SCHIZOPHRENIA AND DELUSIONAL DISORDERS

Introduction

Schizophrenia and delusional disorder are distinct disorders that may share certain features, such as paranoia, suspiciousness, and unrealistic thinking. However, schizophrenia is associated with psychosis—a loss of contact with reality—and with a decline in general functioning. In contrast, in delusional disorder, contact with reality is preserved except for the very specific and focused unrealistic thinking that comprises the delusions; functioning is much less impaired. In addition, schizophrenia is relatively common, whereas delusional disorder is rare.

Delusional Disorder

Delusional disorder is characterized by one or more false beliefs that persist for at least 1 month.

Delusional disorder generally first affects people in middle or late adult life. Delusions tend to be non-bizarre and involve situations that could conceivably occur in real life, such as being followed, poisoned, infected, loved at a distance, or deceived by a spouse or lover. Several subtypes of delusional disorder are recognized.

In the erotomanic subtype, the central theme of the delusion is that another person is in love with the individual. Efforts to contact the object of the delusion through telephone calls, letters, or even surveillance and stalking may be common. Behaviour related to the delusion may come in conflict with the law.

In the grandiose subtype, the person is convinced that he has some great talent or has made some important discovery.

In the jealous subtype, the person is convinced that a spouse or lover is unfaithful. This belief is based on incorrect inferences supported by dubious "evidence." Under such circumstances, physical assault may be a significant danger.

In the persecutory subtype, the person believes that he is being plotted against, spied on, maligned, or harassed. The person may repeatedly attempt to obtain justice by appealing to courts and other government agencies. Rarely, violence may be resorted to in retaliation for imagined persecution.

In the somatic subtype, the person is preoccupied with a bodily function or attribute, such as an imagined physical deformity or odour. The delusion can also take the form of an imagined general medical condition, such as a parasitic infection.

Symptoms and Diagnosis

A delusional disorder may arise from a pre-existing paranoid personality disorder. Beginning in early adulthood, people with a paranoid personality disorder demonstrate a pervasive distrust and suspiciousness of others and their motives. Early symptoms may include feeling exploited, being

preoccupied with the loyalty or trustworthiness of friends, reading threatening meanings into benign remarks or events, bearing grudges for a long time, and responding readily to perceived slights.

After ruling out other specific conditions that are associated with delusions, a doctor bases the diagnosis of delusional disorder largely on the person's history. It is particularly important for the doctor to assess the degree of dangerousness, particularly the extent to which the person is willing to act on his delusions.

Prognosis and Treatment

Delusional disorder does not generally lead to severe impairment. However, the person may become progressively involved with the delusion. Most people are able to remain employed.

A good doctor-patient relationship helps in the treatment of delusional disorder. Hospitalization may be needed if the doctor believes the person is dangerous. Antipsychotic drugs are not generally used but are sometimes effective in suppressing symptoms. A long-term treatment goal is to shift the person's focus away from the delusion to a more constructive and gratifying area, although this goal is frequently difficult to achieve.

Schizophrenia

Schizophrenia is a mental disorder characterized by loss of contact with reality (psychosis), hallucinations (usually, hearing voices), delusions (false beliefs), abnormal thinking, flattened affect (restricted range of emotions), diminished motivation, and disturbed work and social functioning.

Schizophrenia is a major health problem throughout the world. The disorder typically strikes young people at the very time they are establishing their independence and can result in lifelong disability and stigma. In terms of personal and economic costs, schizophrenia has been described as among the worst disorders afflicting humankind.

Schizophrenia is listed by the World Health Organization as the ninth leading cause of disability worldwide and affects about 1% of the population, although pockets where schizophrenia is more or less common have been identified. Schizophrenia affects men and women equally. Schizophrenia is more common than Alzheimer's disease and multiple sclerosis.

Determining when onset occurs is often difficult because unfamiliarity with symptoms may delay medical care for several years. The average age for the onset of schizophrenia is 18 for men and 25 for women. Onset in childhood or early adolescence is uncommon. Onset is also uncommon late in life.

Deterioration in social functioning can lead to substance abuse, poverty and homelessness. People with untreated schizophrenia may lose contact with their families and friends and often find themselves living on the streets of large cities.

Causes

What precisely causes schizophrenia is not known, but current research suggests a combination of hereditary and environmental factors. Fundamentally, however, it is a biologic problem, not one caused by poor parenting or a mentally unhealthy environment. People who have a parent or sibling with schizophrenia have about a 10% risk of developing the disorder, compared with a 1% risk among the general population. An identical twin whose co-twin has schizophrenia has about a 50% risk of developing schizophrenia. These statistics suggest a hereditary risk.

Other causes may include problems that occurred before, during, or after birth, such as influenza infection during the 2nd trimester of pregnancy, oxygen deprivation at birth, low birth weight, and mother-infant blood type incompatibility.

Symptoms

The onset of schizophrenia may be sudden, over a period of days or weeks, or slow and insidious, over a period of years. Although the severity and types of symptoms vary among different people with schizophrenia, the symptoms are usually sufficiently severe as to interfere with the ability to work, interact with people, and care for oneself. In some people with schizophrenia, mental ability declines, leading to an impaired ability to pay attention, think in the abstract, and solve problems. The severity of mental impairment is a major determinant of overall disability in people with schizophrenia.

Symptoms may be triggered or worsened by environmental stresses, such as stressful life events. Drug use, including use of marijuana, may trigger or worsen symptoms as well. Overall, the symptoms of schizophrenia fall into three major groups: positive (nondeficit) symptoms, negative (deficit) symptoms, and cognitive impairment. A person may have symptoms from one, two, or all three groups.

Positive symptoms include delusions, hallucinations, thought disorder, and bizarre behaviour. Delusions are false beliefs that usually involve a misinterpretation of perceptions or experiences. For example, people with schizophrenia may experience persecutory delusions, believing that they are being tormented, followed, tricked, or spied on. They may have delusions of reference, believing that passages from books, newspapers, or song lyrics are directed specifically at them. They may have delusions of thought withdrawal or thought insertion, believing that others can read their mind, that their thoughts are being transmitted to others, or that thoughts and impulses are being imposed on them by outside forces. Hallucinations of sound, sight, smell, taste, or touch may occur, although hallucinations of sound (auditory hallucinations) are by far the most common. A person may "hear" voices commenting on his behaviour, conversing with one another, or making critical and abusive comments.

Thought disorder refers to disorganized thinking, which becomes apparent when speech is rambling, shifts from one topic to another, and loses its goal-directed quality. Speech may be mildly disorganized or completely incoherent and incomprehensible. Bizarre behaviour may take the form of childlike silliness, agitation, or inappropriate appearance, hygiene, or conduct. Catatonia is an extreme form of bizarre behaviour in which a person maintains a rigid posture and resists efforts to be moved or, in contrast, displays purposeless and unstimulated motor activity.

Negative symptoms of schizophrenia include blunted affect, poverty of speech, anhedonia, and asociality. Blunted affect refers to a flattening of emotions. The person's face may appear immobile; he makes poor eye contact and lacks emotional expressiveness. Events that would normally make a person

laugh or cry produce no response. Poverty of speech refers to a diminishment of thoughts reflected in a decreased amount of speech. Answers to questions may be terse, perhaps one or two words, creating the impression of an inner emptiness. Anhedonia refers to a diminished capacity to experience pleasure; the person may take little interest in previous activities and spend more time in purposeless ones. Asociality refers to a lack of interest in relationships with other people. These negative symptoms are often associated with a general loss of motivation, sense of purpose, and goals.

Cognitive impairment refers to difficulty in concentrating and remembering, organizing, planning, and problem solving. Some people are unable to concentrate sufficiently to read, follow the story line of a movie or television show, or follow directions. Others are unable to ignore distractions or remain focused on a task. Consequently, work that involves attention to detail, involvement in complicated procedures, and decision making may be impossible.

Types of Schizophrenia

Paranoid schizophrenia is characterized by a preoccupation with delusions or auditory hallucinations; disorganized speech and inappropriate emotions are less prominent. Hebephrenic or disorganized schizophrenia is characterized by disorganized speech, disorganized behaviour, and flat or inappropriate emotions. Catatonic schizophrenia is dominated by physical symptoms such as immobility, excessive motor activity, or the assumption of bizarre postures. Undifferentiated schizophrenia is characterized by a mixture of symptoms from the other subtypes: delusions and hallucinations, thought disorder and bizarre behaviour, and negative symptoms.

Diagnosis

No definitive test exists to diagnose schizophrenia. A doctor makes the diagnosis on the basis of a comprehensive assessment of the person's history and symptoms. For a diagnosis of schizophrenia to be made, symptoms must persist for at least 6 months and be associated with significant deterioration of work, school, or social functioning. Information from family, friends, or teachers is often important in establishing when the disorder began.

Laboratory tests are often performed to rule out substance abuse or an underlying medical, neurological, or hormonal disorder that can have features of psychosis. Examples of such disorders include brain tumors, temporal lobe epilepsy, thyroid disease, autoimmune disorders, Huntington's disease, liver disease, and side effects of drugs. Testing for drug abuse is sometimes warranted.

People with schizophrenia have brain abnormalities that may be seen on a computed tomography (CT) or magnetic resonance imaging (MRI) scan. However, the abnormalities are not specific enough to be of help in diagnosing schizophrenia.

Prognosis

Adherence to treatment is very important for people with schizophrenia. Without drug treatment, 70 to 80% of people with schizophrenia experience substantial recurrence of symptoms within the first year

after diagnosis. Drugs taken continuously can reduce the relapse rate to about 20 to 30% and can lessen symptoms significantly in most people. After discharge from a hospital, a person with schizophrenia who does not take prescribed drugs is very likely to be readmitted within the year; taking drugs as directed dramatically reduces the likelihood of being readmitted.

Despite the proven benefit of drug therapy, half of people with schizophrenia do not take their prescribed drugs. Some do not recognize their illness and resist taking drugs. In other instances, unpleasant side effects lead people to decide to stop taking their drugs. Memory problems, disorganization, or simply a lack of money prevents others from taking their drugs.

Improving adherence to drug therapy is most successful when specific barriers to adherence are addressed. If side effects of drugs are a major problem, a change to a different drug may help. A consistent, trusting relationship with a doctor or other therapist helps some people with schizophrenia to accept their illness more readily and recognize the need for adhering to prescribed treatment.

Over longer periods, the prognosis of schizophrenia varies. In general, one third of people achieve significant and lasting improvement, one third achieve some improvement with intermittent relapses and residual disabilities, and one third experience severe and permanent incapacity. Factors associated with a better prognosis include sudden onset of the disorder, late age at onset, a good level of skills and accomplishments before becoming ill, and having the positive (nondeficit) subtype of the disorder. Factors associated with a poor prognosis include early age of onset, poor social and vocational functioning before becoming ill, a family history of schizophrenia, and having the negative (deficit) subtype of the disorder.

About 10% of people with schizophrenia commit suicide.

Treatment

The general goals of treatment are to reduce the severity of psychotic symptoms, prevent the recurrence of symptomatic episodes and the associated deterioration in functioning, and provide support to allow functioning at the highest level possible. Antipsychotic drugs, rehabilitation and community support activities, and psychotherapy represent the three major components of treatment.

Antipsychotic Drugs: Drugs can be effective in reducing or eliminating symptoms, such as delusions, hallucinations, and disorganized thinking. After the immediate symptoms have cleared, the continued use of antipsychotic drugs substantially reduces the probability of future episodes.

Unfortunately, antipsychotic drugs have significant side effects that can include sedation, muscle stiffness, tremors, weight gain, and motor restlessness. Antipsychotic drugs may also cause tardive dyskinesia, an involuntary movement disorder most often characterized by puckering of the lips and tongue or writhing of the arms or legs. Tardive dyskinesia may not go away even after the drug is discontinued. For tardive dyskinesia that persists, there is no effective treatment. Another side effect of antipsychotic drugs, although rare but potentially fatal, is neuroleptic malignant syndrome, which is characterized by muscle rigidity, fever, high blood pressure, and changes in mental function (for example, confusion and lethargy).

A number of new antipsychotic drugs that cause fewer side effects have become available. These drugs may relieve positive symptoms (such as hallucinations), negative symptoms (such as lack of emotion), and cognitive impairment (such as reduced mental functioning and attention span) to a greater extent than the older antipsychotic drugs.

Clozapine has proven to be effective in up to half of the people for whom other drugs do not work. However, Clozapine can cause serious side effects, such as seizures or potentially fatal bone marrow suppression; thus, it is generally used only for people who have not responded to other antipsychotic drugs. People who take clozapine must have their white blood cell count measured weekly, at least for the first 6 months, so that can be discontinued at the first indication that the number of white blood cells is dropping.

Rehabilitation and Community Support Activities Community support activities, such as on-the-job coaching, are directed at teaching the skills needed to survive in the community. These skills enable a person with schizophrenia to work, shop, care for himself, manage a household, and get along with others. Although hospitalization may be needed during severe relapses, and involuntary hospitalization may be needed if the person poses a danger to himself or others, the general goal is to have the person live in the community. To achieve this goal, some people may need to live in a supervised apartment or group home where someone can ensure that drugs are taken as prescribed.

A small number of people with schizophrenia are unable to live independently, either because they have severe and unresponsive symptoms or because they lack the skills necessary to live in the community. They usually require full-time care in a safe and supportive setting.

Psychotherapy

Generally, the goal of psychotherapy is to establish a collaborative relationship between the person, family, and doctor. That way the person might learn to understand and manage his disorder, to take antipsychotic drugs as prescribed, and to manage stresses that can aggravate the disorder. A good doctor-patient relationship is often a major determinant of successful treatment. Psychotherapy reduces symptoms in some cases and helps prevent relapse in others.

What Is Neuroleptic Malignant Syndrome?

Neuroleptic malignant syndrome is a state of unresponsiveness caused by use of certain antipsychotic drugs. It develops in up to 3% of people who are treated with antipsychotic drugs, usually within the first few weeks of treatment. The syndrome is most common among men who, because they are agitated, are given rapidly increased doses of the drugs or high doses initially.

Symptoms include muscle rigidity, a high temperature, a fast heart rate, a fast breathing rate, high blood pressure, and coma. Damaged muscles release the protein myoglobin, which is excreted in the urine. Myoglobin turns the urine brown (myoglobinuria), and myoglobinuria can result in kidney damage or even kidney failure.

People with this syndrome are usually treated in an intensive care unit. The antipsychotic drug is discontinued, fever is controlled (usually with ice baths and wet towels or with special cooling blankets), and a muscle relaxant is given. Giving sodium bicarbonate intravenously helps prevent myoglobulinuria by making the urine alkaline. Most people recover completely; however, almost 30% of people with this syndrome die. After recovery, up to 30% of people develop the syndrome again if they are given the same antipsychotic drug.