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Childhood psychoses in those suspected of being mentally retarded

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CHILDHOOD PSYCHOSES IN THOSE SUSPECTED OF BEING MENTALLY RETARDED

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INTRODUCTION

Since 1958 the Nebraska Psychiatric Institute has carried out a program to evaluate children under eight years of age who are suspected of being mentally retarded. Over a five year period (1958-1963) 616 children have been studied in detail by a clinical team consisting of a psychiatrist, a neurologist, a pediatrician, a psychologist, a speech therapist and a social worker.

Of these 616 children it was decided that 32 were psychotic. It will be the purpose of this paper to briefly discuss the history of childhood psychosis; to present in some detail the technique of evaluating the children studied herein; and finally the results of these evaluations and their possible significance.

HISTORICAL REVIEW

Psychoses in young children, especially those functioning at a mentally retarded level, have consistently presented a major challenge to clinicians who have attempted to delineate their type(s) and etiologies. Thirty-five years ago the diagnosis of childhood schizophrenia and related disorders was comparatively rare. During recent years, however, the diagnosis of psychoses in young children has been increasingly more frequently applied. Ini-

tial studies in the first and second decades of this century focused on descriptive considerations (De Sanctis, 1908; Heller, 1908), and tended to cite these disorders as variations of degenerative central nervous system disorders. The third and fourth decades witnessed a sporadic number of reports concerning a childhood psychoses that closely resembled the schizophrenic psychoses of adults (Potter, 1933; Lutz, 1937; Despert, 1938). However, even by the late nineteen-thirties, Lay (1934) in an extensive review of the world literature on childhood psychosis chose to title his publication "The Schizophrenia-Like Psychoses of Young Children", and referred to them as a "dementing neurological disease attacking children in the first years of life". (page 368). The fifth and sixth decade brought forth further delineation of a schizophrenic disorder of childhood postulated on interpersonal pathology (Bradley, 1941). It also brought forth a new syndrome - Early Infantile Autism (Kanner, 1944) which received much interest as to whether it represented the earliest form of childhood schizophrenia. Finally, the fifth and sixth decades have produced a wealth of clinical reports of children deemed to represent a functional psychosis of the schizophrenic type (Mahler, 1952; Kaplan, 1954; Bender, 1955). The sixth decade - and up to the present time, has been a period of further elaboration (Kaufman, Friend, Heims and Weiss, 1963; Creak, 1963) and re-evaluation of former viewpoints (Rusley, 1963). For example some clinicians felt that the designation "psychosis" was only a label, and

chose instead "atypical child" (Rank, 1955; Putnam, 1955) and "children with ego defects" (Beres, 1956). Also, the concept of the final common pathway -- from diverse etiologies -- has been applied to childhood psychosis (Goldfarb, 1963).

Thus the child who is psychotic and is also suspected of being mentally retarded has been a major interest to clinicians, past and present. The interpretations of this particular combination of clinical phenomena have ranged from their being complementary parts of the same corresponding syndrome (e.g. Propf-schizophrenia (Lanzkron, 1957; Wortes, 1958), a primary emotional disorder (Szurek & Berlin, 1956) or multi-factorial etiological relationships (Despert & Sherwin, 1958; Creak, 1963).

As one reviews the case reports upon which such diagnostic formulations have been advanced, the need for detailed studies of these children is underscored. As stated earlier this paper will focus on a clinical review of a group of such children who were thoroughly evaluated as part of a larger project.

SAMPLE POPULATION AND METHOD OF STUDY

Since 1958, there has been an active Mental Retardation Clinical Evaluation Unit at the Nebraska Psychiatric Institute. Its purpose was to study children, eight years of age and under, who were considered by some referral source to be mentally retarded. The group of children studied also included every child in this age group who was being considered for possible institutionaliza-

tion for mental retardation in the State of Nebraska.

Of the 616 children examined between 1958-1963 it was the consensus of the staff that 191 of them displayed prominent emotional components. These 191 children are reviewed in a recent report (Menolascino, 1964). Highlights of that report, which are pertinent to this study are:

(1) All of the emotionally disturbed children were first viewed diagnostically as to the etiologic nomenclature of the American Association on Mental Deficiency (Heber, 1959) classification, with associated behavioral nomenclature of the American Psychiatric Association (Raines, 1958).

(2) Of the 191 children who were deemed to display prominent psychiatric problems, 32 of them were considered to be psychotic.

(3) Of these 32 psychotic children, 12 were noted in the first six AAMD categories (encephalopathy due to infection, intoxication; trauma or physical agents; disorder of metabolism, growth, or nutrition; new growth; and unknown prenatal influences); four in category seven (encephalopathy due to uncertain or unknown cause with structural reaction manifest); 15 in category eight (encephalopathy due to unknown or uncertain cause with functional reaction manifest); and four children, were

felt to represent primary functional psychoses without mental retardation.

Before discussing the specific psychiatric findings of this group of psychotic children some of the clinical "pitfalls" in this area should be considered. There appears to be a tendency in child psychiatry over this last decade, to classify together rather diverse major emotional disturbances of early life as psychoses of similar historical and clinical parameters -- without differentiation as to etiological basis (Mahler, 1952; Beres, 1956). The validity of considering Early Infantile Autism as a separate and distinct category has been questioned by some clinicians (Bender, 1959; Sarvis & Garcia, 1961; Wing, 1963). The term "autism" has been employed in various contexts and at times it seemingly loses its original definition (Bleuler, 1913) and is differently employed as the description of a stage of personality development, a type of thinking disorder, a group of behavioral symptomatology, and a specific nosological entity. Further, Benda (1952) has noted that the term "idiocy" has the same derivation from the Greek, that "autism" has from the Latin, meaning a person that lives in his own world. As Benda stated "Applying psychiatric standards to behavioral patterns, the idiot is almost by definition as "autistic child". This paper will employ Kanner's original diagnostic criterion for early infantile autism (Kanner, 1944; Rimland, 1964), with appreciation of its possible etiological

spectrum. ("Possibly some of them are brain damaged, possibly some of them are schizophrenic, but in whatever category one wishes to place them, they do present a phenomonological constellation "sue genoris" (Kanner, 1944, pp 422). It would appear that the lack of appreciation of the similar clinical description -- but from possibly diverse etiological factor has led to the present dichotomy of viewpoints which consider Kanner's syndrome as primarily "functional" (Szurek & Berlin, 1956) or "organic" (Bender, 1947) in etiology.

The techniques of examining the children studied in this sample has been uniformly the same. Initial contact by the referral source (which was most often the family physician) led to social service arrangements with the family to bring the child to our clinic for complete diagnostic study. The parents also completed a detailed questionnaire concerning the child's past history which they brought with them at the time of evaluation. The information requested includes a history of the prenatal, paranatal, and neonatal periods as well as subsequent development. Significant information from the family physician's records of the mother's pregnancy and delivery and post partum course were utilized. Developmental milestones were recorded by the parent which included ages at which the child could hold his head up, follow an object with his eyes, (speak single words), sit alone, stand alone, walk alone and speak sentences, etc.

The significant medical and development history of the parents and siblings were also obtained. Thus the parents were asked to subjectively evaluate in writing the child's progress regarding physical, mental, emotional and social development. Further, they were asked to discuss the child's immediate problem and, as they saw it, the reason(s) for seeking help at that time. With this information from the parent plus maximum information from previous medical, social and educational contacts to further clarify and cross validate the questionnaire it is felt that a fairly complete history had been obtained.

The child arrived at the Institute with both parents for one or often two full days of evaluation. In outline form the procedure for clinical evaluation was as follows:

A. Alertness to the non-verbal communications:

1) Child's play and behavior toward objects in the room.

2) Child's behavior and response to the examiner.

3) Child's responses to his parents.

4) Parents: Their attitudes toward events in the child's personal history; attitudes apparent toward the child -- these are commonly at variance to their verbalizations concerning same: also their observed attitudes in response to the child's behavior itself.

B. Thorough physical, neurological, speech and hearing, laboratory, electroencephalogram, radiographs (including wrist for bone age), and special consultations (when necessary).

C. Evaluation of the child's performance and behavior in areas which lend themselves to objective measurement:

1) Developmental level (Gesell, 1951).

2) Standardized tests in a controlled environment (e.g. psychological testing).

With this information at hand it was felt by the psychiatrist and the project team that 32 of the 616 children studied were psychotic.

The description of the behavior noted in these children has been coded on diagnostic checklists, and more recently, videotaped records of standardized diagnostic play situations have been utilized. Thus the problem of interpretation of behavior could be subjected, to both objective and multiple rated techniques. It is felt that these diagnostic precautions are necessary in any effort to obtain diagnostic impressions that can be re-evaluated and compared to the results of other workers in the field.

All of the 32 children deemed psychotic had certain characteristics in common. They all presented with the initial clinical impression of mental retardation. Many were either non-verbal or

had marked speech impairment. Affective contact was severely impaired and their mannerisms and gestures were such as might commonly be referred to as "autistic behavior".

Although these children did have many characteristics in common they also differed from one another in certain aspects. The 32 studied fell into three major diagnostic groups of psychotic children: 1) Early infantile autism (after Kanner (1944) and Rimland (1964); 2) Childhood schizophrenia (after Creak (1963) and Despert and Sherwin (1958); and 3) The Chronic Brain Syndrome with Psychosis (after Ingram (1963) and Kucera and Kolektiv (1961)).

The diagnostic criteria employed in this study are reviewed in Table I.

Insert Table I about here

PROJECT RESULTS

With these basic criteria in mind and serving as a guide to the differential diagnosis of the 32 children studied, the results of the project and a detailed analysis of the information assembled will be presented.

Of the 32 studied 22 were boys and 10 were girls. The median age was 4.4 years for the boys and 5.2 years for the girls (Table II).

Insert Table II about here

As mentioned earlier all of the children were referred to the project because of suspected mental retardation. Table III reviews the chief complaint(s) or the reason(s) the child was brought to the attention of the project and thus the area(s) in which the suspected mental retardation manifested itself. All of the chief complaints could be classified into the following four broad categories: 1) slow development, 2) behavioral problems, 3) speech problems and 4) abnormal physical finding(s). Often there was more than one chief reason for referring a child. The nature and frequency of the presenting problems is reviewed in Table III.

Insert Table III about here

The chief complaints as related to the final diagnosis in each of the diagnostic categories is presented in Table IV.

Insert Table IV about here

Examples of the four broad categories (in the parent's own words) are:

1) Slow Development

   a) "He seems to be so much slower than the other children - we're wondering if he'll be able to attend school."

   b) "He has been slow since he was born. He's 2½ years old and still is unable to walk."

c) "She hasn't been very responsive since she was born." (Physically and/or affectively).

2) Behavior

a) "He often goes off into a world of his own and then sits and stares."

b) "He is terribly hyperactive and expresses his anger by screaming, biting and pinching."

c) "He is prone to temper tantrums and seems to have an intense fear of being alone."

d) "He whines and cries and seems withdrawn."

3) Speech

a) "He can understand what we say but he is unable to speak" - (e.g. at age five years).

b) "She is four years old and still unable to talk."

c) "He is normal except for speech. We first noticed something was wrong when he was two, because he suddenly quit talking."

d) "He didn't say his first word until he was three years old."

4) Physical

a) "He has had convulsions since he was a baby."

b) "She has never grown very big."

c) "His head has always looked odd-shaped or something."

In Table V are listed the factors from the clinical histories of these children which were deemed to be etiologically significant in the evaluation of their presenting clinical problems.

Insert Table V about here

Examples of pertinent history are as follows:

(1) Heavy and prolonged vaginal bleeding during the first trimester.

(2) Marked cyanosis (child) following caesarean section for transverse lie.

(3) Increasing jaundice for first 2-8 days after birth.

(4) Frequent seizures with associated febrile factors.

(5) Severe infectious disease(s) of childhood (viral) with possible encephalitis.

Possibly significant past physical and developmental events, as related to final diagnosis are presented in Table VI.

Insert Table VI about here

The findings in Table VI (A) and (B) reveal that pertinent past medical history factors were noted in 24 of these children. The "mixed" medical history findings suggests the possibility of interacting indices of potentially damaging influences on the

child. The relation of type of developmental pattern to the psychotic disorder noted in a given child - reveals rather sharp demarcations between these three types of disorders.

Table VII reviews the major physical findings in this group of psychotic children and their relationship to the final diagnostic considerations. Similarly, the neurological and electroencephalographic findings are reviewed in Tables VIII and IX.

Insert Tables VII, VIII & IX about here

Examples of significant physical findings were abnormal head sizes and shapes, cafe-au-lait lesions, and congenital anomalies and stigmata - such as that noted in one of these children with Down's Syndrome. Significant neurological findings were ataxic or immature gait, positive Babinski responses, marked decrease or marked increase in the deep tendon reflexes and very poor generalized coordination.

The type and number of abnormal electroencephalograms noted were: alternating bi-precentral spike foci (one), slightly abnormal interhemispheric asynchromy (one), abnormal diffuse slow (two), abnormal right anterior temporal focal spikes (one), abnormal focal spike alternating bi-temporal (one), abnormal focal spike and wave - multiple foci (one), petit mal variant type (one). Interestingly all eight of these abnormal electroencephalograms were noted in those children who displayed a

Chronic Brain Syndrome with Psychosis.

Routine radiographic evaluations of the skull, chest and wrists (for bone age) were all essentially within normal limits except for one child in our sample (with Down's Syndrome) who had a delayed bone age (bone age: $2\frac{1}{2}$ years; chronological age = $4\frac{1}{2}$ years).

All but four of the 32 children were severely retarded in speech. There were three mildly retarded and one moderately retarded in speech. Of the four, one child with mildly retarded speech was diagnosed as Childhood Schizophrenia, the other three were diagnosed as Chronic Brain Syndromes with Psychosis.

Table X reviews the degree of mental retardation as related to the final diagnosis.

Insert Table X about here

The criteria for degree of mental retardation are consistent with those of the American Association on Mental Deficiency (Heber, 1959).

The psychiatric examinations revealed distinct behaviorial characteristics - these can be grouped as follows - 29 displayed autistic or withdrawn behavior; 16 were primarily diffusely hyperactive; 13 were negativistic and had frequent anxiety episodes; and 14 showed marked impulsivity and shortened attention spans. Table XI relates these general psychiatric findings to the

final diagnosis.

Insert Table XI about here

The psychiatric descriptive findings in Table XI suggest much overlap between the behaviorial characteristics in each of these diagnostic groupings. Thus a child can be both hyperactive and withdrawn - either alternately or co-existent in a given period of time. The findings in Table XI suggest that the clinical descriptive features of these children do not sharply demarcate them as to diagnostic groupings. This will be elaborated upon in the discussion section of this paper.

Family assessment, which was the result of the combined evaluation of the psychiatrist and social workers produced the following family diagnoses: two families were considered to be within normal limits, six families with reactive psychopathology, 23 families with structured psychopathology, and one family was indeterminant as to the assessment of family health and interactive role with the child.

Table XII relates the family structure to the final diagnosis.

Insert Table XII about here

Examples of the reactive type of family psychopathology observed are:

1) Good family relations in most spheres but an extreme

feeling of guilt by the mother. Father perplexed by child's atypical developmental pattern - feels he will, "Grow out of it - I hope --".

2) The mother is over-protective and finds it hard to adjust to the child's behavior. Parents conflicted about acceptance of the diagnosis of mental retardation and/or the diagnosis of psychosis.

3) Normal family relationship before the third (psychotic) child was born, but with subsequent progressive feelings of hostility and anxiety secondary to social-vocational upheavals - with projection of problems onto child: "We want J. out of the house".

Examples of the structured type of family pathology are as follows:

1) Prominent marital problems before birth of child - and child subsequently employed as overdetermined "scapegoat" for parental feelings.

2) Over-investment or under-investment in the child because of unconscious needs of one or both parents: "He should have been more active - I tried to push him - why didn't he cooperate?"

3) Indices of parental psychopathology - in areas outside

of their interaction with the child (e.g. chronic social and vocational maladjustment) - which becomes intensified by the child's presence and needs, eventuating in toxic interpersonal interactions for the child.

4) Psychotic disturbance in one (or both) parent(s) with associated changes in the family emotional support systems that bewilder the child (e.g. schizophrenic father and passive-insecure mother).

DISCUSSION

With the exception of Webster's (1963) report, there have been very few detailed studies of psychiatric problems of young mentally retarded children. Various types of psychotic behavior have been noted in young mentally retarded children. In fact, Sarason & Gladwin (1958) states, "Practically every major psychotic symptom which has been described in the non-defective patient has also been noted in many of the defective cases". The incidence of such cases and the problems of differential diagnosis of the types of psychoses seen, has only infrequently been reported. Garfield (1960) states that there is a great need for the accumulation of reliable information in this area.

Before commenting upon the data accumulated and offering conclusions or suggestions regarding the findings presented it seems fitting to recall the unique method employed in gathering the information. All of these children were thoroughly examined by a

team of specialists consisting of a pediatrician, a neurologist, a psychologist, a social worker, a speech therapist, and a psychiatrist. Significant laboratory tests and electroencephalograms were taken on all the children. The past histories were available in much detail and the parents were also evaluated. It is felt that the information obtained was more valid and complete - as contrasted to the entire task having been attempted by fewer clinicians. This study is more detailed than previous studies that are not based upon the clinical team evaluation concept. The complexity of the problems represented in these children and the various disciplines employed for total evaluation demands high diagnostic acumen and broad backgrounds in many fields - as contrasted to the clinician who might attempt to delineate the types of psychoses seen in our sample.

This paper reviews information on 32 psychotic children from a field of 616 presented with the suspicioned diagnosis of mental retardation. Therefore, the incidence observed in this group was 5.2%. It is interesting to note that this is considerably higher than in the general population. This would tend to support the view that the defective is much more prone to mental disturbances than is the nondefective (Pollack, 1945; Tredgold, 1952). All but four of the 32 studied were mentally retarded although eight others were scattered in their intellectual achievements.

Regarding Table II it should be pointed out that the median age when first seen was 4.4 years for the boys and 5.2 years for the girls. Over and over again it was observed that the parents first considered medical help for their child only when they were confronted with the fact that they were not qualified to enter school. It is felt that this may be a major reason that nearly two-thirds of the children first were seen between the ages of 4-5.9 years. This is true despite the fact that 23 had abnormal developmental milestones since birth and seven of the remaining nine had regressed from normal developmental milestones by the age of three years.

The data in Tables III and IV - concerning the nature, frequency, and relationship(s) of the initial chief complaints to the final clinical diagnosis - suggests some possibly pertinent considerations. First, under the broad categories given, there is no definite pattern seen regarding the type of psychoses represented. Thus, it becomes necessary for the examiner to clarify the parent's presenting complaint(s). For example, has development been slow from birth suggesting a chronic brain syndrome, or has it regressed suggesting childhood schizophrenia? Has the slow development been uniform in all areas or is it atypical - but not abnormally slow? Are there areas of normal functioning which would suggest a childhood schizophrenia? Thus these two Tables serve to alert the physician to the need of

developing the presenting complaint(s) in some detail if it is to be of value in arriving at the proper diagnosis. Perhaps the most significant application of Table III and VI is in comparing the chief complaints to the clinical findings. For example, only three times did the chief complaint involve a physical abnormality, yet 12 had significant physical findings and 15 had significant neurological findings (eight had both). Behavioral complaints were primary in 23 yet all 32 displayed psychotic behavior. Poor speech was a chief complaint in only eight yet all 32 had some degree of speech retardation. Thirty of the 32 had subnormal developmental milestones (see Table VI) but it was a chief complaint in only 18. Thus there were 50 chief complaints and 106 clinical pathological findings in these same four broad categories (30 slow development, 32 behavioral, 32 speech, and 12 physical findings were observed). Therefore, it behooves the clinician to evaluate each child thoroughly with full cognizance, of the symptomatic nature of mental retardation, brain syndromes and functional psychoses in the young child.

Tables V and VI reviews the history pertinent to the diagnosis. Examples of Table V were given under the section of the paper entitled Project Results. It is interesting to note that five of the 23 diagnosed as "Chronic Brain Syndrome with Psychosis" had no pertinent past physical history and all but three of the nine in the other categories did have pertinent past physical histories. In view of these findings it is necessary

that the clinician not assume that such events as anoxia at birth, heavy first trimester bleeding or three or four convulsions at age three is sufficient evidence to label a child as having a Chronic Brain Syndrome. Conversely, does the absence of such findings in the history rule out the diagnosis? Again the need for thorough developmental history and clinical evaluations is underscored.

The children classified as Childhood Schizophrenia and the one classified as Propf-schizophrenia* had regressed from previous developmental attainments. However, two of those classified as having Chronic Brain Syndromes with Psychotic Reactions - also regressed. Therefore, developmental regression does not necessarily indicate schizophrenia but in our sample it was most commonly associated with that disorder.

The physical and neurological findings, and their relationship to final diagnosis (Tables VII and VIII) suggest that positive physical and neurological findings are frequently noted (but not pathogononic) of Chronic Brain Syndromes. All of the 23 children with a diagnosis of a Chronic Brain Syndrome with Psychosis had one or more pertinent clinical finding(s) on the physical, neurological or electroencephalogram examinations.

Thus, these behavioral pictures must be viewed against the backdrop of the associated clinical findings. Varying degrees

*Schizophrenic reaction engrafted upon a primary state of mental retardation (Lanzkron, 1957).

of speech and language retardation was noted in all of the children studied. Electroencephalograms -- obtained on every child -- were classified as abnormal in eight of these children (25%). Routine and special laboratory evaluations on each child were within normal limits.

Consideration of the degree of mental retardation to the final diagnosis (Table X) reveals that the childhood schizophrenics noted were unique in the fact that none of them were moderately or severely retarded. Two were not retarded, one was mildly retarded, and the remaining three displayed a scattered array of intellectual abilities. The clinician should thus alert himself to the possibility of detecting areas of normal functioning in a child who may appear moderately or severely retarded on gross clinical observation. A similar pattern may be found in the chronic brain syndromes with psychosis and again the need for a more detailed evaluation is underscored. Such a differentiation has major therapeutic and prognostic significance. A more serious clinical quandry is for the physician to make a diagnosis of "mental deficiency" without being aware of a primary or secondary emotional component. Thus he may relegate many salvageable children to a custodial setting, all but hopelessly beyond reach of current therapeutic resources which may have reversed the psychosis which so closely resembles "primary retardation" (Reiser, 1963). For example, it has been the experience of the James Jackson Putman

Children's Center (Putman, 1951) that one of the significant factors associated with a good prognosis in infantile psychosis has been early recognition and hence early treatment. Therefore, let mental retardation first motivate the physician to analyze the child in detail in an effort to ascertain the etiology and the presence or absence of a psychotic component. Secondly, he may be able to employ the type and degree of retardation delineated to help differentially diagnose the type of psychosis being observed.

As noted in Table VI, the final psychiatric diagnostic impressions in this group of 32 psychotic children were; Early Infantile Autism - two; Childhood Schizophrenia - six; Prop[illegible]-schizophrenia - one; and Chronic Brain Syndrome with psychotic reaction - twenty-three. The designation "chronic brain syndrome with psychosis" describes a clinical picture resulting from a variety of etiological factors with concomitant severe behavioral changes. For example, a diffuse encephalopathy of undetermined cause with only the structural manifestations present has most frequently displayed findings of the underlying disease process (as noted clinically by physical and neurological signs) with associated behavioral symptomatology. The severe behavioral pictures -- termed psychoses in these children with signs of a chronic brain syndrome -- have been noted to be of three types; 1) as a direct sequalae of the central nervous system dysfunction itself, 2) as the product of the cerebral dysfunction and the

child's interaction with his environment, and 3) combinations of the above with associated special sensory handicaps such as a central language disorder. The children noted with central language disorders (five) present a diagnostic challenge since muteness can be mistaken for autism, and non-verbal coping devices may be viewed as products of regression rather than the child's secondary anxiety about the efficacy of his non-verbal attempt to communicate. Thus the emotional problems noted in these particular children were secondary to the underlying chronic brain syndrome, and/or reactive to the child's interpersonal environment.

The associated emotional climate of the child's family life is obviously important as to both etiological and clinical diagnostic parameters. It is interesting to observe that 72% (23) of the families had structured psychopathology and 19% (6) displayed reactive psychopathology. As one seeks cause and effect relationship for the acquisition and progression of the psychosis in these children the fact that 91% of the families (one or both parents) displayed reactive structured psychopathology strikes an alarm signal to the alert physician. Although a disucssion of the therapy of these children is not the purpose of this paper, it is fitting to mention at this point that other workers in the field of therapy (Putman, 1951) point out that the treatment of the underlying personal distress of the parents is a key factor in the treatment of the psychoses of

infancy.

SUMMARY

One of the great problems of our time is the loss of productive individuals because of Mental Retardation. Much study and progress has been made in recent years in the diagnosis and treatment of the various etiologies of this disorder. Primary and secondary psychoses in young children suspected of being mentally retarded is an area which has been relatively neglected. Yet, this is an opportune area in the broad field of mental retardation in which its sufferers may expect progression toward normal function if recognized and treated promptly. Therefore, it has been the purpose of this paper to review the method of evaluating the 616 children under eight years of age who had presented as suspected mental retardates and analyze in some detail the 32 (5.2%) on this larger group who were considered to be psychotic. Specific clinical differential diagnostic aspects of the three types of childhood psychoses observed were discussed. The need for diagnostic acumen on the part of the physician has been emphasized. One would hope the proper evaluation and diagnosis would lead to better treatment and thus in turn to lives more satisfying and more productive than might otherwise have been possible.

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TABLE I: DIAGNOSTIC CRITERION FOR PSYCHOTIC DISORDERS

	Early Infantile Autism	Schizophrenia in Childhood	Chronic Brain Syndrome with Psychosis
Affective contact	(-) from early life	(+) until onset of illness then becomes negative	(+)
Developmental History	Normal or atypical	Normal	Abnormal
Play patterns	Since early life, insistence on sameness with much isolated play and highly structured rituals.	Normal until onset of disorder; then become bizarre and ritualistic.	Primitive and unstructured; during acute psychotic phase - become highly disorganized.
Speech	Mostly non-verbal communication; may remain mute, words not employed basically for communication.	Normal until onset of illness then regression of accomplishments in this area.	Slow but commensurate with endowment or central nervous system residuals.
Incidence of heredodegenerative, prenatal, paranatal or postnatal etiological factors.	Undetermined at this time; commonly thought to be (-).	(-)	(+)
Onset	From birth or before first year of life; (±) known reactive factors.	Rarely before 1½ years of age; most commonly with reactive factors prominent.	Usually after the first year of life in response to both endogenous and exogenous (reactive) factors.
Physical, Neurological, Laboratory Findings	(-); maybe (±)	(-)	(+); uncommonly (-)
Psychological Test Findings	Inconclusive with respect to innate endowment (problems are the mute child, difficulty in entering their isolation, etc.).	Atypical pattern with no uniform retardation in all areas. (Much scattering.)	Atypical patterns noted with rather uniform retardation in most areas.

TABLE II: GENERAL

NUMBER	SEX		AGE WHEN INITIALLY EVALUATED			
	Boys	Girls	0-1.9	2-3.9	4-5.9	6-7.9
32	22	10	2	4	21	5

TABLE III: CHIEF COMPLAINTS - NATURE AND FREQUENCY

A) TYPE

TOTAL	1(A)	2(B)	3(C)	4(D)	1,2	1,2,3	2,3	2,4
32	7	7	2	2	7	4	2	1

B) FREQUENCY

TOTAL	1	2	3	4
50*	18	21	8	3

Legend: (A) Slow development
(B) Behaviorial
(C) Speech
(D) Physical

*The number of chief complaints was multiple in these children - thus it is greater than the number of 32.

TABLE IV: THE CHIEF COMPLAINTS RELATED TO THE FINAL DIAGNOSIS

	NUMBER	SLOW DEVELOPMENT	BEHAVIORAL	SPEECH	PHYSICAL
EARLY INFANTILE AUTISM	2	2	2	2	0
CHILDHOOD SCHIZOPHRENIA	6	0	4	5	0
CHRONIC BRAIN SYNDROME WITH PSYCHOSES	23	16	16	3	3
PROPF-SCHIZOPHRENIA	1	0	1	1	0
TOTALS	32	18	23	11	3

TABLE V: HISTORY PERTINENT TO DIAGNOSIS

A) Physical

NUMBER	PRENATAL	PARANATAL	NEONATAL	POSTNATAL	MIXED*
24	4	7	0	9	4

(N=32)

B) Developmental Milestones

NUMBER	BORDERLINE	SUBNORMAL	REGRESSED
32	2	21	9

(N=32)

*These children presented with clinical histories of multiple etiologies (e.g., a combination of prenatal and paranatal factors were noted in two of the four children in this group - such as demonstrable in Rh incompatibility and cord wrapped around the neck at birth).

A) PAST MEDICAL HISTORY RELEVANT TO PRESENT DIAGNOSIS

	NUMBER	PRENATAL	NEONATAL	PARANATAL	POSTNATAL	MIXED*
EARLY INFANTILE AUTISM	2	0	0	0	1	1
CHILDHOOD SCHIZOPHRENIA	6	0	0	2	0	1
CHRONIC BRAIN SYNDROME WITH PSYCHOSIS	23	3	0	5	6	3
PROPF-SCHIZOPHRENIA	1	0	0	0	1	0
TOTAL	32	4	0	7	8	5

B) DEVELOPMENTAL MILESTONES RELATED TO THE DIAGNOSES

	NUMBER	BORDERLINE	SUBNORMAL	REGRESSED
EARLY INFANTILE AUTISM	2	0	2	0
CHILDHOOD SCHIZOPHRENIA	6	0	0	6
CHRONIC BRAIN SYNDROME WITH PSYCHOSIS	23	2	19	2
PROPF-SCHIZOPHRENIA	1	0	0	1
TOTAL	32	2	21	9

*Many of these children had had <u>combined</u> findings from different periods of development (e.g., both prenatal and postnatal factors).

TABLE VII: PHYSICAL FINDINGS RELATED TO THE DIAGNOSIS

	NUMBER	PHYSICAL FINDINGS
EARLY INFANTILE AUTISM	2	1
CHILDHOOD SCHIZOPHRENIA	6	0
CHRONIC BRAIN SYNDROME WITH PSYCHOSES	23	11
PROPF-SCHIZOPHRENIA	1	0
TOTAL	32	12

TABLE VIII: NEUROLOGICAL FINDINGS RELATED TO THE DIAGNOSIS

	NUMBER	NEUROLOGICAL FINDINGS
EARLY INFANTILE AUTISM	2	1
CHILDHOOD SCHIZOPHRENIA	6	1
CHRONIC BRAIN SYNDROME WITH PSYCHOSIS	23	13
PROPF-SCHIZOPHRENIA	1	0
TOTAL	32	15

TABLE IX: ABNORMAL ELECTROENCEPHALOGRAM FINDINGS RELATED TO THE DIAGNOSIS

	NUMBER	ELECTROENCEPHALOGRAPHIC FINDINGS
EARLY INFANTILE AUTISM	2	0
CHILDHOOD SCHIZOPHRENIA	6	0
CHRONIC BRAIN SYNDROME WITH PSYCHOSES	23	8
PROPF-SCHIZOPHRENIA	1	0
TOTAL	32	8

TABLE X: THE DEGREE OF MENTAL RETARDATION RELATED TO FINAL DIAGNOSIS

	NUMBER	NOT MENTALLY RETARDED	MILD	MODERATE	SEVERE	SCATTERED
EARLY INFANTILE AUTISM	2	0	1	0	1	0
CHILDHOOD SCHIZOPHRENIA	6	2	1	0	0	3
CHRONIC BRAIN SYNDROME WITH PSYCHOSES	23	2	1	7	8	5
PROPF-SCHIZOPHRENIA	1	0	0	1	0	0
TOTAL	32	4	3	8	9	8

TABLE XI: PSYCHIATRIC FINDINGS AS RELATED TO THE DIAGNOSIS

	NUMBER	WITHDRAWN	HYPERACTIVE	NEGATIVISTIC	SHORT ATTENTION SPAN
EARLY INFANTILE AUTISM	2	2	1	0	0
CHILDHOOD SCHIZOPHRENIA	6	6	2	3	4
CHRONIC BRAIN SYNDROME WITH PSYCHOSIS	23	20	13	9	10
PROPF-SCHIZOPHRENIA	1	0	0	1	0
TOTAL	32	29	16	13	14

TABLE XII: THE FAMILY PSYCHIATRIC STATUS RELATED TO FINAL DIAGNOSIS

	NUMBER	NORMAL	REACTIVE	STRUCTURED	INDETERMINANT
EARLY INFANTILE AUTISM	2	1	0	1	0
CHILDHOOD SCHIZOPHRENIA	6	0	1	5	0
CHRONIC BRAIN SYNDROME WITH PSYCHOSES	23	1	4	17	1
PROPF-SCHIZOPHRENIA	1	0	1	0	0
TOTAL	32	2	6	23	1

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