Practical Psychiatry in Medicine

Part 15. Schizophrenic Disorders

Schizophrenia refers to a group of conditions characterized by disturbances of thought, affect, and behavior that lead eventually to a wide variety of signs and symptoms, such as social and emotional withdrawal, mood disturbances, periods of excitement and immobility, misinterpretations of reality, delusions, and hallucinations. Although the constellation of signs and symptoms comprising a schizophrenic syndrome is often unmistakable, there is no single sign or symptom that is pathognomonic of schizophrenic illness.

Schizophrenic illness usually begins during adolescence or young adulthood. The incidence of new cases in the United States among people age 15 and above is estimated at between 0.3 and 1.2 per 1000 per year.[3] Because of the early age at onset, the seriousness of the disorder, and its tendency to be chronic or recurrent, schizophrenic illness accounts for one-third to one-half of the beds occupied in psychiatric hospitals. All races and socioeconomic groups are affected, but the prevalence is higher among the poor.

In recent years it has become increasingly important for the primary physician to be familiar with these disorders. This is true for several reasons. Since the advent of effective chemotherapy, more schizophrenic patients are able to live outside the hospital. As a result the physician is now much more apt to be consulted in the clinic or in his office by the schizophrenic patient who happens to have an incidental medical problem or whose emotional disturbance manifests itself in somatic symptoms or concerns. Further, potent chemotherapeutic agents, sometimes in very high dose, are commonly used in the management of schizophrenic illness. The physician may be involved in the management of patients who exhibit side effects or toxic reactions to these drugs. He must be knowledgeable of the condition for which these agents are used so that he may have some idea of what to look for if chemotherapy must be discontinued. Finally, and most importantly, it is usually the family physician to whom the patient and/or his family first turn for help in the early stages of the illness, and whose advice and counsel will continue to be sought during the often prolonged course of psychiatric treatment.

The following chapter has been selected by the Publisher from its book, *Practical Psychiatry in Medicine,* by John B. Imboden, MD, and John Chapman Urbaitis, MD, in the hope that it will have immediate usefulness to our readers.

Etiology

There is no single cause of schizophrenia. In the past, various theories of etiology have competed, but now, as with many other diseases, schizophrenia is considered to be the result of several interacting factors.

Genetic Factors

Genetic studies have repeatedly indicated that the concordance for schizophrenia is significantly higher among pairs of monozygotic twins than among pairs of dizygotic (fraternal) twins. In addition, recent studies of schizophrenics who were adopted at birth into nonschizophrenic families have found higher incidence of schizophrenia among the biologic relatives (parents, siblings, or half-siblings) than among the general population.[7]

Biochemical Factors

The genetic factor is probably mediated by a biochemical change or set of changes. Here, only hypotheses have so far been offered, with no clear proofs. For example, dopamine has been implicated in Snyder's hypothesis,[11] since phenothiazines and other antipsychotic medications block dopamine receptors (this probably accounts for the production of parkinsonism as a side effect). In addition, dextroamphetamine, which can exacerbate schizophrenic psychoses or induce a schizophrenia-like illness when given in large doses, increases the activity of neurotransmitters at dopaminergic as well as noradrenergic synapses in the central nervous system.

Early Environmental Influences

Family experiences during childhood no doubt sometimes play a part in the development of schizophrenia, but the clearcut descriptions of a decade ago of the schizophrenogenic mother or of specific pathologies in the families of schizophrenic patients have not

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held up. On the other hand, it does seem clear that such factors as marked parental inconsistency, ambiguity of communications with the child, and failure to provide adequate role models or an atmosphere of love acceptance are all likely to impair personality development and thus intensify the stressfulness of life. This may be of great importance in the individual genetically predisposed to schizophrenic illness.

Current Stress

Stress resulting from current psychologic and social pressures frequently appears to play a role in schizophrenic decompensation. It has long been noted, for example, that the illness often makes its appearance at the transitional junctures of adolescence or young adulthood.

In sum, then, while etiology is far from fully understood, it does appear that the several factors of genetic predisposition, biochemical malfunctions, early environmental influences, and current stress all contribute to the development of schizophrenic illness.

Clinical Characteristics

Mode of Onset

In some patients there is a preillness history of shyness, oversensitivity, emotional inhibition, and a tendency to daydream and to be a loner. Many patients, however, do not have such a history and many persons who do have such a history never become afflicted with a schizophrenic illness.[9]

The onset may be insidious, sometimes consisting initially in progressive withdrawal from friends and family, decline in academic interest and achievement, hypochondriacal preoccupations, multiple somatic complaints, and neurotic symptoms such as obsessions and compulsions. In this insidious mode of onset months may go by before the family realizes that something serious is going on, and this realization may not occur until some bizarre, disturbing behavior develops.

In other patients, the illness develops more rapidly and dramatically, the patient exhibiting such unmistakable evidences of profound disturbance as psychomotor excitement, panic, marked alteration of mood, delusions, and hallucinations. The initial development and subsequent exacerbations of schizophrenic illness may or may not be associated with stressful events or situations. As already noted, often the illness tends to develop or worsen around transitional periods of youth: puberty, adolescence, graduation from high school or college, leaving home or school and facing the prospects of going out into the world.

Disturbance of Affect

The affective manifestations of schizophrenic illness are manifold and vary greatly from one patient to the next and in the same patient over a period of time. Not infrequently the patient exhibits a reduction or "flattening" of affect: this feature may be associated with a progressive diminution or narrowing of interests and loss of ability to experience pleasure or deep satisfaction in any activity or interpersonal relationship. This anhedonic state often leads the patient to feel empty, isolated, and lost; he may despair of ever being better and may contemplate suicide. Affective flatness and withdrawal may make the patient seem exasperatingly indifferent to everything and everybody.

The patient may also display affect that seems silly or inappropriate to what he is talking about or to his situation. He may, especially early in the illness, have a burst of emotion accompanied by sudden conviction that "everything is clear" about previously mysterious events.[1] The patient may have periods of melancholy, elation, irritability, anger, and fearfulness.

Disturbance of Cognitive Functions

Evidence of cognitive disorder may be revealed in difficulties in communication, and in the development of delusions and hallucinations.

Communication

In normal communication, one attempts to convey a concept to the listener. In doing this, one must often relate background material or subordinate concepts in order to get the main idea across. Thus, normal communication requires the speaker, on the one hand, to be in touch with associations relevant to the idea he is communicating and, on the other hand, to screen out those which are irrelevant. In schizophrenic thought disorder there may be difficulty with either

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or both of these processes, ie, severe inhibition of associations or failure in screening out tangential and irrelevant associations. Both of these difficulties may result in speech that is poorly connected or fragmented, ie, in what is often referred to as "loosening" of associations.

When the associative processes are severely constricted the patient may find that his thoughts are frequently "blocked" so that he loses his train of thought. Constriction of associations may be revealed in a tendency to concrete thinking as manifested by very narrow, literal interpretations of simple proverbs. The patient may indicate that he feels he has no thoughts and may indicate that his thoughts have been taken from him by an outside agency.

On the other hand, failure to screen out irrelevant or tangential associations often occurs and may result in excessively circumstantial speech; in extreme cases, the patient never seems to get to the point—his speech is rambling, vague, and difficult or impossible to follow. He may be strikingly overinclusive when asked a straightforward question or when confronted with a simple task or problem.

Other disturbances of communication include the idiosyncratic use of words, creating new words (neologisms), repeating words or phrases in a stereotyped fashion, and negativism.[10]

Delusions

Everyone's judgment, beliefs, reasoning, and even perceptions are influenced to a degree by currently prevailing emotions, especially wishes and fears. In a state of intense fear, for example, one may interpret innocuous shadows and sounds as having some ominous significance. In patients with schizophrenic illness, cognitive functions may be abnormally vulnerable to such influences as wishes and fears.

Many schizophrenic patients tend to be preoccupied with the fear of being controlled or influenced by other persons or "outside forces." It is possible that in some cases this apparent fear represents an underlying wish. In any event it is not uncommon for the patient to express the notion that he is being kept under surveillance, is followed when he walks down the street, that thoughts are being inserted into or withdrawn from his mind, that his behavior is being directed by someone, that bodily sensations are being imposed upon him. He may have the delusion that he is being persecuted. The patient's delusions may be elaborate and well systematized (internally consistent) or they may be unelaborated or fragmented.

Preoccupation with the self, and absorption in his own fantasies and bodily processes are characteristically present. This narcissistic orientation in conjunction with defensiveness concerning feelings of loneliness, inadequacy, and guilt may lead to a variety of delusions. Notions of grandiosity are often seen, particularly in patients who feel they are the target of a conspiratorial plot. Ideas of reference occur in which the patient believes that he is the subject of news articles, television programs, and so forth. Somatic delusions, sometimes buried in what superficially looks like a hypochondriacal neurosis, are not rare.

Sometimes, the outer world seems distant, strange, and unreal (derealization) and sometimes he himself feels unreal (depersonalization). The patient may identify the cosmos with himself and, fearing the dissolution of his own mind, have the conviction that the end of the world is nigh.

Hallucinations

In schizophrenic illness, hallucinations involving any sensory modality may occur, but usually they are predominantly auditory. Auditory experiences of several types are found. Voices may be heard which are discussing the patient and which refer to him in the third person, or which describe or comment on the patient's activities as they take place. The patient may have the experience of hearing his own thoughts, as though aloud but within his head ("gedankenlautwerden").[10]

Behavior

As one may infer from the above description of the profound disturbances in affect and cognition, schizophrenic patients may show a wide variety of behaviors which range from the mildly eccentric to the bizarre. Many schizophrenic patients are obviously ill at ease with other people and may seem awkward or gauche in social situations. An air of guardedness or suspiciousness is common in patients with paranoid tendencies. On the other hand, some schizophrenic patients may not reveal any particular behavioral clues of their

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illness in casual social situations, while nonetheless revealing unmistakable pathology when carefully interviewed or when observed over a period of time.

Particularly striking alterations of psychomotor behavior are catatonic stupor and catatonic excitement. In the former state the patient is immobile, sitting or standing in same position for hours, not speaking or eating; in catatonic stupor, the patient's hand or arm remains in the position in which it is passively placed (waxy flexibility). In catatonic excitement, the patient may lose control of aggressive impulses and may strike out suddenly at people and things in his immediate environment; the patient may be generally overactive, running around wildly and talking incoherently.

Classification

There are several ways of classifying the various subtypes of schizophrenia. We will consider only three.

The Classic Syndromes of Kraepelin and Bleuler

The syndromes of Kraepelin and Bleuler do not occur in as pure and stable a form as one would infer from the early descriptions of schizophrenia.[9,10] The comparative rarity of these syndromes "in pure form" is in part due to the influence of modern chemotherapy. The classic syndromes referred to are as follows.

Paranoid Schizophrenia

In paranoid schizophrenia, ideas of reference, delusions of being watched, followed, or persecuted, and delusions of grandiosity dominate the clinical picture. Onset of the illness tends to be somewhat later than in other forms of schizophrenia, often first becoming manifest in the 30s age group. These patients are often tense, guarded, and suspicious. Typically there is rather good preservation of intellectual function (outside of the delusions) and the patient may be able to function well in many areas of life.

Catatonic Schizophrenia

Catatonic schizophrenia applies to patients whose illness is primarily manifested by the disturbances in psychomotor behavior described above: catatonic stupor and/or excitement. In addition, catatonic patients typically have hallucinatory experiences and delusions as well as psychomotor symptoms.

Hebephrenic Schizophrenia

Hebephrenic schizophrenia typically begins in the teens (Hebe, the Greek goddess of youth). It is a severe disorder characterized by silly, inappropriate affect, hallucinations, poorly organized delusions, and severely regressive behavior.

Simple Schizophrenia

Simple schizophrenia is characterized primarily by *progressive* shallowness of emotion, and reduction in interests and in attachments to things, situations, and people. Patients with this condition show little interest in holding a job or pursuing goals. They may show little evidence of delusions and hallucinations.

Process-Nonprocess Schizophrenia

It has been found useful to classify schizophrenic illness into two types: one characterized by features associated with a relatively good prognosis (nonprocess type), and the other by features associated with a relatively poor prognosis (process type).[12]

The relatively good prognosis type is characterized by the following: good preillness level of adjustment, presence of stress at time of onset, acute onset, presence of excitement, tension, anxiety, and affective symptoms. Illnesses falling into the good prognosis group may be referred to as nonprocess schizophrenia, reactive schizophrenia, schizoaffective disorder, remitting schizophrenia, and schizophreniform illness.

The group with relatively poor prognosis is sometimes referred to as process schizophrenia or "true" schizophrenia and its characteristics are poor preillness adjustment; slow and insidious onset; absence of precipitating stress; relative lack of tension, anxiety, or affective symptoms; emotional blunting or flatness; and relatively high incidence of schizophrenic illness in the family.

It is important to note that when dealing with individual patients, the prognostic indicators noted above do not always prove to be accurate.[4] That is, it is imperative to proceed with active treatment and with a hopeful attitude regardless of which group the patient appears to belong to.

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The Classification of Klein and Davis

These investigators have offered a classification of schizophrenia based on presenting symptoms, childhood adjustment, and likely response to medications.[8] It has the virtues of simplicity and a close connection to the patients as we may encounter them in clinical practice. Klein and Davis have classified schizophrenic disorders into three groups as described below.

1. "Schizophrenia—childhood asociality" is a condition with marked thought disorder, much disorganized thinking (even delusions are vague), and fragmented verbal productions. In affect, these patients are frightened rather than angry or depressed. History of their childhood shows aloof, cold, asocial behavior, with no real friendships. This group of patients is the least likely to respond to treatment, and long-term prognosis is poor.

2. "Schizophrenia—fearful paranoid" presents with a suspicious and defensive patient, who has clear-cut delusions, ideas of reference, and paranoid ideas about other people. Delusions may include beliefs in changes in shape, size, or function of bodily parts. The patient may be depressed or suicidal, especially early in the course of illness. Angry outbursts may occur when the paranoid patient believes himself to be trapped. Childhood is typically not so disturbed, though there may be some pattern of being a loner. These patients are likely to respond to treatment, and the prognosis is fair to good.

3. "Schizophrenia—schizoaffective" refers to an illness with definite affective psychotic manifestations, resembling either mania or psychotic depression; in addition, the patient must show clear-cut schizophrenic thought disorder with bizarre and/or persecutory delusions. The illness is often of acute onset, and response to treatment is generally good with a favorable prognosis in the long run.

Diagnosis

In its florid form, the diagnosis of schizophrenia usually presents no difficulty. In early stages of the illness, however, especially when the onset is slow and insidious, it may be extremely difficult to make a definite diagnosis until the patient has been observed over a period of time. In such instances, the initial manifestations may consist predominantly of neurosislike symptoms such as hypochondriacal preoccupations, obsessions, and compulsions, or a sort of social maladjustment with such features as decline in school performance, and a progressive tendency to withdraw from interpersonal contacts and to prefer solitary pursuits. Such symptoms occurring in an adolescent or young adult may arouse the suspicion of schizophrenic illness and lead the physician to be alert to the presence of the characteristic disturbances in cognition and affect, perhaps present in relatively subtle or mild form.

With regard to more fully developed schizophrenic disorder, it should be kept in mind that a variety of conditions can be associated

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with delusions, hallucinations, and other symptoms common in schizophrenia; among these are the organic brain syndromes and affective disorders.

Typically, in schizophrenic illness the sensorium is clear and if hallucinations are present it is common for the auditory type to be predominant. In delirium, in addition to clouded sensorium, visual hallucinations often predominate.

Hallucinations and delusions can occur in severe depressive and manic states; in that event their content usually reflects a depressive or expansive attitude toward the self and the future. Other manifestations of affective illness should be sought including a family history of affective illness.

Amphetamine intoxication can closely simulate schizophrenic illness; the diagnosis is made by a history of amphetamine ingestion and by relatively rapid (one to two weeks) symptomatic remission following separation from the drug, which is sustained for as long as the patient abstains from further amphetamine ingestion.

In the diagnostic evaluation of patients with schizophrenic illness, no matter how obvious the diagnosis appears, the physician conducts a careful neurologic and general medical examination just as he does in evaluating patients with other types of illness.

Management

The patient with schizophrenic illness should be referred to the psychiatrist for continued evaluation and treatment. This does not mean, however, that the primary physician will have no further role in the management of the patient. More often than not, worried parents will consult the primary physician from time to time, even after the psychiatric referral is made, in order to have his opinion about various aspects of the treatment and course of the patient's illness. The parents may feel guilty, as if they are to blame for their son's or daughter's illness, and seek the physician's counsel about their feelings. The parents and the patient may rely on the advice of the primary physician as to whether to accept some specific recommendation, such as hospitalization, that the psychiatrist may have made. For these and other reasons, it is appropriate for the physician to have some general understanding of the psychiatric management of schizophrenic illness, and for the primary physician and the psychiatrist to communicate with each other from time to time about the patient's treatment and progress.

Treatment for schizophrenic patients includes several modalities.[5] We have previously described patterns of symptoms and the most expected prognosis based on stereotyped descriptions. Now as we consider treatment of the individual patient, however, we are reminded that population statistics do not provide a valid ironclad predictor for outcome in any individual patient. Therefore, each schizophrenic patient should have a vigorous and thorough program of treatment, regardless of the characteristics of his particular illness.

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The overall goals of treatment are reduction of the duration and degree of disability for each patient in each episode of illness, and limitation of the impact of the patient's illness on family and community. Subsidiary objectives in planning for these goals include reduction of psychotic symptoms, decreasing the disruption of personal life, and finding ways to prevent future relapses.

The means of treatment are a network or system of services. Just as the illness has developed within the context of a person's life, so treatment must be planned to fit into that context or skillfully to alter the context of the patient's life. Psychiatrists, psychiatric outpatient clinics, psychiatric hospital services, and social work and rehabilitation programs all collaborate in providing continuity of clinical services. A single person must coordinate these joint efforts; sometimes this person is the psychiatrist, sometimes the family physician.

Techniques of treatment can be divided into three categories: chemotherapy, psychotherapy, and social therapy.

Chemotherapy

Chemotherapy has become the mainstay of therapy for schizophrenia.[2,8] Antipsychotic drugs have been demonstrated as markedly more effective than placebos in promoting recovery from acute episodes of schizophrenic psychosis. Psychotic symptoms are disruptive to the patient and to those around him, and the judicious use of adequate doses of antipsychotic medications can do much to relieve the suffering.

A number of antipsychotic drugs are available, and their major actions are similar. Choice of a particular one depends on the secondary effects or side effects, and on the patient's responses. The less potent phenothiazines (Thorazine, Mellaril) are more sedating, and tend to have lower incidence of extrapyramidal side effects. Those which are more potent per milligram of dose are less sedating, and more likely to give some extrapyramidal side effects. The newer nonphenothiazine antipsychotics include butyrophenones (Haldol), thioxanthenes (Navane), dibenzodiazepines (Loxitane), and molindone (Moban). They are particularly useful in patients who do not improve on phenothiazines, or who have side effects or allergic reactions which dictate a change of medication.

One medication should be used at a time; polypharmacy is not generally helpful in chemotherapy of schizophrenia. The medication chosen should be given in adequate dosage for a long enough time to have a full effect. Since these medications have a half-life of over 24 hours, a single daily dose can be prescribed rather than the divided dosages necessary for shorter-acting drugs. Antipsychotic effects may occur within a few days, or may not become evident for several weeks. Dosages can be increased at three-day intervals, until the desired effect appears.

Psychotherapy

Psychotherapy is another essential aspect of treatment of schizo-

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phrenic patients. A personal relationship between physician and patient, and the resultant issues of trust, responsibility, and influence, are of critical importance. While psychotherapy alone rarely is sufficient as a treatment for schizophrenia, the planned use of a human relationship can make a significant difference in the way a patient responds to the other components of the treatment plan.

Several purposes are served by the use of psychotherapy in schizophrenia.

1. A model for effective, clear communication with another person can be established and experienced.

2. When rapport and a degree of trust have been established, the therapist is in a position to assist the patient to improve his ability to test reality; this activity is best done in a fashion that encourages the patient to consider nonpsychotic interpretations of his experiences rather than one in which the therapist imposes his views on the patient.

3. The patient can receive necessary emotional support and encouragement.

4. Introspective patients can review their experiences in the postpsychotic phase of illness, to better understand and integrate their recent psychosis in the context of the rest of their lives.

5. Also in the postpsychotic phase, patients with depression can receive support and gain some comfort.

6. After a psychosis, patient and physician can examine the issues and conflicts that may have contributed to the development of a schizophrenic psychosis, with the aim of lessening the patient's vulnerability for another later psychosis. For example, a young woman who had had two brief but severe schizophrenic psychotic episodes, both after romantic disappointments, was able to learn how she had picked men who would not carry out their end of the relationship.

In beginning psychotherapy the establishment of a trusting relationship is always paramount. This may be particularly difficult with a schizophrenic patient who is fearful, suspicious, and antagonistic. Nonetheless, the therapist can do several things that increase the opportunity for his patient to develop trust. Being open and straightforward is the most helpful attitude, since the patient can sense that he is being dealt with as an adult with rights and responsibilities. The therapist who is sincere, who explains things to his patient, and who lets the patient know what his plans for treatment are will find that the patient appreciates and responds to this respectful attitude. When sessions with other family members are held, the patient should be present whenever feasible. This can reduce the likelihood that he will feel the therapist and his family are doing things behind his back.

A similar flexibility and willingness to place the patient's interests foremost is a sound guideline for any decision that may arise in psychotherapy. The patient who feels he is being treated as an adult by a physician who appeals to the intact and healthy part of his personality will often respond by taking appropriate control of some of his previously disorganized behav-

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ior. Most patients can cooperate to a large degree even in a decision such as entering a psychiatric hospital.

In summary, while medications are usually indispensable in treating the psychosis per se, psychotherapy involves treating the patient as a whole person, discovering and fostering the patient's own abilities to control his behavior and to resume competent social functioning. The human context of the patient-physician relationship is important to the patient, for in this collaborative effort he will be learning the necessary tool of clear communication with another person.

Working with the family remains an important consideration in treatment of schizophrenic patients, also.

The patient's family is often a potential and necessary ally. Families can be extremely helpful in carrying out diagnostic evaluation and treatment; they can provide information the patient may be unable to give, and a session with all the family can often demonstrate to the physician much about the ways the family deals with problems and stress. He can then counsel the family on using certain approaches to the patient and avoiding other behavior that places undue pressures or demands on the patient.

In addition, if the patient is out of the hospital for most of his treatment, the family can help supervise his taking medication, getting to clinic or office appointments, and other necessary treatment activities. If the patient is hospitalized, close planning among the hospital staff, the patient, his family, and the people who will be responsible for afterhospital care is essential to provide a smooth transition back to home and the community.

Social Therapy

Social therapy is the term applied to treatment approaches that affect social functioning and behavior of patients. These approaches include inpatient hospital care, aftercare programs, and vocational/educational rehabilitation. All of these treatment modalities have some place in the planning of each patient's treatment; they should be applied with the same deliberate care that one uses in prescribing a particular dose of a certain medication at a certain point in an illness. Like medications, social therapies can be efficacious when used as indicated, and like medications social therapies can have undesirable effects when used indiscriminately.

Hospitalization is an important tool in psychiatric treatment. Intensive supervision can literally enable a patient to survive a suicidal crisis or a period of irrational excitement and overactivity. Planned therapeutic programs during a hospital stay can allow a patient to discover his abilities and assets, and to find ways to use them to lead a more stable life. The shelter or asylum provided in any hospital stay can be an opportunity to take stock, to sort out the various forces and demands in one's life, and to make plans to deal effectively with these stresses rather than becoming

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overwhelmed by them. Living together with other people in a unit of an inpatient service can be a new experience in sharing and developing human relationships, something that schizophrenic patients often have great difficulty doing on their own.

There are several relative indications for hospitalizing a patient, and a few conditions for which hospitalization is absolutely necessary. The absolute indications include severe suicidal risk, profound withdrawal or excitement in a catatonic state, and extreme disorganization that makes it impossible for a patient to cooperate in controlling his own behavior. In situations less severe than these, the decision for hospitalization is made by balancing the benefits of hospital care; the patient's relative ability to cooperate and participate in his own treatment; the available alternatives such as daily office or clinic visits, partial hospital services (day hospital), the ability of family to help supervise the patient; and the possible risks of hospital care (eg, increased inappropriate dependency; loss of social role, such as job).

A patient who requires close supervision because of a rapidly changing clinical state, who presents a problem in diagnosis, or who requires large doses of a medication not taken before may receive better care if he is hospitalized during the initial stage of treatment. Likewise, the patient who has a disrupted life with little or no family or other social support may require hospitalization for effective treatment.

Chronically ill schizophrenic patients may be hospitalized briefly and periodically when their families need a respite from the full responsibility of caring for them. These respite hospitalizations can be an opportunity for patient, family, and physician to reevaluate the total approach to long-term treatment. Such a hospitalization is generally time-limited, and discharge is planned from the day of admission.

Facilities for inpatient psychiatric care vary from community to community. The several types are psychiatric beds or units in a general hospital, private psychiatric hospitals, and public (state or county) psychiatric hospitals. General hospital psychiatric services have increased greatly in the last 20 years, and such inpatient units can offer intensive diagnostic and therapeutic care during a short-term hospitalization. Care in such general hospital units is usually covered by Blue Cross and other medical insurance policies. Another advantage of the general hospital psychiatric unit is that it is usually close to the patient's home and family, so a smooth transition can be made at discharge.

Private psychiatric hospitals offer long-term care, generally, and can provide intensive therapy for patients who may require several months of inpatient care to regain function. They often have specialized units or specific psychiatrists who have concentrated on doing therapy with difficult schizophrenic patients.

State and county public psychiatric hospitals offer both acute and chronic care. For a patient who has no medical insurance, a brief hospitalization in a public hospital may be the only choice if he is too ill for outpatient care. State hospitals

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have changed over the years also, and many patients are discharged within a few weeks, to return to community-based outpatient care. The patient who has not responded to therapy, and who cannot live independently or with family in the community, may require indefinitely long inpatient care. Here the state hospital may be the place of choice for those with limited or exhausted financial means.

Most patients will agree to voluntary hospital care, but some will refuse or be unable to cooperate. In these instances, the physician must decide if he will begin commitment procedures to require the patient to enter a hospital involuntarily. Different states have different regulations about involuntary admission; a usual situation for which involuntary admission is allowable is the patient who, because of his psychiatric illness, presents an immediate danger to himself (suicide; risk-taking, such as running into traffic) or to others (threats of assault or homicide). In most states two physicians examine the patient, and if they both find that he is psychiatrically ill and presents a danger, they sign the appropriate papers. These papers are then presented to the receiving hospital, by family or by the court system. Involuntarily admitted patients are examined, treated, and subsequently their situation is reviewed to determine if they still require involuntary hospitalization. Virtually all public mental hospitals receive involuntary patients, and many private psychiatric hospitals also do so.

After hospitalization some patients return to their homes, while others are referred to a halfway house for further therapy in a setting where they can take some steps toward independence, within a structured and planned environment. Halfway houses, in which patients generally stay three to ten months, are located within communities, and patients living there often take part-time or full-time jobs, or return to school. In these facilities patients can further develop social abilities and at the same time keep a distance from some of the family tensions and demands that may have exacerbated their illness.

Whether a patient goes home, or to a halfway house, or lives on his own after hospitalization, a well-planned aftercare program is an essential step in ensuring maximum opportunity for recovery. This can be done within the same institution that provided the inpatient care, or by another outpatient clinic, or by a private practitioner with the collaboration of social or rehabilitation services. A particularly useful model of aftercare is described by Donlon and Rada.[6] It includes group therapy of a supportive nature, medications, socialization groups in which patients can further develop their social skills, and aggressive follow-up for any patient who misses an appointment. Patients become loyal to such an aftercare program, and can readily turn to it for as much as they may need in any stage of their recovery. At the same time, a good aftercare program will place definite demands upon its patients, challenging them in a supportive fashion to make the most of their lives by seeking jobs or education.

Vocational and educational rehabilitation services can help many

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recovering patients to return to former occupations or to choose new fields better suited to their abilities and their vulnerabilities. These services, usually run by state or local departments of education, can also provide some financial support for patients in the transition from dependent hospital patient to productive member of the community. A further note here: a trend in state laws is to forbid employers to refuse a job to someone merely because the person has been a mental patient. Therefore, when the general job market is good, the prospects of a patient finding a job may also be good; every effort should be made to help a recovering patient gain the necessary skills to obtain employment.

Other therapies should be briefly mentioned. Electroconvulsive therapy, used mostly for psychotic depressions, also may provide quicker recovery than would medications for a schizophrenic patient in a catatonic withdrawal. Megavitamin therapy, with high doses of nicotinic acid and other vitamins, has not been shown to offer any significant help for schizophrenic patients; in fact, most reports of the treatment include large groups of patients who have been given phenothiazines in addition to the vitamins, and results are equivocal at best.

In summary then, there are effective therapeutic approaches for patients with schizophrenic illnesses. It is a matter of finding the combination of approaches that best fits the individual patient. Antipsychotic medication, some form of psychotherapy, and a plan to improve social functioning are all essential components. Most patients can gain significant improvement, and many will recover completely. Lehmann states that of patients hospitalized for an acute schizophrenic episode, 60 percent will show good social recovery in a five-year follow-up, 30 percent will have some handicaps, and only ten percent will be in a hospital.[9]

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