transference neurosis will develop, and the therapist will find himself unable to analyze it. The treatment will reach an inevitable impasse.

In contrast to short-term, long-term supportive psychotherapy[4] should be offered to seriously disturbed individuals. In such therapy the doctor tries to reinforce the patient's weak character structure and support him over a long period of time. Although not mutually exclusive,[5] these two forms of psychotherapy should be differentiated when one is evaluating patients for psychiatric treatment.

Short-term dynamic psychotherapy based on systematic evaluation, observation, theoretical considerations and prediction of future course, with adequate follow-up, seems to be an approach helpful to the patient's needs, and suitable for a psychiatric clinic population.

REFERENCES

1. Sifneos, P. E.: A concept of "emotional crisis." Ment. Hygiene. 44:169, 1960.
2. ——: Phobic patient with dyspnea. Am. Pract. Digest Treat. 9: 947-952, 1958.
3. Glover, E.: The Technique of Psychoanalysis. New York: International Universities Press, Inc. 1955, p. 137.
4. Sifneos, P. E.: Long term psychotherapy in a patient with epigastric pain. Am. J. Med. 40:275-281, 1956.
5. Novey, S.: The techniques of supportive therapy in psychiatry and psychoanalysis. Psychiatry, 22:179-187, 1959.

vol. 1 (1961)
Jules H. Masserman (ed.)
NY: Grune & Stratton.
current APA President-Elect

Intensive Therapy of the Psychoses in a University Hospital

by O. H. Arnold and H. Hoff

A: Rationale

We believe that there exists a schizophrenic disease process which has a somatic basis and is genetically determined. We presuppose the presence of what we term "enzyme bottle-necks" in certain areas of the brain. The disturbances in question come to the fore only when the brain undergoes either psychological or somatic stress. In principle we see no difference between a psychologically and a somatically triggered schizophrenia. The "personal reaction" may consist in a rejection of the world, or, in the case of extraversion, a contrary tendency. Together with these constitutional reaction patterns we find individual differences stemming from individual personality development, and the state of being in which the disease became manifest. The personality of the patient will be clearly discerned not only in his total reaction to the lesion in the brain, but in individual symptoms. These must therefore be understood against a background of ever-changing patterns of the reaction of his social surroundings and his reaction to them. Relatives will respond to the patient's disease, and the patient in turn will be influenced by their attitudes.

In formulating an effective treatment plan we must first take into our purview the somatic component of the disease. Here altered cell metabolism may produce toxic substances, or physiological functions of the brain may be otherwise disturbed. We must try to counteract such toxic effects with our therapy and similarly attempt to restore normal function. But we must also help the patient to find his way back to normality, and toward that end we shall have him take his first steps in the hospital, with the aid of physicians and nurses.

It is our basic requirement, therefore, that living conditions in the

From the University Neuropsychiatric Clinic, Vienna, Austria.

TABLE 1.—*Simplified Scheme of the Symptom Constellations in Schizophrenia*

Mixed Psychosis	Fully Remitting Form of Schizophrenia	Schizophrenia Progressing in Attacks	Process Psychosis
		INITIAL STAGE	
Skipping of thought with corresponding changes of emotion	Skipping of thought and hypervigilance	Disturbance of fixation of attacks	Imperceptible beginning
No other disturbances of thinking	Compulsive lack of inhibition	Transitory habit of thinking; feeling of losing control; thoughts being snatched away or "being outside"	Disturbance of the total emotional sphere
Diminishing hallucinations	Stupors	Feeling of an external will imposed on himself (false feeling of being hypnotized)	Feeling of a hidden meaning behind facts; secret relationship of external facts to the patient. Experiences of persecution.
Religious experiences	Diminishing acoustic hallucinations	Religious and philosophic ideas	Decrease of psychomotoric energy (vitality)
Symptoms of manic-depressive disease	Sleep disturbance in every case	Feeling of a hidden meaning behind facts	Prognosis improves with age onset of disease before 25 years
		LATER STAGE	
Tendency for visualization (pseudohallucinations)	"Parakineses"	Severe disturbance of thinking	*Faseln* (scattering)
Stupors	Feeling of blocking of thoughts	Acoustic hallucinations (imperative and threatening voices)	Affective distortions
"Parakineses"	No *Faseln* (not scatterbrained)	Formation of delusion without systematization	Systematized delusions and later disintegration of the systems
Compulsive lack of inhibition	No formation of delusional ideas	Lessening of sleeplessness	Compulsive lack of inhibition (*Raptus*)
Return of insight into the disease	Affective deviations rare	Rare skipping of thoughts	Lack of insight into the disease
		THERAPY	
Electroconvulsive shock	ECT plus neuroleptics	Insulin coma	Majeptil treatment

hospital be such that the patient will have a feeling of security and of acceptance as a human being. Each contact with the patient is of prime importance, because the abnormal reaction tendency with all its corollaries is involved in a constant struggle with the striving for normality. At the same time we must endeavor to strengthen the already damaged personality. The patient must learn again to accept reality.

The basis of each form of therapy in psychiatry is an exact clinical diagnosis. Psychological tests, social anamnesis, somatic tests, electroencephalography and so on are only adjuncts. Following admission of the patient, the sequence of events in our hospital is as follows:

1. The period of observation: The psychiatrist interviews the patient and constructs a case record. The patient undergoes psychological testing. Relatives of the patient, meanwhile, are also interviewed by the psychiatrist. The social work department obtains a social anamnesis. The head of the psychotherapy department holds an initial interview with the patient with a view to planning future psychotherapy. Reports of nurses' observations are assembled. During this period, treatment is purely symptomatic. Anxiety, tension and restlessness are treated with neuroleptics. As a rule we employ Truxal (chlorprataxin—Lundbeck, Copenhagen) in doses of 150 to 400 mg. per 24 hours, orally or intramuscularly. When insomnia is present, sleeping drugs such as Doriden and Plexonal (combinations of barbiturates) are administered.

2. Data obtained during this period of observation are discussed in team conferences of the psychiatrist, the psychologist, the social worker, the occupational therapist, the physiotherapist, and the head nurse.

3. The team formulates a comprehensive treatment plan for the patient. This consists in basic biological therapy accompanied by occupational therapy, sport, gymnastics, musical therapy and initial psychotherapy. The period of rehabilitation follows, with emphasis on psychotherapy and added occupational therapy and sport. The day's program during the period of basic biological treatment is planned in detail, and the patient is given a program of events.

B. Basic Biological Treatment (Tables 1 and 2)

1. Technique of Electroshock

Contraindications must be noted (at present the two accepted contraindications are acute myocardial infarction, and the possibility of acute cerebral bleeding). The patient is brought into the treatment room, and 0.1 mg. atropine and 0.8-1 Gm. Kemithal (thiobarbital sodium) are administered intravenously, using the same syringe. Immediately there-

Table 2.—*Scheme of Therapy: Mixed Psychosis, Fully Remitting Form of Schizophrenia*

Week	Treatment
	A. General
Admission	Initial symptomatic tranquilizing therapy with neuroleptics, e.g., 100 mg. Truxal every 6 to 8 hours
First	3 to 5 ECT
Second	3 ECT
Third	Eventually 2 ECT
Fourth	Control under occupational therapy
	Neuroleptics in decreasing dose (if necessary)
	Barbiturates for insomnia
Full remission	Discharge without following therapy
	B. In Cases with a Tendency to Relapse
	Insulin shock treatment or Majeptil
	C. Acute Catatonia
First	
1st day	2 ECT blocks (3 ECT during 45 minutes with intervals of 15 minutes)
2nd day	2 ECT
3rd day	2 ECT
4th day	1 ECT
5th day	1 ECT
6th day	No treatment
7th day	1 ECT
Second	3 ECT
Third	Eventually 2 ECT
Fourth	No treatment
	Additional cardiac treatment, antibiotics, dehydrating therapy; hypnotics or paraldehyde but no neuroleptics

after Lysthenon (bis-cholinester of succinic acid) is given in a dose of 1 mg. per kilo of body weight. Artificial respiration is then applied by means of a Dreger apparatus, using pure oxygen, for approximately three minutes, followed by electroshock applied with the hand apparatus without fixation of time. Artificial respiration is re-applied for another five

minutes. The patient wakes up in the treatment room under control of the physician and nurse.

2. *Technique of Insulin Shock Treatment*

Thirty units of insulin are administered to the fasting patient at 6 a.m. The patient is then put into a net bed with side nets. He is under the charge of a nurse, and does not see other patients. Hexamethonium, 40 to 80 mg., is given to suppress a counteraction against insulin. The insulin dose is increased daily by 20 to 30 units until coma is reached, which occurs in from 5 to 8 days. The average dose inducing coma is about 100 units of insulin. The duration of coma during the first 10 treatments increases up to 30 minutes, and thereafter to one hour. Insulin treatment is given daily except Sunday. Necessary interruption of treatment for unavoidable reasons such as intercurrent infection calls for a repetition of the entire procedure. Between 50 and 150 comas are given. The coma is terminated by administration of glucose by nasal tube.

Contraindications: At present, these include bilateral pneumothorax, exudative tuberculosis in excerbation, age over 45, or an immediate post-operative period.

Alarm System: If after ten minutes of glucose feeding the patient fails to awaken, an anesthetist assumes charge in a special treatment room. The patient is given 500 cc. of levulose intravenously, followed by 10 Gm. succinic acid in a 5 per cent solution intravenously if he still does not wake up. If coma continues following these measures, intermittent nitrous oxide narcosis should be tried. Other emergency procedures include intubation, tracheotomy, artificial respiration, cardiac treatment and various antibiotics. Continuous control by the anesthetist must be maintained.

If after 20 insulin comas the patient does not attain a process-free symptomatic state, a series of metrazol shocks is instituted at the end of each coma hour twice a week (Wednesdays and Thursdays), to a total of 12 to 20 metrazol shocks. The insulin treatment is given until a process-free symptomatic state is attained, and then a further 20 "security" comas are induced.

3. *Technique of Majeptil Treatment*

Majeptil (Dimethylsulfonamid 3 (N- mechylpiperazinylpropyl) 10-phenothiazine. Specia. Paris.) administration is begun in a dose of 5 mg., with an increase in dose every second or third day until a state of pseudoparkinsonism is reached, or until phases of tetanic or torsion spasms occur. Acute, severe attacks of spasm may be interrupted by 10

mg. Pervitin (Amphetamine) intravenously. The patient may remain in the spasm phase for 5 to 10 days, when the dose may be decreased as indicated. Treatment is repeated after an interval of 2 to 4 weeks. Up to 6 repetitions are usually made.

4. *Treatment with Neuroleptics*

At present we use Perphenazine, Laevopromacine, Thiophenylpyridylamin and Thioriadazine. The dosage level is kept low enough to minimize side effects while at the same time maintaining the patient in a tranquil state. If this is not possible, however, neuroleptic treatment is discontinued, or combined with electroshock and Majeptil.

Invariably the treatment methods we have outlined constitute major insults to the total personality of the patient; electroshock, insulin shock and Majeptil, furthermore, produce considerable, if temporary, brain damage; patients undergoing these treatments must therefore do so under the strictest supervision. Every moment of their days, literally, must be regulated and supervised. Rules must be followed as to the time of rising, of going to and coming from the treatment rooms, of participating in general activities and receiving visitors, and of retiring at night.

The psychiatric head of the department must assume the role of disciplinarian. He confers with the relatives and administration outside the hospital; he establishes all rules. In the second phase of biological treatment a new psychotherapist appears almost as if by coincidence in the life of the patient; he plays the part of a benign and friendly counsellor who is always accessible to the patient for discussions of the latter's problems, however "trivial." This bipolar position of the two doctors, with their symbolic representation of illness and health, plays a highly important part, even early in treatment, in the patient's subsequent transference to his second psychotherapist. Also of great importance in this stage of massive personality disintegration is the temporary substitution—for normal inherent personality regulation—of rules imposed upon the patient from the outside, which are easy to grasp, to understand, and to follow.

C. Psychotherapy

In the transitional phase basic biological treatment is terminated and principal emphasis is given to group psychotherapy. Its primary purpose is to assist the patient in finding his way from his psychotic period to social adjustment. Often during this time the diminishing organic psychosyndrome as well as the tendency toward introversion inhibits the transference formation in individual psychotherapy. The specific peculi-

arities of the group, such as identificatory listening-in, anonymous thinking, and guidability in the socio-dynamic structure and rank relieve the patient from anxiety.

A significant addition during this time is occupational therapy. Through this medium the patient gains more confidence in himself, finds satisfaction and fulfillment in his personal creations and takes pride in his new accomplishments. Apart from these obvious psychological benefits, psycho-physical energies are drained away from his psychosis and utilized in positive and constructive performance.

The frequency of disturbances of motor behavior and motor expression in our patients led us to the incorporation of gymnastic and dancing groups in our master therapy plan. We found that disturbances in the formation of excitation and will with the tendency to sudden discharge are best treated by sport therapy as a supplement to our basic biological treatment.

D. Rehabilitation

The rehabilitation period must be started while the patient is still residing in the hospital. The application of psychotherapeutics now moves into a critical phase wherein it must be carefully individualized. The patient's personal problems must be brought to light, discussed and if possible solved, with psychoanalytic aid if necessary. Schindler and Gastager have worked out the possibility of utilizing the spontaneous defense reactions of the disturbed personality as aids in therapy. Thus, the tendency to retreat into somatic symptoms, or to encyst the fixation of a delusion, are employed in the therapeutic technique. By apparently increasing such tendencies in the patient these measures actually assist in restoring the integrity of the patient's social relationships.

The social milieu of the patient is of great importance as the foundation upon which his psychodynamics and his social background rest. It is the objective of the bifocal group therapy of Schindler to inculcate the problems of social milieu into the therapy plan and thus to treat the patient, so to speak, from two focal points. Thus the relatives of the patients are encouraged to form groups which work with the same psychotherapist. Through the medium of these discussions the relatives learn to understand the problems of the patient and are better able as a result to revise their attitudes toward him just as he, through treatment, learns to readjust his own toward them and toward his environment as a whole.

Even in advanced process schizophrenia, where for obvious reasons a therapeutic approach to the patient's individual problems is not possible, we place great emphasis on the social adaptation of the patient

and his readjustment to the community. Here we find that a goal of total recovery is an ideal that is seldom achieved; however, complete recovery is not, from a standpoint of practicality, truly necessary. A more realistic goal is one which we term "social remission," which means that despite the presence of some residuals of his psychotic process the patient can be readapted to his community and earn a livelihood for himself and his family, even though this may involve descending to a lower social level. Such a result, we feel, is well worth our effort, particularly in severe cases.

With the re-individualization of the patient during the rehabilitation phase, the strict rules governing the patient's daily program are gradually eased and a great deal more latitude is permitted him, particularly in gymnastic, dance, and sport therapy. A critical moment arrives, of course, on the day of discharge. We attempt to prepare for this and to minimize the psychic trauma inherent in the situation by having the patient, a short time before his discharge, go to work outside the hospital daily but return to the hospital at night to sleep. The patient thus is not abruptly deprived of his "refuge" or of the sense of security which to him is symbolized by his hospital. A transitional period, we feel, represents "safety insurance." Nor do we terminate the neuroleptics upon discharge; administration of these drugs is usually continued systematically for as long as two years.

Evaluation of our master treatment plan and its results in individual patients is the subject of discussion at weekly team conferences. Necessary revisions in the program are likewise put into effect at these meetings.

E. Results

Table 3 lists the results of a five-year controlled series of 118 cases of schizophrenic patients undergoing combined treatment. The incidence of recovery during these five years is two to one as compared with spontaneous remissions in untreated cases. At present we seldom have failures in achieving social remissions in patients selected for our comprehensive treatment plan.

Summary

We believe that schizophrenia is a specific disease process. It is genetically performed, is specifically triggered, involves a total reaction of the personality, and is characterized by a definite pattern of progression. We term this genesis "multifactorial" because hereditary factors, constitutional type, psychodynamic personality development, triggering situations and other reactive interrelations between disease process and patient, and between patient and milieu as qualified by social factors and background,

TABLE 3.

	Courses of 467 Untreated Cases		*Results of Comprehensive Treatment in 118 Cases*[1] *1958-1959*		*Results of Insulin Treatment in 173 Cases*[2] *1952-1953*	
	Number	Per cent	Number	Per cent	Number	Per cent
Control Time in Years	*9*		*1*		*5*	
Full remission	67	14.3	46	38.9	81	46.8[3]
Social remission	123	26.3	55	46.6	58	33.5
Total per cent		40.6		85.5		80.3
Discharge to family care (temporarily in hospitals)	143	30.6	12	10.1	22	12.7
Hospitalization	123	28.7	5	4.2	9	5.2
Death or lost	None	None	None	None	3	1.7

[1]In cases in which therapy was not continued for external reasons, the latest known results are entered.
[2]Additional group psychotherapy.
[3]Increasing good effect of treatment, because of further maturation after insulin and further readjustment of patients, after decrease of organic psychosyndrome.

combine in a vast montage to form the disease picture. Just as the genesis of the disease is multifactorial, so must adequate treatment be comprehensive.

The basis of our treatment is biological, with psychotherapy as its principal accompaniment. This combination opens the door of life again to the patient. But the very doorstep is crowded with his relatives and his former associates in the business and social world, and he must cope with these. Therefore, group therapy of relatives plays an integral part in the treatment program, to prepare them to accept the recovered patient, to understand him, and to aid him in solving his future problems. His professional or workaday associates, similarly, must receive him into their world again; more important, they must accept him *without prejudice.*

Psychiatrists since the day of Pinel have a standing axiom; i.e., Psychiatry will be a truly and completely successful science only when an enlightened public finally removes the social stigma that, like some noxious vapor from the ancient past, still curls about the heads of those pleading for help.

REFERENCES

Arnold, O. H.: Die körperlichen Behandlungsmethoden der Schizophrenie. In: Hoff, H., ed.: Therapie in der Neurologie und Psychiatrie. Wien: Urban & Schwarzenberg, 1960.

Gastager, H.: Die Gruppenpsychotherapie (und so weiter). II. Internat. Kong. Gruppen-Psychother. 7 (Suppl.), 1959.

Hoff, H.: Lehrbuch der Psychiatrie. Basel und Stuttgart: Schwabe. 1956.

Schindler, R.: Der soziodynamische Aspekt in der "befokalen Gruppentherapie." Acta psychotherap. psychosomat. et orthopaedogogica. 2:2-3, 1959.