the dopamine hypothesis has been the lack of strong direct evidence of altered dopamine concentrations or metabolism when measured in large groups of schizophrenic subjects. Studies involving norepinephrine, phenylethylamine, y-aminobutyric acid, acetylcholine, and the endorphins are examined. Hypotheses concerning balance mechanisms among several neurotransmitters are also considered. (110 references)—Author abstract, modified.


A replication of the Rosenthal and Bigelow (1972) study, which reported that the mean corpus callosum (CC) thickness of a group of cerebra from chronic schizophrenic patients was significantly thicker than that from a matched control group, is reported, and a possible site of abnormality is discussed. The thickness of the CC was measured in all available brain specimens from the years 1973 to 1976, excluding only those cerebra stated on the autopsy protocol as having grossly visible pathology. Sixty-four brains were measured. The hospital charts were reviewed blind to the CC measurement to establish diagnosis. Seventeen met Research Diagnostic Criteria for schizophrenia with onset under 30 years old, seven had paranoid illness beginning after 30 years old, 14 met criteria for other psychiatric disorders, 11 had an organic brain syndrome, and 15 could not be placed definitively in any of these categories. An analysis of variance of the results for the first four groups was not significant for the overall mean CC thickness, but was significant for the thickness of the most anterior measurement. Between individual groups, only the early onset schizophrenic subjects were significantly larger than either the other psychiatric diagnosis or the organic brain syndrome group.—Author abstract, modified.


$K_m$ and $V_{max}$ values for platelet monoamine oxidase (MAO) were determined in 16 chronic schizophrenic subjects and 18 control subjects using three substrates: tyramine (TYR), benzylamine (BZ), and phenylethylamine (PEA). In the chronic schizophrenic subjects, decreased $K_m$ and $V_{max}$ values were found for TYR and BZ but not PEA. When prior neuroleptic drug exposure was considered, a trend toward lower kinetic parameters was found in schizophrenic subjects with a history of neuroleptic usage. It is concluded that platelet MAO activity is, in chronic schizophrneics, both quantitatively reduced and qualitatively different from control enzyme. It is suggested that the measurement of $K_m$ in addition to the measurement of $V_{max}$ may be a useful biological marker for chronic schizophrenia providing that the appropriate substrates are employed. (21 references)—Author abstract, modified.


Whole blood serotonin concentrations were studied in 33 chronic
schizophrenic patients diagnosed with the Research Diagnostic Criteria, who had previously had computed tomography (CT) brain scans and in 23 healthy volunteers. The schizophrenics had a mean serotonin significantly higher than controls. The patients were subdivided into those with abnormal CT findings (enlargement of cerebral ventricles and/or cerebral atrophy) and a group with normal CT scans. The patients with abnormal CT scans had significantly higher serotonin concentrations when compared to schizophrenics with normal CT scans as well as controls. The patients with normal CT scans did not have significantly elevated serotonin concentrations compared to controls. Furthermore, ventricular size in the total patient group was significantly correlated to serotonin concentration. The findings of an association between elevated blood serotonin and abnormal CT scan findings in schizophrenia may explain discrepancies among previously reported studies of blood serotonin levels in schizophrenia. The data suggest a possible relationship between elevated blood serotonin and structural changes in the brain. (4 references)—Author abstract, modified.


Plasma dopamine-beta-hydroxylase (DBH) activity was studied in two separate populations of chronic schizophrenic patients (n = 44 and 56, respectively) and assayed by two independent laboratories. No significant difference between schizophrenic patients and normal controls was found, but in both groups, chronic undifferentiated schizophrenics with paranoid features had a trend toward lower DBH activity than the other patients and controls. In addition, DBH and monoamine oxidase (MAO) activities were studied in 13 schizophrenic patients and available first-degree relatives. There was no association of low MAO and low DBH activities within the schizophrenic families. (33 references)—Author abstract.


The influence of plasma and low-molecular weight plasma fractions on monoamine oxidase (MAO) activity in platelets from controls was studied. Plasmas were obtained from patients with decreased platelet MAO activity who suffered from chronic schizophrenia of different syndrome subtypes, unipolar depressions, and alcoholism. Up to 50 percent inhibition and activation of MAO activity in control platelets were measured after incubation with plasmas or plasma fractions. The frequency and manner of MAO activity alterations did not differ among plasmas from schizophrenic, depressive, and alcoholic patients. Plasmas from schizophrenic patients without medication or on neuroleptics showed similar inhibition and/or activation of MAO activity in platelets from controls. The results indicate, in accordance with recent findings, that a number of low- and high-molecular weight substances can trigger platelet MAO activity changes. These plasma factors do not appear to be characteristic of schizophrenic patients with low platelet MAO activity. (35 references)—Author abstract.


The sinus rhythm resting heart rates of 138 schizophrenic patients were monitored electrocardiographically for 30 minutes each and were compared with those of 139 healthy control subjects. It was found that a significant sinus tachycardia existed in the patients. Factors of chronological age, sex, and treatment by psychotropic drugs were nonsignificant. A subsample of 22 process schizophrenic patients was compared with 20 healthy control subjects matched for age, monitored continuously for a minimum of 120 minutes and analyzed by autocorrelation on a minute-by-minute basis for cardiac rate variation. Ultradian rhythms of each group revealed that the periodicity of cardiac rate variation in schizophrenic patients is significantly longer than in healthy controls. Treatment by psychotropic drugs in half of the patient sample did not appear to influence the cardiac rate variation. It is suggested that the bradycardia existing between pulses of tachycardia in schizo-
The relationship between schizophrenia, the ABO blood group, and the secretory system was examined in 210 schizophrenic patients. According to principles of the nosological taxonomy suggested by Snezhnevsky, the patients suffered from continuous schizophrenia, shift-like schizophrenia, and recurrent schizophrenia. A decrease of O-antigen and an increase of A-antigen were found in the continuous form; the shift-like form produced an increase of O-antigen and a decrease of A-antigen. In the group showing recurrent schizophrenia with genetically independent nosological units, an increase of O-nonsecretors was found. The various frequencies of genes refer to biological origin and polygenic inheritance of the disease. It is emphasized that genetic examinations of schizophrenia should follow the principles of nosology.

Four channels of electroencephalographic activity from several groups of control patients and schizophrenic patients were examined. No difference between normal controls and neurotic inpatients was apparent. An acute schizophrenic group had less alpha power; this change was confined largely to the temporal areas. A chronic outpatient sample showed less alpha and beta power, while chronic long-stay schizophrenic patients had an excess of delta power. The changes in both chronic patient groups are diffuse rather than local.

Concentrations of noradrenaline (NA), homovanillic acid, 5-hydroxyindoleacetic acid (5-HIAA), and cyclic nucleotides were determined in lumbar cerebrospinal fluid (CSF) from acute and chronic schizophrenics and various groups of psychiatric and nonpsychiatric control subjects. Statistically significant increases in NA and cyclic adenosine monophosphate were found in CSF from chronic schizophrenics compared to all other groups. These results were shown by statistical analyses to be unrelated to medication. They may be interpreted as evidence for noradrenergic overactivity as a possible primary abnormality in chronic schizophrenia.

The influence of propranolol and phenothiazines on bilateral electrodermal orienting responses to repeated auditory stimuli was studied with schizophrenic patients and controls. In three studies phasic activity to moderate intensity sounds of patients on no drugs or phenothiazines was predominantly hyperresponsive or hyporesponsive. Controls showed moderate or slow habituation. Propranolol was found to facilitate habituation in slow habituators and to reinstate responses in half of nonresponders, especially when given as the sole drug. The effects seldom had a counterpart in changes in nonspecific responses or levels of skin conductance. It is suggested that modulatory influences on stimulus and response processing and on lateral asymmetries in responses may underlie propranolol's efficacy in treating schizophrenia.


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Clinical and biochemical correlates of repeated oral lecithin administration were investigated in one male and five female chronic schizophrenic inpatients with manifest tardive dyskinesia (TD), using a double-blind crossover design. All subjects had been and continued to be maintained on a fixed dose of neuroleptic with no other psychoactive or anticho- linergic medication. An increase in serum choline and an amelioration of TD ratings were associated with both 7 and 14 days of lecithin ingestion. Assessment of phosphatidyl choline levels showed no fluctuation over the seven serum samples for any patients; in all patients, an increase in phosphatidyl ethanolamine was evident in two reagent strips corresponding with lecithin ingestion. Dyskinesia and serum choline reverted to their original levels on the discontinuation of lecithin. (21 references)


Serial plasma clozapine levels and serum prolactin levels were determined in two schizophrenic patients receiving clozapine, a novel antipsychotic drug. Despite marked therapeutic response and substantial clozapine blood levels, prolactin levels obtained 11 to 12 hours after the last oral dose were unaffected or were only minimally elevated. Clozapine’s proven antipsychotic efficacy, its apparent lack of extra-pyramidal side effects, together with its unusual neuroendocrine profile continue to be of great scientific interest despite its clinical unavail-

ability. It is hoped that a further understanding of its unusual clinical and neuropharmacologic characteristics will lead to the development of antipsychotic agents with a better benefit-to-risk ratio. (22 references)—Author abstract, modified.

5693. Kay, S.R. (Albert Einstein College of Medicine, 1300 Morris Park Ave., Bronx, NY 10461)

Problems in assessment and methodology in the study of arousal in schizophrenia and recent evidence that explains divergencies in arousal research are considered. Research problems include: reliance on measures that are indirect, obtrusive, and response based; disregard of variance from persons, contexts, and situations; questions of validity, reliability, and heterogeneity of schizophrenic classification; and assumptions of a linear and unitary arousal process. A recent series of studies has suggested that the arousal disorder may encompass two opposing components—one treatment responsive (central arousal) and one treatment resistant (autonomic arousal). The latter was associated with dysphoria and unfavorable clinical course, lending support to an existential dynamic interpretation of schizophrenia and its resistance to intervention. The findings are in accord with Routtenberg’s two arousal hypothesis, and contest a unitary conception and one that attributes mode of neuroleptic action to amelioration of arousal. Instead arousal changes were observed to be a consequence of treatment and not necessarily its source.—Journal abstract, modified.


The question of whether abnormal lateralization is relevant and has the same clinical significance in all schizophrenias was examined. Seventy-nine patients diagnosed as schizophrenic or schizoaffective by Research Diagnostic Criteria were studied. Their head computed tomograms were examined for evidence suggestive of atrophy and to determine both frontal and occipital lobe asymmetries. Sixty-five of the patients also were administered the Torque test. The 13 left-handed patients were less frequently subdiagnosed chronic and spent a lesser percentage of their illness hospitalized than the 66 right-handed patients. The same was true of the 22 with Torque compared to the 43 without Torque. There was also an abnormal distribution of both frontal and occipital asymmetries in the 66 right-handed patients compared to 100 neurological controls. These abnormal asymmetries were concentrated in the schizophrenics without evidence of atrophy. It was also noted that left-handedness and Torque were related, but there was no abnormality of the distribution of the cerebral asymmetries associated with either. These findings suggest that: (1) abnormal lateralization may be relevant and have etiological and clinical significance in certain groups of schizophrenics, and (2) abnormal lateralization may not be unitary in origin.—Author abstract, modified.

Gamma-aminobutyric acid (GABA) concentrations were measured in cerebrospinal fluid (CSF) of acute and chronic schizophrenic patients, in persons with psycho-organic or personality disorders, and in nonpsychiatric control subjects. The CSF GABA level in the chronic schizophrenic patients was significantly higher than in any of the other groups. No other significant differences were found. Statistical analysis revealed that the elevated CSF GABA concentration in the chronic schizophrenic patients possibly was not due to medication. Results provide evidence for possible primary or secondary GABAergic overactivity in the brain in chronic schizophrenia. (9 references) — Author abstract, modified.


To determine whether dopaminergic abnormalities in human post-mortem brain are drug induced, brain tissue obtained at necropsy from medicated and drug-free schizophrenic patients and control patients with no history of neurological or psychiatric disorder was examined. The density of \(^{3}H\)-spiperone binding sites was significantly raised in the psychotic group in both the caudate nucleus and nucleus accumbens, but this increase was limited to cases who were probably on neuroleptic therapy up until death and was not seen in cases free of neuroleptic drugs for 1 month or more before death. A similar pattern held for abnormalities in the affinity of dopamine receptors for the labeled ligand in the nucleus accumbens, although the influence of medication on affinity was less clear in the caudate nucleus. Results suggest that the likeliest explanation for the dopamine abnormalities previously observed in schizophrenic brain is neuroleptic treatment rather than the illness itself. (9 references)


Mean regional cerebral blood flow values of gray matter were compared in three male and three female chronic schizophrenics and six healthy volunteers. Results indicate that the schizophrenic patients had lower mean cerebral blood flow values for gray matter than the control group. The most likely explanation for this finding seems to be reduced neuronal metabolism, because organic pathology was excluded and the patient and control groups showed no significant differences in carbon dioxide and oxygen content of the end tidal air. Findings also suggest a greater reduction in gray matter blood flow in the right than the left hemisphere. The patient sample consisted of subjects who were not manifesting florid psychotic symptoms at the time of study; the absence of these symptoms may explain the absence of increased gray matter blood flow values in the posterior brain regions. (9 references)


Radioimmunoassays of \(\beta\)-endorphin and other hormones were conducted in a 41-year-old patient with chronic schizophrenia and Cotard's syndrome. Tests conducted 1 week after withdrawal of neuroleptic medication indicated normal \(\beta\)-endorphin levels in blood and cerebrospinal fluids, similar to those reported for chronic schizophrenics. This finding suggests that \(\beta\)-endorphin plays a minor role in schizophrenia and also in analgesia in Cotard's syndrome. Following intravenous administration of naloxone (10 mg), no significant changes in hormone levels or in the perception of painful stimuli were observed. On the other hand, naloxone has been reported to increase adrenocorticotropic hormone, luteinizing hormone, and follicle stimulating hormone—in normal subjects, and has restored pain sensation in congenital insensitivity to pain. (11 references)
In a study of eight schizophrenic patients, des-tyrosine-

endorphin was found to significantly reduce secondary facilitation of the H-reflex recovery curve. This result is similar to the effect found after treatment with classical neuroleptic medication. The effect is different from that produced by lithium carbonate or antidepressants. This suggests that des-tyrosine-endorphin and neuroleptics have a similar pharmacological action in man. (18 references)—Author abstract.


In a study of eight schizophrenic patients, des-tyrosine-endorphin was found to significantly reduce secondary facilitation of the H-reflex recovery curve. This result is similar to the effect found after treatment with classical neuroleptic medication. The effect is different from that produced by lithium carbonate or antidepressants. This suggests that des-tyrosine-endorphin and neuroleptics have a similar pharmacological action in man. (18 references)—Author abstract.


Characteristics of anticerebral antibodies in schizophrenia, as revealed by the indirect immunofluorescence and complement fixation tests, were studied in 20 schizophrenic patients. The content and tropism of anticerebral antibodies were examined. The complement fixation test revealed the antibodies in 15 patients. The antibodies to the homologous (rat) brain were more common in patients with the slowly progressing form of the disease. In 18 patients, the indirect immunofluorescence test showed fixation of immunoglobulins on neurons, myelin, and vascular walls. Fluorescence of microglia cells was observed frequently. There was selective fluorescence of the capillaries in examinations of the renal tissue. Results point to the participation of immunological reactions in schizophrenia pathogenesis involving various morphological and functional systems. (18 references)—Journal abstract, modified.


Catechol-O-methyltransferase (COMT) activity in erythrocytes was investigated in 213 patients with endogenous psychoses (schizophrenia, schizophreniform psychosis, bipolar and unipolar depressive disorder) and in 120 surgical controls. A significant decrease in COMT activity of erythrocytes was found in both male and female schizophrenic patients, as well as in male patients with schizophreniform psychosis. Among control subjects, a sex difference in COMT activity of erythrocytes was found, with males showing significantly higher activity than females. It is suggested that a genetically determined deficiency of catecholamine degradative enzymes in the central nervous system or, alternatively, influences of nongenetic hormonal factors could be implicated in the findings of altered erythrocyte COMT activity reported. (6 references)—Author abstract, modified.


Discrepant findings by different researchers concerning changes in dopamine receptor function in schizophrenia are considered. Mackay et al. (1980) concluded that reported increases in dopamine receptors in schizophrenic brain, measured by neuroleptic binding, are effects of neuroleptic drug treatment and not of the disease process. Based on different findings by Reynolds et al., it is suggested that post-mortem treatment may pose the greatest difference. Other possible reasons for the discrepancies are discussed. (5 references)


The quantitated electroencephalogram (EEG) of a clinically heterogenous group of 13 adolescent psychiatric patients with paranoid or depressive symptomatology was compared to that of 26 normal adolescents. While in most controls the variances of the distributions of EEG amplitudes were similar between right and left hemispheres, it was
found that higher variances in the right than in the left were significantly more prevalent in patients with depressive symptomatology. However, it was the reverse in patients with paranoid symptomatology in whom the variances were significantly higher in the left than in the right hemisphere. (16 references)—Author abstract, modified.


A highly sensitive radioreceptor assay that detects neuroleptics on the basis of their ability to block dopamine receptors was used in a study of schizophrenic inpatients. Data from studies using both fixed and flexible dose designs are divided into three parts: (1) characteristics of the neuroleptic radioreceptor assay (sensitivity, selectivity, intraassay and interassay reliability, validity as compared with other assay methods, and the effects of physical factors involved in collecting and storing samples); (2) pharmacokinetics—data on the relationship between neuroleptic dose and serum concentration, intraindividual and interindividual differences in serum neuroleptic concentration, time required to achieve peak and steady-state serum concentrations, change in serum concentration over time, relationship of rate of neuroleptic excretion to age, and the effects of other drugs on serum neuroleptic concentrations; and (3) clinical response and serum neuroleptic concentration—the relationship between serum neuroleptic concentration and clinical ratings of psychotic symptoms and drug-related side effects. (3 references)—Author abstract.


Active uptake of serotonin, dopamine, and norepinephrine by blood platelets of 22 acute schizophrenic patients and 15 normal control subjects was studied for 6 weeks. Serotonin uptake by platelets was 40 percent lower in schizophrenics than in controls. No significant differences in dopamine or norepinephrine were observed. The results may reflect a genetic defect in schizophrenics. No significant correlations occurred between biochemical and Brief Psychiatric Rating Scale results. There was a correlation between uptake results with dopamine and norepinephrine but not between these amines and serotonin. This finding may provide indirect support for previously published experimental data which suggest that the carriers to dopamine and norepinephrine differ in function from those of serotonin. (18 references)—Author abstract, modified.

5706. Singer, H.S.; Rabins, P.; Tune, L.E.; and Coyle, J.T. (Coyle: Dept. of Pharmacology, Johns Hopkins School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205) Serum haloperidol levels in Gilles de la Tourette syndrome. Biological Psychiatry, 16(1):79–84, 1981.

Serum levels of haloperidol were measured in eight Gilles de la Tourette syndrome (GTS) patients, whose dosage had been established by clinical response. Results were compared with those found to be therapeutic in schizophrenia, and indicated that GTS patients responded to remarkably low oral doses of haloperidol. Serum neuroleptic measurements confirmed the presence of extremely low haloperidol levels, thus eliminating the possibility that patients develop high serum levels despite low doses. In contrast to schizophrenic inpatients, GTS patients demonstrated marked symptomatic improvement with values on the average tenfold lower than the minimal amount associated with therapeutic response in acute schizophrenic psychosis. These results lend support to the hypothesis of a supersensitive dopaminergic receptor site as the pathophysiologic defect in GTS, and raise the question whether haloperidol may act by a different mechanism in GTS patients than in schizophrenics. (13 references)


In an attempt to develop a measure that could discriminate between akinesia and the negative symptoms of schizophrenia or the psychomotor retardation of depression, plasma levels of chlorpromazine and prolactin were investigated in 43 patients with GTS and 43 normal control subjects.
To examine the reported disarray of pyramidal cells in Ammon's horn of paranoid schizophrenics, which is compatible with a developmental defect, cresyl violet stained sections of the hippocampus of specimens in the Yakovlev collection were selected from brains of 19 schizophrenics (seven paranoid patients), 18 patients with other psychiatric disorders, and 26 controls matched for age (same decade) and plane of section which included 22 normative brains and four brains of stroke victims. The CA2–CA3 junction was photographed under low power and high power, and transparencies were graded blindly for degree of disarray of pyramidal cell basilar dendrites and for cellular concentration. Inter-rater reliability was 0.92. Unequivocal disarray was found in two schizophrenics (one paranoid patient), four other psychiatric patients, and four controls. Cell concentration also did not differ across groups. The findings were not differentially lateralized. Thus, diffuse disarray of hippocampal pyramidal cells is unlikely to be a specific characteristic of paranoid schizophrenics. However, the possibility that focal or regional disarray in a functionally specific area of Ammon's horn is relevant to schizophrenia is not excluded by the findings.—Author abstract, modified.


Studies of the possibility that phenylethylamine (PEA) might be related to the causes of schizophrenia are briefly reviewed, and the question of whether there might be a connection between the elevated urinary PEA concentrations and norepinephrine in the nucleus accumbens of paranoid schizophrenic patients is considered. To determine not only if acute PEA administration increased norepinephrine in the cerebrospinal fluid, but also whether chronic PEA increased norepinephrine in the brain itself, PEA (100 mg/kg) was administered to rats intragastrically twice daily for 10 days. The rats were sacrificed 2 hours after the last dose. Of the various brain areas analyzed, norepinephrine concentrations were selectively and significantly increased in only the hypothalamus (36 percent above controls) and the nucleus accumbens (96 percent above controls). Norepinephrine's major metabolite, 3-methoxy-4-hydroxyphenylglycol, was also increased in the hypothalamus (47 percent above controls), but remained normal in the nucleus accumbens. In contrast, dopamine was not changed, but 3,4-dihydroxyphenylacetic acid was slightly increased. These biochemical findings of increased norepinephrine concentrations in the nucleus accumbens after administration of PEA are consistent with findings that application of PEA to the nucleus accumbens potentiates PEA.
stereotypy and hyperactivity. (19 references)


In an attempt to find a biological measure that differentiates among schizophrenic patients, six biological variables were employed: platelet monoamine oxidase activity, urine phenylethylamine concentration, brain norepinephrine concentration, abnormalities on computed tomography, lateralization asymmetries, and the presence or absence of tardive dyskinesia. All variables successfully subclassified patients, some into divisions consistent with phenomenological, psychosocial, or biochemical descriptions of hypotheses of schizophrenia. Points of controversy are examined for each variable considered. The possibility that any of the factors that differentiate schizophrenic subgroups may be a byproduct of being schizophrenic is discussed. It is noted that none of the measures employed has sufficiently stood the test to be of clinical utility. (86 references)—Author abstract, modified.

5712. Zahn, T.P.; Rapoport, J.L.; and Thompson, C.L. (National Institute of Mental Health, Bldg. 31, Rm. 4C39, 9000 Rockville Pike, Bethesda, MD 20205) Autonomic effects of dextroamphetamine in normal men: Implications for hyperactivity and schizophrenia.


A World Health Organization multinational study of the antithymic activity of blood sera of patients suffering from schizophrenia is described. Blood serum specimens from 118 schizophrenic patients and 62 mentally healthy donors were investigated. Significant differences between schizophrenic patients and controls were found. It is probable that as with other biological phenomena described in schizophrenia, antithymic activity is one of the biological factors, in combination with other factors, predisposing toward the development of the schizophrenic process. (7 references)—Author abstract, modified.


Evidence is presented that schizophrenia may be positively correlated with ingestion of milk and wheat, and negatively associated with July temperature from data obtained in 18 countries. These findings are predictable from studies of high versus low prevalence of the disorder in various climates and cultural systems and agree with other research results. (13 references)—Author abstract, modified.

Description


Qualitative and quantitative dermatoglyphic features in schizophrenia and manic-depressive psychosis were analyzed. Salient differences found between the
diagnostic groups were: (1) the frequency of whorls is higher in manic-depressive psychosis, and loops and arches are higher in schizophrenia; (2) the frequency of pattern occurring in thenar and interdigital 13 and 14 areas is significantly higher in manic-depressive psychosis; (3) the ‘at’ angle is greater in manic-depressive psychosis—that is, the axial triradius is more toward the digital end in manic-depressive psychosis; and (4) there is a tendency toward an increase in the mean total ridge count in manic-depressive patients compared to schizophrenic patients. The findings support the view that the two psychoses are genetically distinct. The importance of dermatoglyphic studies in this field is emphasized.—Author abstract, modified.


Some findings from a long-term followup study of schizophrenic patients in Switzerland are reported, with particular reference to the problems of treatment. The average duration of followup from first admission to reexamination was 36.9 years. The total duration in hospital was less than 1 year for half of the probands. The global outcome of schizophrenia was favorable in 49 percent of the cases. At followup, about two-fifths of the patients were living with their families or by themselves. The enormous variety of possible evolutions shows that there is not a specific course of schizophrenia. (9 references)


A combined form of the Spiegel Personality Inventory was administered to 100 male schizophrenic patients residing in a state mental hospital to assess their level of emotional dependency. The study was done on a cross-sectional basis with 20 subjects for five groups ranging in length of time hospitalized from 1 to 5 years. Contrary to findings for the blind, it was found that emotional dependency for those disabled by schizophrenia is not an adequate index of coping behavior. It may be possible that for schizophrenic patients, emotional dependency functions on a decremental reinforcement basis. The conclusion that emotional dependency can operate independently of the process of institutionalization seems warranted. (50 references)—Author abstract, modified.


The syndrome of schizophrenia is discussed with emphasis on discoveries of etiology and course of illness and remaining unanswered questions. Probably the most significant advance in knowledge of the brain and mental state concerns the chemical substances that serve as neurotransmitters or modulators of synaptic activity. In a substantial fraction of typical chronic schizophrenics, there is an underlying neurological disturbance. Genetic factors, biochemical factors, and psychosocial factors are reviewed. It is likely that the biological processes which underlie behavior and mental function play important, but not exclusive roles in the etiology and pathogenesis of the schizophrenia syndrome. These as well as the psychological and social factors that interact with them require further elucidation. (85 references)


Independent subforms of schizophrenia are differentiated to explain discrepancies in the origin of schizophrenia. A special form of catatonia—periodic catatonia—seems to be transmitted by dominant inheritance, and a special paraphrenia—affectional paraphrenia—recessively. Family histories of psychosis are rarely found in systematic schizophrenias, but examinations of twins suggest a psychosocial origin for the disorder. Only by diagnostic separations can the discrepancies in the field of schizophrenia be solved. (44 references)—Author abstract, modified.


A case study of a schizophrenic who used neologisms is presented. The patient had experienced auditory hallucinations describing new words
and their meanings since early childhood, while attending emotionally charged church services. He came to believe that God intended that the neologisms be spoken as a new language in a city which the patient was supposed to build. He began to keep a written record of these neologisms. He also believed that he had personally designed every novel object he encountered. Treatment with fluphenazine eliminated the auditory hallucinations but not the delusions and left the patient displeased at the cessation of the hallucinations. A larger dosage produced cognitive deterioration and was discontinued. An attempt is made to classify the neologisms, which are mostly nouns composed of actual English syllables. (4 references)


The neurochemical hypothesis that schizophrenia is associated with relative overactivity of central dopamine (DA) systems is discussed with emphasis on post-mortem findings from analysis of schizophrenic brain tissue. These results agree with the work of Crow and reveal that not only is there an increase in the DA receptor population, but also in the DA concentration in certain discrete areas of the schizophrenic brain. These abnormalities are particularly marked in cases where the onset of illness was before the age of 25 years. Neuroleptic drugs are, ineffectual in treating the classical form of the disease, as described by Kraepelin. The likely cause of drug ineffectiveness in such cases is discussed and a comment by Crow is included. (18 references)


The psychopathological art of a schizophrenic artist is examined. The family history of this schizophrenic patient is outlined, and his own psychotic episodes beginning at the age of 15 are detailed. His art work is discussed as an important medium of his schizophrenic expression (mannerism). A brief discussion of mannerism and schizophrenic symptomatology is presented. (14 references)


Histories are presented of two patients who were treated at an outpatient clinic with schizophrenic illnesses without family history and who demonstrated 47 XXY chromosomal patterns—Klinefelter’s syndrome. In view of the strong evidence of familial, probably genetic, factors in the usual development of schizophrenia, a lack of family psychiatric history in these cases suggests that the chromosomal deficit may be a significant factor in the causation of illness. The possible role of a specific effect of the chromosomal constitution, such as a minor cerebral dysfunction, is suggested, along with the influence of personality and concomitant intellectual and sexual immaturity. (5 references)


The hypothesis that psychiatric inpatients deliberately withhold important information from their therapists, and that this would be particularly true of unmarried male schizophrenics and those dissatisfied with their hospitalization, was investigated in 32 adult inpatients in four units of a short-term, voluntary, psychiatric facility. Sixteen subjects (50 percent) reported having deliberately withheld information. Withholders tended to be male, unmarried, have a discharge diagnosis of schizophrenia, and express less satisfaction with hospitalization and more negative feelings toward the therapist. Age, educational level, religion, length of hospitalization, and number of previous hospitalizations did not distinguish between withholders and nonwithholders. Areas in which information was most likely to be withheld (or not disclosed) are discussed, as are reasons given by patients for withholding or failing to disclose information. (4 references)—Author abstract, modified.


The controversial view of David Margules that the child-parent bond is an addictive attachment based on opioid peptides in the body, and that
the problem in schizophrenia centers around the inability to loosen or attenuate this attachment is discussed. Margules suggests that schizophrenia and autism result from deficits in the endorphinergic and endoxonergic systems which prolong the period of extended learning that lies between birth and the age of sexual maturity. His theory is seen as offering a possible resolution of the conflict between those who view schizophrenia as the outcome of relationships and experiences and those who see it as the consequence of chemical or metabolic aberrations.


Schizophrenics with high or low levels of frontalis muscle tensions while at rest (baseline) were: (1) instructed to respond (button-press) at different rates, (2) allowed to respond at any rate they preferred, and (3) reinforced for responding under different schedules of reinforcement. Information about the response reinforcement relationship was provided for each reinforcement schedule. High and low levels of baseline muscle tensions were associated with high and low rates of preferred and reinforced responding, respectively. Response rates also varied with different contingencies of reinforcement. It is concluded that: (1) under certain contingencies, responding may vary more with baseline muscle tensions than with the contingency of reinforcement; and (2) instructed rates of responding may not be correlated consistently with baseline muscle tensions. (20 references)—Author abstract, modified.

Diagnosis


The reliability of lifetime diagnosis was examined, using both the Schedule for Affective Disorders and Schizophrenia-Lifetime Version and Research Diagnostic Criteria, to interview ill and well relatives of probands in the National Institute of Mental Health Collaborative Study of the Psychobiology of Depression. Subjects were interviewed three times, so data are available concerning both short and long interval test/retest reliability. Short interval test/retest reliability was also quite high in the long interval test/retest study. It is concluded that it is possible to make lifetime diagnoses reliably in a nonpatient population. (12 references)—Author abstract, modified.


To establish confidence in assigning schizotypal features, three paradigms estimating the reliability of a new instrument, the Schedule for Schizotypal Personalities (SSP), were tested. The first paradigm considered joint but independent evaluations made by two raters simultaneously. The second paradigm assessed evaluations on different occasions with a mean interim time of 5.9 months (test/retest procedure). Both reliability paradigms demonstrated high levels of agreement for all of the scaled items: 90 percent of the intraclass correlations coefficients were .80 or better for the joint evaluations; and 70 percent were .80 or better for the test/retest evaluation. The third paradigm measured the reliability of DSM-III schizotypal personality disorder. The kappa value for measuring diagnostic agreement was .88. The use of the SSP as an interview schedule is recommended, and the authors discuss implications of the findings for genetic and biological research of schizophrenia spectrum disorders. (20 references)—Author abstract, modified.


Correlations between several diagnostic scales of the paranoid dimension and monoamine oxidase (MAO) activity were investigated in 24 schizophrenic and 22 age-matched control subjects. Platelet MAO activity was significantly lower in the chronic schizophrenic subjects than in the controls. When the Research Diagnostic Criteria and Tsuang and Winokur subtyping criteria were used, no differences between paranoid and nonparanoid types were found. However an inverse correlation was found between MAO...
activity and the Minnesota Multiphasic Personality Inventory paranoia scale and the measure of persecutory delusions and hallucinations, although neither result reached statistical significance. Results are discussed with reference to previous research into MAO activity in schizophrenia. (10 references)


The distinction between paranoid and nonparanoid forms of schizophrenia is discussed. The different methods of making the distinctions are examined, as well as some of the variables to which it has been applied. It is suggested that the grounds on which the distinction is made are often questionable. This conclusion is reached based on research results that include studies of premorbid personality, remission outcome, incidence of schizophrenic subtypes among family members, and results of physiological arousal, cognitive control, and ability tests. It is suggested that other methods such as monitoring of concurrent organismic variables rather than use of subtypes to predict group differences are needed. (45 references)—Author abstract, modified.


The 12-point flexible system for diagnosing schizophrenia was used to demonstrate the specific similarities of several other diagnostic groups to schizophrenia. The system appears practical and flexible and permits the clinician or investigator to set stringency levels according to specific needs, with a reasonable prediction of the extent to which false positive and false negative classifications will be associated with this system. Attention herein is on the special problem of mania. The user is reminded that the flexible system does not provide for a broad differential diagnosis and therefore will usually be embedded in a clinical diagnostic workshop which provides access to all relevant information. (28 references)—Author abstract, modified.


Studies on paranoïd schizophrenia for diagnostic classification and biological research are reviewed. A large number of the Bleulerian paranoïd schizophrenics are increasingly in the category of affective and schizoaffective disease. From a biological viewpoint, this seems justified; however, research criteria for paranoïd schizophrenia should include: diagnosis of schizophrenia only after excluding affective disorder, age of onset, chronic course of illness, absence of periodic agitation and catatonic manifestations, and repeated or continuous occurrence of delusions or hallucinations. (36 references)—Journal abstract, modified.


An effort was made to formalize the clinical, demographic, and historical features of schizophrenia through the development of a reliable assessment questionnaire. The criterion diagnosis was established through traditional hospital procedures and was substantiated by psychometric measures. Raters with comparable diagnostic experience were familiarized with each of the clinical, demographic, and historical features before evaluating presence or absence in psychiatric inpatients and outpatients. Interviews were used to reduce inconsistency and oversight. Using the coefficients of the discriminant functions of five major symptoms (loose associations, autism, loss of ego boundaries, emotional blunting, and delusions) and two demographic and historical features (family history of mental illness and poor social relations) correctly classified 98 percent of the total sample of 253 patients. The utility and generalizability of the proposed system was also demonstrated, along with its assets and liabilities. (63 references)—Author abstract, modified.

5734. North, C., and Cadoret, R. (Cadoret: Dept. of Psychiatry, University of Iowa School of Medicine, Iowa City, IA 52242)

Five published accounts of patients with schizophrenia were reviewed in the light of DSM-III diagnostic criteria. None of the accounts unequivocally met the DSM-III criteria for schizophrenia, but all did meet the criteria for some other psychiatric condition, especially affective disorders. The survey results suggest that popular accounts of schizophrenia present a confusing picture of schizophrenia. Inasmuch as these accounts often are evoked to support cures, the reading public is doubly confused, as when a naturally remitting condition such as depression is mistakenly called schizophrenia. The psychiatric profession has a responsibility to clarify diagnostic misconceptions put forth in the popular literature; DSM-III might provide more objective guidelines for this much needed clarification. (9 references)—Author abstract.


Modern diagnostic criteria for schizophrenia were applied to 254 patients admitted to the psychiatric wards of an urban hospital. It was found that only 16 (6.3 percent) met the St. Louis criteria for schizophrenia. Other studies using similar criteria also reported a consistently low prevalence of schizophrenia in general psychiatric inpatient populations. However, 30 patients classified as undiagnosed narrowly missed the definite diagnosis of schizophrenia because of the presence of affective disorder and/or insufficient duration of the symptoms. The clinical and research implications of these findings are discussed. (14 references)—Author abstract, modified.


The decline of diagnoses of dissociated (multiple or dual) personality was examined. The syndrome was found to fall into disrepute around 1910, which has been attributed to loss of interest in hypnosis; psychiatrist believed the syndrome resulted from hypnosis. It is noted, however, that around 1910 Bleuler introduced the term “schizophrenia” to replace “dementia praecox.” A review of Index Medicus from 1903 was performed and revealed a dramatic decline in the number of reports of multiple personality after the diagnosis of schizophrenia was recognized, especially in the United States. A review of clinical reports indicates that many patients with multiple personality had been diagnosed and treated as schizophrenics. (22 references)—Author abstract, modified.

5737. Strauss, J.S.; Loevsky, L.; Glazer, W.; and Leaf, P. (Dept. of Psychiatry, Yale University School of Medicine, 25 Park St., New Haven, CT 06519) Organizing the complexities of schizophrenia. Journal of Nervous and Mental Disease, 169(2):120-126, 1981.

Principles of multiaxial diagnosis were employed to begin constructing an operational systems model of schizophrenia. Findings from an intensive qualitative study of schizophrenic subjects were used to develop this model from an empirical base. In particular, 14 schizophrenic subjects were interviewed concerning the relationships between their work and symptoms. Both single cause/effect links and several types of relationships between components across the two systems were described. Data were construed in terms of symptoms, social relations, and work and within these three systems, components were identified. Implications of the findings and methodology for further research are discussed. (33 references)—Author abstract, modified.

5738. Tsuang, M.T.; Winokur, G.; and Crowe, R.R. (Dept. of Psychiatry, University of Iowa College of Medicine, 500 Newton Rd., Iowa City, IA 52242) Morbidity risks of schizophrenia and affective disorders among first degree relatives of patients with schizophrenia, mania, depression and surgical conditions. British Journal of Psychiatry, 137:497-504, 1980.

A group of 1,578 first-degree relatives of schizophrenic, manic, depressive, and control subjects were personally interviewed using the Iowa Structured Psychiatric Interview Form without knowledge of the probands' diagnoses. The data, based on blind diagnostic assessment of the relatives, support the distinction between schizophrenia and affective disorders, although the distinction between schizophrenia and mania was not clear-cut. The data did not support familial subtyping of paranoid and nonparanoid schizophrenia and of unipolar and bipolar affective
disorders. Future studies on subtyping of these two disorders should utilize biological markers and other nonfamilial variables in addition to clinical and familial data. (11 references)—Author abstract, modified.


Patients selected according to research criteria for schizophrenia and affective disorders were followed up in a historical prospective study to evaluate their diagnostic stability over a 30- to 40-year period. The followup lifetime diagnosis, based on blind diagnostic assessment, shows that 92.5 percent of the personally interviewed schizophrenics were given a followup diagnosis of schizophrenia, which was significantly higher than the 78.3 percent found in affective disorders. However, no significant difference existed when assessment was made on available records of those who had died or refused to be interviewed. These stability coefficients are discussed in light of the methodological assumptions involved in a long-term followup study. It is concluded that the diagnostic stability in schizophrenia and affective disorders was very high, and that rigorous diagnostic criteria should be maintained. (14 references)—Author abstract, modified.

The Family


In a paper delivered at the American Psychiatric Association meeting in San Francisco, California in 1980, the effect of mother-infant interaction on the development of schizophrenia is examined. The complexity of the interrelated factors bearing on this relationship is emphasized. Vulnerability is viewed as epigenetically evolving via individual/environment transactions throughout life, with major impacts from conception through adolescence. It is noted that pregnancy and such attendant factors as diet, drugs, physical stress, illness influencing fetal development, obstetrical manipulations, and the birth process influence earliest mother-infant interaction. The importance of nonspecific protective or pathogenic factors such as social support or stressful precipitating events as well as socioeconomic status may play a role. Distorted communicative reciprocity between parent and child rooted in the preverbal period of infant development is considered. It is suggested that, except in the presence of gross organic defect, predictions about schizophrenic adult functioning can be validly based on the assumption of a continuing pathogenic environment, inherent in a continuing distorted reciprocal relationship between infant (and later child) and parents. (57 references)—Author abstract, modified.


The empirical literature that has attempted to assess the validity of the family theories of schizophrenia are reviewed from an epistemological viewpoint. Particular attention is directed to restating and extending the epistemology of pattern within which schizophrenia occurs. It is claimed that the conventional psychiatric approaches to schizophrenia play an active role within the schizophrenic pattern. Some, but not all, of the family theories of schizophrenia entail a shift from the Aristotelian/Cartesian/Newtonian epistemology of individual psychology to a systemic epistemology of pattern. A significant aspect of this epistemological shift pertains to etiology: the family theories of schizophrenia espoused by Bateson et al. and by Wynne and Singer do not claim that parents or families cause schizophrenia. (64 references)—Author abstract, modified.


Client characteristics, theoretical rationale, goals, and treatment strategies utilized in an aftercare program for deinstitutionalized schizophrenics and their families are described. This client population is notable for its low level of ego integration, reflected in their poor coping capacities and their limited abilities to find satisfaction and pleasure. A relentless fixity of distance characterizes the usual relationship between these clients and their families. Program goals, based
on a psychosocial, family systems perspective, include facilitating the client’s treatment and enhancing the family’s coping capacities through the encouragement of a therapeutic, ego enhancing environment which provides containment, support, and structure. Family involvement in all phases of treatment is emphasized in the family’s treatment plan which includes family/therapist meetings, crisis intervention, and a relatives’ discussion group. A case vignette is included which illustrates the feasibility of engaging the families as allies in psychodynamically oriented psychotherapy and resocialization.

(27 references)


In a paper presented at the American Psychiatric Association meeting in San Francisco, California, 1980 family studies of schizophrenia are reviewed. Two new series of studies of the family relationships of schizophrenics are seen as emerging. One approach, emphasizing the concept of communication deviance, examines family relationships in prospective longitudinal studies of children and adolescents who are at increased risk for later psychopathology, including schizophrenia. A second approach studies expressed emotion of key relatives as a predictor of subsequent course of illness in persons already diagnosed as schizophrenic. The diversity of methods now available for studying family relationships, both in the absence of the patient and with family members observed in direct interaction with one another, are discussed. Implications for pathogenesis and treatment are discussed as well as methodological and substantive problems requiring further investigation. (58 references)—Author abstract, modified.

Genetics


Slater’s model of assessing distribution patterns of ancestral secondary cases in maternal and paternal family trees was applied to pedigree data on schizophrenia. A group of 18 schizophrenic probands with at least two ill second-degree relatives was studied. The distribution of unilateral to bilateral pairs of affected relatives did not deviate significantly from that expected in polygenic inheritance. Contrasting pedigrees with family history of chronic schizophrenia with pedigrees loaded with soft spectrum disorders (i.e., borderline schizophrenia) did not alter the consistency of the data with polygenic transmission. (27 references)—Author abstract, modified.


Serum antithymocytic activity was analyzed genetically in several groups including healthy people, patients with schizophrenic psychoses and their relatives, and pairs of monozygotic and dizygotic twins. The subjects were 17 to 58 years old. The immunological disturbances observed in patients with schizophrenic psychoses were measured from the level of serum antithymocytic activity. These data then were analyzed genetically. Results show that the contribution of genetic factors to the determination of interindividual differences in antithymocytic activity is more than double the contribution of environmental factors. The close correlation between serum antithymocytic activity and the genetic predisposition to the disease suggests that a rise in serum antithymocytic activity may be regarded as a pathogenetic marker of hereditary predisposition to schizophrenia. (11 references)—Journal abstract, modified.


Preliminary results of the New York high-risk project, a comparative study (begun in 1971) of two samples of children with one or two schizophrenic parents (high-risk of schizophrenia) and children of normal parents or parents with other psychiatric diagnoses (low-risk of schizophrenia), are reported. The first sample includes 80 high-risk and 125 low-risk subjects who are now between 13 and 20 years old; the second, recently recruited sample
includes 44 high-risk and 106 low-risk children between the ages of 7 and 12. In addition, data for older and younger siblings of the first sample and for younger siblings of the second sample are available. At this stage of the prospective study, it has been possible to identify subgroups of high-risk children who exhibit attentional and cognitive deficits at early ages, early neuro-motor disturbances (males only), and unusual visual evoked response patterns reflecting deviations in cognitive and attentional processes. A good correspondence has been found between indicators of attentional and cognitive dysfunctions at 7 to 12 years old and psychopathological manifestations in late adolescence.


In order to determine if HLA-B27 could serve as a genetic marker for both arthropathy and schizophrenia, 16 patients with chronic arthropathy and 288 patients with clinical, radiological, and laboratory features of an arthropathy were tested. In the chronic arthropathy patients with HLA-B27, no form of arthropathy was observed and in the patients with arthropathies, no cases of schizophrenia were detected. These data agree with the hypothesis that schizophrenia and arthropathies tend to be mutually exclusive. However, it is conceivable that HLA-B27 is a genetic marker and could perhaps predispose to both diseases with the development of either an arthropathy or schizophrenia depending on the interaction of the genetic marker with other biological and environmental factors. (8 references)


The possibility of differentiating EEG changes caused by hereditary and process factors in schizophrenia was compared in 43 pairs of monozygotic and dizygotic twins suffering from schizophrenia. Healthy relatives of the schizophrenic twins also were examined. The quantitative differences of EEG characteristics were studied. Results show that the magnitude of some parameters is substantially lower in the monozygotic twins than in the dizygotic ones. Results also show that there is an increased frequency of the same signs (in magnitude and direction) in the healthy relatives as there is in the patients. Differences between reactive changes in the biopotentials and their spatiotemporal organization within the pairs of twins were more difficult to distinguish in monozygotic and dizygotic pairs. In the monozygotic pairs, the changes and organization are disturbed to a greater degree in the twin with a more rapid progress of the disease. (7 references)—Journal abstract, modified.


Morbidity risks for affective illness and schizophrenia were estimated in the first-degree relatives of schizoaffective probands as compared to matched controls—bipolar, unipolars, and schizophrenics. Linkage studies with X-chromosome markers were also performed in informative families. The genetic results indicate that schizoaffective illness is a heterogeneous entity. This syndrome appears to be primarily related to the affective disorders, but there may be a subgroup linked to the schizophrenic spectrum disorders. The studies also indicate that some schizoaffective syndromes may be transmitted through the X-chromosome, a pattern previously demonstrated in some families with bipolar manic-depressive illness. (34 references)—Author abstract, modified.


The possible role of heredity in schizophrenia, affective disorders, and schizoaffective disorders is considered, based on twin studies, adoption studies, and genetic theories. The evidence seems to suggest that what is inherited is not the certainty of developing schizophrenia but rather a vulnerability to it. The twin studies in particular show that environmental factors must be necessary for the expression of this vulnerability in at least half the cases. Current models of the mode of inheritance for schizophrenia and affective disorders are considered. Evidence also seems to indicate that genetic factors are more important in bipolar affective disorders than in unipolar illness.
The data strongly suggest a genetic transmission of affective disorder, but the exact mode of inheritance is unclear. Schizoaffective disorders are cases of psychosis that appear to have both schizophrenic and affective features. (49 references)


Methods for the systematic construction of genetic models of schizophrenia with one, two, and four loci are described. All models are constrained to fit the following three parameters: (1) frequency of schizophrenia in the general population equals 0.9 percent; (2) frequency of schizophrenia in the siblings of schizophrenics equals 8 percent; and (3) frequency of “schizofrénic spectrum” in the siblings of schizophrenics equals 15 percent. In addition, a fourth parameter, the frequency of the correcting for ascertainment bias and of comparing and testing these genetic models, is discussed. (17 references)—Author abstract, modified.


Methods of likelihood analysis of pedigrees were applied to testing various systematically constructed genetic models. One-locus, two-locus, and four-locus models have certain features in common—a relatively high frequency of the allele predisposing to schizophrenia (about 20 percent) and a relatively low index of genetic determination (23-34 percent). However, direct likelihood comparisons do not permit distinctions between the three models. Although the most likely interpretation is that the etiology of schizoaffective is heterogeneous or even nongenetic, a simple model with a single completely recessive locus and incomplete penetrance in the homozygote also produces a flat likelihood surface closely resembling that obtained with the real data. It is suggested that with reservation this single locus model may be proposed as a potentially useful working hypothesis. (9 references)—Author abstract, modified.


Six genetic models of the etiology of schizoaffective disorder are described, and data concerning the incidence of psychopathology among relatives of schizoaffective patients are reviewed. The genetic etiology of schizoaffective disorder is described as: (1) a subtype of schizophrenia; (2) a subtype of affective disorders; (3) a separate disorder; (4) a mixture of two separate biologic disorders; (5) a subset of some polygenic spectrum; and (6) the heterozygotic state of a polyallelic vulnerability gene. Data are presented which consistently indicate high frequency of psychopathology in families of schizoaffective patients. However, these data do not discriminate between any of the family hypotheses cited. Strategies and topics for future research are discussed. (9 references)—Author abstract, modified.


To investigate the possibility that lateral cerebral ventricular size may be under genetic control, the computed tomography (CT) scans of 17 healthy siblings from seven normal sibships were compared. The CT scans of 10 chronic schizophrenic patients and 12 of their nonschizophrenic siblings were also compared. A trend was found for a correlation of ventricular size between siblings in the healthy sibships but not in the schizophrenic sibships. In each sibship the schizophrenic patient had the largest ventricles; in seven cases they exceeded the normal range. Although the discordant siblings were all well within the normal range, their ventricles were larger than those of the controls. The findings suggest a genetic component to ventricular size in healthy individuals and that CT findings in schizophrenics are not coincidental familial traits but markers of the illness. The implications of the findings in the discordant siblings are discussed. (20 references)—Author abstract.
In a summary of a paper presented at the 16th Annual Meeting of the American College of Neuropsychopharmacology, held in San Juan in December 1977, dreams of fragmentation and death are discussed as early clinical signs of vulnerability to psychosis. Case histories of three patients who dreamed that parts of their bodies were severed or mutilated and of four patients who dreamed of actually being dead are presented. It is suggested that dreams of these two types are highly suggestive or near certain indicators of vulnerability to schizophrenia, schizoaffective psychosis, or affective psychosis. (13 references)—Author abstract, modified.

**Prognosis**

Results are presented of a 1976 followup study of a 1971 examination of a cohort of 65 schizophrenics who were divided into two groups—good prognosis schizophrenia and poor prognosis schizophrenia—on the basis of duration of illness and premorbid level of functioning. Diagnoses in the poor prognosis group were remarkably stable with 84 percent of the subjects retaining a diagnosis of chronic schizophrenia at followup. In the good prognosis group, however, the majority (57 percent) were diagnosed as having a primary affective disorder. The remainder were largely divided between chronic schizophrenia (19 percent) and undiagnosed psychosis (19 percent). The good-versus-poor prognosis distinction seemed to hold at followup. The mortality in the poor prognosis cohort was unexpectedly high: four of the five deaths were from the poor prognosis group—two of these were known suicides and another was a suspected suicide. The data suggest that while it is possible to narrowly define a relatively homogeneous population of nuclear schizophrenics, schizoaffective disorder is diagnostically a heterogeneous group of illnesses heavily loaded with affective disorders but containing a significant number of schizophrenics as well. (5 references)—Author abstract, modified.

**Psychological Theory**


The theory is advanced that a basic disorder of consciousness can account for the three principal symptoms of schizophrenia as well as a number of cognitive disorders associated with the illness. Normally most of the complex information processing which is continuously required by even simple acts of perception, language, and thought goes on below the level of awareness. In schizophrenic patients, some of this processing, or the results of this processing, not in themselves abnormal, become conscious. Typical schizophrenic symptoms such as hallucinations, delusions, thought disorders, and problems of movement and action are explained through this theory. (56 references)—Author abstract, modified.

Observations on the development of cognition among schizophrenic children are reviewed with emphasis on Piaget's theory of cognition. Piaget proposes a functional relationship between cognition and affect, rather than a structural one, and he emphasizes three main products of preverbal sensorimotor intelligence and five criteria for the development of intelligence. Work with schizophrenic children, however, suggests that the relationship between cognition and affect may not be simply a functional one, and that the lack of integration in cognitive operations in such children may be the result of affective factors. (18 references)—Author abstract, modified.

Treatment


The effects of long-term, high dose clorotepin therapy for chronic schizophrenic patients were investigated. Ten schizophrenic inpatients received clorotepin in a daily dose of 105 to 210 mg for between 6 and 78 weeks. Psychopathology was assessed at the beginning of the study, every 6 weeks of treatment, and at termination, using the Brief Psychiatric Rating Scale. Side effects were also monitored. Physiological functioning was assessed at the beginning and the end of the trial. In 7 of 10 patients, a striking improvement in psychopathology was noted. No serious side effects or pathological changes were found. (2 references)


A longitudinal, placebo controlled case study of the response to drug treatment in a 64-year-old female schizophrenic patient hospitalized for 40 years is described. While neither lithium nor a neuroleptic drug alone was effective, both drugs administered simultaneously led to the gradual extinction of a pronounced behavioral cycle and the disappearance of manifest psychosis. A synergistic interaction between the two drugs is suggested, and the need for sustained trials of the combination therapy in patients with similar behavioral cycles is emphasized. (11 references)—Author abstract, modified.


A number of subtypes of schizophrenia that can assist in the rational choice of individualized treatment approaches are discussed. Their application to therapeutic decision-making at various phases of the illness is considered. Misdiagnosed subgroups, early treatment subgroups, and later treatment subgroups are examined. Treatment with antipsychotic medication is discussed because this particular treatment approach is ubiquitous; however, it is noted that other forms of treatment can be considered in a similar fashion. It is suggested that the implementation of the considerations described would sharply reduce practices of overprescribing medication and would focus the use of antipsychotic drugs on those patients where potential benefits are maximal. (36 references)—Author abstract, modified.


The effects of neuroleptics on disorders of smooth pursuit eye movements (SPEMs) among schizophrenic patients were investigated. SPEMs were investigated in 26 hospitalized schizophrenics and in 23 staff members. Significant differences in SPEMs of patients and control subjects were found for: small saccades, positive saccades, and overshooting and undershooting. Among the schizophrenic patients, none of the SPEM parameters was found to be significantly correlated with the daily dose of neuroleptics. (9 references)


Possible antipsychotic effects of \( ^{\gamma} \)-type endorphins (des-Tyr \( ^{\gamma} \) -endorphin) were studied through a double-blind placebo controlled
crossover study of 13 schizophrenic patients undergoing continuous neuroleptic therapy. Based on assessment with the Inpatient Multidimensional Psychiatric Scale and the Verlaufs-Beurteilmungs-Skala, it is concluded that the y-type endorphin does not have antipsychotic action in chronic schizophrenia, but it may have an effect in acute cases. (7 references)


Dystonic reaction during maintenance antipsychotic therapy (molindone) is reported in a 25-year-old male chronic schizophrenia outpatient. The patient had been treated with a variety of neuroleptics over the 10-year course of his illness. Tardive dyskinesia was noted 2 years previously while the patient was receiving 400 mg/day of thioridazine. Because of the patient’s concern about tardive dyskinesia and obesity, the thioridazine dose was gradually tapered and eventually discontinued, resulting in psychotic decompensation. Following hospitalization and reinitiation of neuroleptic therapy, the patient rapidly recompensated and was released on 90 mg/day of molindone. Because of moderately severe choreathetoid dyskinetic movements, his dose was reduced to 75 and then to 50 mg/day. A week later the patient showed a severe neurological reaction, with rigidity of the trunk, difficulty in arm movement, and an upward rolling of the eyes. Symptoms and subjective distress were relieved by administration of 2 mg oral benzotropine. Choreiform movements were still evident at 6-week followup, but there was no recurrence of dystonic reactions. (4 references)


Neuroleptic drug variables in the etiology of tardive dyskinesia in 50 chronic state hospital inpatients (mostly male chronic schizophrenics) are reported. To determine which variables best discriminate between dyskinetic and nondyskinetic groups, a stepwise discriminant analysis was conducted. Three drug variables (number of months on low potency neuroleptics, time since initial neuroleptic therapy began, and total amount of depot fluphenazine received), as well as two other variables (abnormal electroencephalogram and previous electroshock therapy) were found to significantly predict membership in the dyskinesia group. Tentative conclusions drawn from these results are included. (15 references)


In a sham-controlled, double-blind, crossover study, four chronic schizophrenic subjects received weekly hemodialysis or sham dialysis treatments, including at least 16 consecutive hemodialysis treatments. No subject fully remitted during the trial; however, one subject had substantial improvement and two others had some improvement that may be attributed to hemodialysis or to a synergistic effect of hemodialysis and neuroleptic medication. Suggestions for further study are discussed. (29 references)—Author abstract, modified.


The efficacy of Sakel’s insulin therapy in schizophrenia was examined. A questionnaire concerning the applicability of this therapy was answered by 78 French physicians and 28 foreign physicians. Results indicate that 11 physicians (10 percent) used Sakel’s treatment for varying types of cases: schizophrenics with acute onset of the disease, hebephrenics, catatonics and hebephrenics, and cases not responding adequately to neuroleptic treatment. (8 references)


A double-blind, crossover study of maintenance therapy of schizophrenic patients with fluphenazine decanoate and oxyprothepine decanoate is described. Forty-six schizophrenic
Clinical and metabolic aspects of propranolol in chronic schizophrenia. Some clinical and metabolic aspects of propranolol in chronic schizophrenia.


Evidence is presented that no benefit was attributable to propranolol (1000 mg/day) in a trial lasting at least 22 weeks, 6 weeks of which was double-blind placebo controlled, in five chronic schizophrenic patients. The mean propranolol cerebrospinal fluid (CSF)/plasma ratio was 0.08, and there was good agreement between CSF and free plasma propranolol levels. Basal plasma prolactin was slightly but insignificantly reduced by propranolol, and metoclopramide stimulated prolactin release was unaffected. Propranolol was associated with a significant temporary increase in homovanillic acid, a nonsignificant rise in 5-hydroxyindoleacetic, and a significant decrease in 3-methoxy-4-hydroxyphenylglycol in the lumbar cerebrospinal fluid of four patients. (33 references)—Author abstract, modified.


In an open study, three chronic schizophrenic patients with normal kidney function were treated with hemodialysis in an attempt to ameliorate their psychotic symptoms. Neuroleptic treatment was stopped at least 4 weeks prior to hemodialysis. The patients were dialyzed once weekly for 12 (in one case 11) weeks. Psychopathology was evaluated using the Inpatient Multidimensional Psychiatric Scale, the Brief Psychiatric Rating Scale, and the Nurses’ Observation Scale for Inpatient Evaluation. No patient showed any improvement during the course of dialysis, and one patient showed a marked deterioration. These observations raise doubts about whether schizophrenic psychoses can be improved by hemodialysis, as was previously reported by Wagemaker (1977). (21 references)—Journal abstract.

Clinical and biochemical correlations following abrupt discontinuation of psychopharmacotherapy were studied in 26 patients (20 to 60 years old) with periodic and simple schizophrenia with a duration of 1 to 15 years. All the patients had received intensive psychopharmacotherapy, but without sufficient effect. Before and after discontinuation of pharmacotherapy, the serum levels of adenalin, noradrenalin, serotonin, and acetylcholine were determined, as well as the content of adenalin, noradrenalin, dopamine, and vanillylmandelic, homovanillic, and 5-hydroxyindoleacetic acids in the urine. A control group of 20 healthy people also was examined. Results indicate that an individualized therapeutic approach to different variants of paroxysmal schizophrenia is necessary, since the metabolism of biogenic amines in patients with periodic and simple schizophrenia is different. (20 references)—Journal abstract, modified.
Schizophrenic patients with depressive symptoms were treated with viloxazine or placebo combined with chlorpromazine or haloperidol. No difference between viloxazine and placebo treated groups was found. Since no side effects were associated with viloxazine, it is possible the doses used were inadequate. (30 references)—Author abstract, modified.

The effects of the dopaminergic blocking agents, haloperidol and sulpiride, on distal colon motility were studied in 30 chronic schizophrenic patients. Although these drugs inhibit distal colon motility in most nonpsychotic subjects, sulpiride inhibited motility in only 10 percent of the schizophrenic subjects; haloperidol increased motility in 23.3 percent and had no effect in the other schizophrenic subjects. Dihydroergotamine, phentolamine, and clonidine inhibited distal colon motility in 90 percent of the schizophrenic patients, suggesting peripheral noradrenergic hyperactivity in these subjects (25 references)—Author abstract, modified.

The drug response difference between low and high doses of fluphenazine decanoate (FD) was investigated in 40 chronic schizophrenic patients resistant to standard doses of neuroleptics. All patients were treated for at least 3 months with high doses of FD (100 mg or more within 3 weeks); patients were then randomly assigned to two groups for the double-blind study. In one group the high dose was continued (average dose 225 mg in 14 days); in the other FD was reduced to a standard dose of 25 mg in 14 days. During the 24 weeks of investigation, the patients' somatic and psychological state was evaluated by the Arbeitsgemeinschaft für Methodik und Dokumentation in der Psychiatrie (AMP) System, and self-rating data were obtained from the EWL-K. After 24 weeks, the high dosage group was more often rated as unchanged, while standard dosage patients were more often rated as improved or worse. Average condition differences between the groups could not be found in a covariance analysis. A factorial covariance analysis showed that patients with low hostility and low catatonic scores improved after reduction of the dosage in the apathic, hallucinatory/disintegrative and neurologic syndromes: Patients with high initial hostility and catatonic scores, however, became psychopathologically worse after dose reduction. The generalizability of these results is discussed. (15 references)—Author abstract, modified.

The rationale for psychosocial treatment in schizophrenia is examined and a strategy for its clinical use is provided. Primary concerns include: the limitations of neuroleptic drugs in treatment; family factors involved in relapse (particularly those involving expressed emotion); social competence and relapse; and elements of effective social skills training. The program implemented by one multidisciplinary treatment center for psychosocial research is described. The training involves cognitive skills, community homework assignments, community survival skills, family therapy, aftercare, and evaluation. It is hoped that this alternative to the current revolving door strategy for treating schizophrenia will result in reduction of the rate of relapse and improvement in the quality of life among patients. (48 references)

Results after long-term treatment of schizophrenia were examined with emphasis on: (1) the combination of psychotherapy (including other psychosocial treatments) and continuous depot neuroleptic medication; and (2) on building a treatment model for the rehabilitation of schizophrenic patients. A first sample of younger, male, chronic schizophrenic patients treated for 5 years with a combination of intensive psychotherapy and depot neuroleptics was significantly changed in a direction indicative of improvement as measured by the Holtzman and Rorschach tests, and is compared with a control group treated with neuroleptics only. A second sample treated with either fluphenazine decanoate or pipothiazine palmitate and studied for 3 years was found to have maintained a low degree of symptoms and signs. A third sample treated according to an integrated treatment model also showed a low level of signs and symptoms. It is noted, however, that although the level of psychopathology was low, difficulties in coping with emotional and practical problems in social life were observed. (158 references)—Author abstract, modified.


In a controlled double-blind study, the effects of pip eridine were investigated in five male—one of whom failed to complete the study—and one female schizophrenic inpatients. Subjects were started on a 300 mg/day dose, increased over 2 weeks to 1,600 to 1,800 mg/day and held constant for 1 month, then increased to 3,000 to 3,200 mg/day and held constant for 1 month. A 3-week placebo period preceded and followed the experimental protocol. No significant drug effect was found according to Brief Psychiatric Rating Scale total score or for the six symptom clusters of thought disorder, withdrawal, hostility/suspiciousness, anxiety, depression, or activation for the group or for any patient. No hematological or biochemical changes were associated with the drug period. The only side effects were nausea and vomiting in one patient and nausea in another at the 3,200 mg dose; both effects subsided when the dose was reduced. (14 references)


The difficulties encountered in the therapeutic session with the schizophrenic patient are discussed. The schizophrenic causes the therapist to question the very roots of his own psychological relationship to knowledge, sex, death, identity, desire, and castration. The schizophrenic patient unmasks the schizophrenic parent and/or the alienated child in the therapist, and he allows the therapist to see the derisive limits of his own knowledge and its defensive and ideological character. In consultation with the schizophrenic patient, it seems that the very possibility of thinking disinte-

grates. Despite these difficulties, it is proposed that talking can help pull the schizophrenic out of his chaotic situation.—Journal abstract, modified.


Plasma and saliva levels of chlorpromazine hydrochloride were measured by gas chromatography/mass spectrometry, after a standard dosage had been administered to 48 newly admitted schizophrenics over 28 days. Other treatments were rigorously controlled. Saliva chlorpromazine concentrations were higher than plasma concentrations, generally by about 4 to 50 times. Saliva and plasma chlorpromazine levels were significantly related. There was great variability in individuals between plasma and saliva peaks and values over time, in plasma/saliva ratios, and in change in plasma/saliva ratio over time. Chlorpromazine plasma and saliva levels at the end of fixed, sustained dosage treatment did not correlate with amount of improvement as measured by 10 criteria from the Brief Psychiatric Rating Scale and the Mobility, Affects Cooperation, and Communication Scale. Yet, levels obtained in the first 24 hours after the first dose did seem related to outcome, more strongly for saliva chlorpromazine than for plasma chlorpromazine levels. A reexamination of the relationships between levels of antipsychotic drugs in the body and
The clinical efficacy of oxyprothepine decanoate and fluphenazine decanoate in the treatment of schizophrenia was assessed in 12 men and 8 women. The clinical state and side effects were evaluated before treatment, before each injection, and following 6 months' treatment. Both drugs significantly reduced psychotic symptomatology. Fluphenazine showed a greater tendency to produce extrapyramidal side effects. In nine patients receiving fluphenazine, it was necessary to apply antiparkinsonism drugs; among oxyprothepine patients only three required antiparkinsonism drugs. (4 references)

A 2-year follow-up is presented of the Soteria Project which provides a homelike, community-based treatment facility for schizophrenic patients, advocating a phenomenological approach to schizophrenia. Young, first-break schizophrenic patients, deemed in need of hospitalization, were assigned on a space available basis to the experimental setting or to a control hospital ward. Results indicate that young, schizophrenic subjects recover and attain somewhat better psychosocial adjustment at 2 years, generally without drugs, when treated in a nonmedical residential setting staffed by nonprofessionals than do similar subjects treated in the regular mental health system. Despite strikingly lower use of neuroleptics and aftercare, the experimental subjects were not readmitted more often. Results also suggest that antipsychotic drugs need not be used routinely with newly admitted schizophrenics if a nurturing, supportive psychosocial environment can be provided. Soteria treatment subjects are also reported, at 2-year followup, to have higher occupational levels and to be better able to live independently at postdischarge. (8 references)

The treatment of acute psychotic episode with low- and high-dose haloperidol was investigated in 20 psychiatric inpatients with diagnoses of schizophrenia, acute paranoid reaction, and manic-depressive illness/manic type (DSM-II criteria), using a rapid neuroleptization technique. A 6-day maintenance phase followed. Both groups improved at 1 hour, 1 day, and 7 days after starting treatment; neither group differed as to degree of rapidity of symptom alleviation. Therefore, the results of the study do not give support for the administration of high doses of haloperidol to young, acutely psychotic inpatients with relatively good prognoses. (23 references)—Author abstract, modified.

Comparative characteristics of the prophylactic properties of short-term and long-acting lithium carbonate preparations in endogenous affective psychoses were studied in 53 patients (20 to 60 years old) with manic-depressive psychosis and schizophrenia. The duration of the disease in most of the subjects was 5 to 15 years. A group of 35 patients was examined in two stages. Results show that long-acting lithium carbonate preparations have an advantage over short-term preparations in preventing relapses of affective and schizo-affective psychoses because of their regular and even absorbability in the tissue. This affects both the quantitative and qualitative characteristics of the course of the disease. (21 references)—Journal abstract, modified.

The treatment of acute psychotic episode with low- and high-dose haloperidol was investigated in 20 psychiatric inpatients with diagnoses of schizophrenia, acute paranoid reaction, and manic-depressive illness/manic type (DSM-II criteria), using a rapid neuroleptization technique. A 6-day maintenance phase followed. Both groups improved at 1 hour, 1 day, and 7 days after starting treatment; neither group differed as to degree of rapidity of symptom alleviation. Therefore, the results of the study do not give support for the administration of high doses of haloperidol to young, acutely psychotic inpatients with relatively good prognoses. (23 references)—Author abstract, modified.
Comments are made on five articles on new directions in the psychotherapy of schizophrenia, with emphasis on treatment and research changes. Treatment changes involve augmentation of psychotherapy by pharmacotherapy and behavior therapy into a broad spectrum of interventions to meet the changing needs of individual patients. Greater emphasis on family treatment and problems of expressed emotion is also evident. Changes in research conditions have curtailed the use of the long-term psychotherapy setting as a laboratory for the study of schizophrenia, and the need to identify relevant dimensions for assessing the effects of psychotherapy in the disorder has been recognized. Other researchers have investigated the importance of improving social relations, work, education, coping with life stresses, and psychological organization. The greatest problem facing the researcher is the absence of adequate descriptions and standardization of form.


Two hundred hospitalized schizophrenic patients, most of whom had received neuroleptic treatment for at least 2 years, were examined. Tardive dyskinesia (TD) was found in 23.5 percent of them. The frequency and severity of TD increased with age, and the more advanced the age at which the patient started taking neuroleptics, the more likely it was that TD would develop. Severe TD was more common in men than in women. Prolonged treatment with neuroleptics or the use of antiparkinsonism drugs increased the risk of TD. It is noted that these results are in accord with most of the data in the literature. (19 references)—Author abstract, modified.


Studies are reported on the beta-endorphin treatment of six acute schizophrenic patients in a double-blind design. It was found that beta-endorphin affects the temperament, rather than the process symptoms of such patients, and that the results and duration of temperament therapy depend on the nature and symptoms of the psychosis. This interpretation may help resolve discrepancies between other clinical studies. The manner of drug administration may also affect clinical results. (9 references)


Chronic schizophrenic patients were maintained for 6 months on a dosage of haloperidol adjusted to give optimum clinical effect. A correlation was found between extrapyramidal symptoms and prolactin levels and between plasma haloperidol concentration and plasma prolactin levels. It is concluded that estimation of plasma prolactin is a reliable measurement of patients’ compliance with medication. (19 references)—Author abstract, modified.


In a double-blind study, the therapeutic efficacy of sulpiride was compared to that of haloperidol, an established neuroleptic agent. A total of 30 female patients with a diagnosis of chronic schizophrenia were initially stabilized on the dosage of haloperidol which produced optimum therapeutic response when given once or twice daily. The patients were then randomly allocated to receive either sulpiride or haloperidol over a period of 12 weeks. Plasma drug concentrations and prolactin levels were measured. Clinical effects were evaluated by the Brief Psychiatric Rating Scale (BPRS), Wing Rating Scale, and Extrapyramidal Symptoms Rating Scale (EPS). A standardized side-effects checklist was used. Treatment with sulpiride was associated with a significant rise in plasma prolactin level, but paradoxically, these patients had significantly reduced extrapyramidal symptoms. No significant correlation was found between plasma sulpiride concentration and prolactin level or any of the clinical variables. Results confirm the antipsychotic activity of sulpiride. (23 references)—Author abstract, modified.

5791. Schulz, S.C.; Van Kammen, D.P.; Balow, J.E.; Flye, M.W.; and Bunney, W.E., Jr. (Van Kammen: Biological Psychiatry
A double-blind study of the therapeutic effects of weekly hemodialysis of schizophrenic patients is described. Eight chronic schizophrenic patients completed a research program consisting of 10 weekly sessions of active hemodialysis and 10 weekly sessions of sham dialysis in a double-blind design. Previous reports of therapeutic efficacy were not substantiated. None of the patients improved during active dialysis; four patients worsened. Each patient's psychiatrist evaluated him or her weekly using the Brief Psychiatric Rating Scale and the Bunney-Hamburg Global Assessment. (15 references)—Author abstract, modified.


Thirty-six schizoaffective patients were treated with haloperidol plus lithium or haloperidol plus placebo. Standard statistical analysis showed greater improvement in those treated with lithium plus haloperidol. The Brief Psychiatric Rating Scale scores were reanalyzed using a nonparametric technique for multidimensional scaling of symptom profiles. The differential outcome after haloperidol with or without added lithium was found to be determined both by symptom dimension and by type of drug. Results indicate that added lithium prevents a depressive shift after haloperidol treatment on the dimension of cognitive disorganization/depressive preoccupation. (11 references)—Author abstract.


A Schiz-Anon group, with goals and objectives parallel to those of Al-Anon groups, has been developed, which enlists the aid of family members as primary care agents in the treatment of chronic ambulatory schizophrenics. The initial sessions were conducted by the psychiatrist treating the patients; emphasis was placed on the biological model of schizophrenia and the importance of medication and possible side effects in treatment. The format of subsequent sessions was open, permitting members to share feelings and experiences. Participation in the group helped members set realistic goals for the patient, overcome feelings of guilt and alienation and isolation, and channel feelings of impotence. Family members of 19 patients have attended all or most meetings for 2 years; and in that time, patients showed a decrease in number of days hospitalized and improved attendance at outpatient appointments. Families reported improvements in patients' social lives and, in many cases, a lessening in maladaptive behaviors. (3 references)


A controlled comparison of long-term injection oxyprothepin and fluphenazine decanoates in maintenance doses for schizophrenic patients whose symptoms were in remission is described. Clinical state was assessed before treatment and at each subsequent injection. Each compound was administered alternately for 6 months. No significant differences between the two compounds were found for therapeutic effect, tolerance, dosage, or intervals between injections. Both depot neuroleptics are considered as significant advances in the pharmacoprophylaxis of schizophrenic psychoses. (3 references)