

Schizophrenia



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Introduction

Schizophrenia is a chronic, severe and disabling brain disease that typically shows its first clear symptoms in late adolescence or early adulthood. It is one of several types of Psychotic Disorders. It is characterized by fundamental distortions in thinking and perception, and by inappropriate emotions. The disturbance involves many of the most basic functions that give the normal person a feeling of individuality, self-direction, and independence in functioning. The first signs of Schizophrenia often appear as confusing or even shocking changes in behavior. The onset of Schizophrenia can either be sudden, with severe psychotic symptoms such as delusions and hallucinations, or progressive, that is less obvious, with symptoms such as social withdrawal or isolation, unusual speech, thinking or behavior that may precede the psychotic symptoms.

Overview and Facts

Schizophrenia occurs in as much as 1% of all adults, with onset typically in late adolescence or early adulthood. It is uncommon in pre-pubertal children and it is hard to recognize in its early phases in this age group.

The behavior of children and early adolescents with Schizophrenia may differ from that of adults with this illness. Children and adolescents may for example, have trouble telling dreams from reality, confusing television with reality, seeing things and hearing voices which are not real. They may also have confused thinking, vivid and bizarre thoughts and ideas, as well as paranoid thoughts like people are "out to get them". They might suffer from severe anxiety and fearfulness, resulting in a severe problem making and keeping friends. Children who used to normally enjoy relationships with others may start to become more shy or withdrawn and seem to be in their own world. They may also start to cling to their parents.

People with Schizophrenia may attempt suicide at some time during the course of their illness. Studies show that 30% of patients diagnosed with this disorder had attempted suicide at least once during their lifetime. About 10% of persons with Schizophrenia die through suicide.

In the 1990's, a major international study was undertaken by the World Bank, the World Health Organization (WHO), and the Harvard School of Public Health, called the Global Burden of Disease (GBD). GBD measured how diseases affect people's capacity to function by calculating the years lost to disability or premature death due to a certain illnesses. This unit of measurement of the burden of disease is called a DALY (Disability Adjusted Life Years). The Global Burden of Disease analysis showed that Schizophrenia places an enormous burden on societies everywhere in the world, and is ranked as the eighth leading cause of burden among all diseases for the population between 15 and 44 years of age. Schizophrenia was also reported to be the seventh leading cause of the years of life lived with disability (YLD's) in the year 2000 for all age groups. For the population between 15 and 44 years of age, Schizophrenia was reported to be the third leading cause of YLD's. It exceeds HIV/AIDS and pulmonary diseases in the amount of disability associated with it.

Symptoms

The types of symptoms present in Schizophrenia are generally divided into 3 categories: "positive", "negative", and "disorganized symptoms".

- **Positive symptoms** (symptoms added to the personality) include:
 - Delusions are false personal beliefs that are not subject to reason or contradictory evidence and are not explained by one's usual cultural concepts. They may have different themes. For example, delusions of persecution are false and irrational beliefs that the person is being cheated, harassed, poisoned or conspired against. Some other delusions are quite bizarre, for instance that a neighbor is controlling their behavior and/or their thoughts with magnetic waves, that people on television are directing messages to them, or that their thoughts are being broadcast aloud to others.
 - Hallucinations are disturbances of perception that are common in people suffering from Schizophrenia. They can occur in any sensory form: auditory (sound), visual (sight), tactile (touch), gustatory (taste), or olfactory (smell). Auditory hallucinations (hearing "voices" that other people do not hear) are the most common type of hallucinations in Schizophrenia. "Voices" may describe the person's activities, carry on a conversation, warn of dangers, or even issue orders to the individual.
- **Negative symptoms** (symptoms lost from the personality) include:
 - Emotional flatness or lack of expression,
 - Speech that is brief and lacking content,
 - Lack of interest in life and an inability to follow through with activities.
 - Low motivation for work, as well as for interest or enjoyment of life.
- **Disorganized symptoms** refer to:
 - Cognitive deficits that might lead to a certain disorganized behavior. For example, the person may not be able to concentrate on one thought or on one simple task for very long and may be easily distracted.
 - Difficulties connecting thoughts into logical sequences occur, thus thoughts become disorganized and fragmented. This lack of logical continuity of thoughts, called "thought disorder", can make conversation very difficult and may contribute to further social isolation.

Also, people with schizophrenia might have Disorders of Movement. People with schizophrenia can be clumsy and uncoordinated. They may also exhibit involuntary movements and may grimace or exhibit unusual mannerisms. They may repeat certain motions over and over or, in extreme cases, may become catatonic. Catatonia is a state of immobility and unresponsiveness. It was more common when treatment for schizophrenia was not available; fortunately, it is now rare.

Causes and Risk Factors

Experts do not know what causes schizophrenia. It may have different causes for different people. In some people, brain chemistry (involving the neurotransmitters dopamine and glutamate) and brain structure aren't normal. For example, the brains of schizophrenics

appear to have less gray matter, and some areas of the brain may have less or more activity. This can be due to problems in brain development before birth. The reason behind schizophrenia showing after puberty is due to the fact that the brain undergoes major changes during puberty, and these changes could trigger psychotic symptoms.

Family history plays a role, in fact schizophrenia occurs in 10% of people who have a first-degree relative with the disorder, (parent, brother, or sister). People who have second-degree relatives (aunts, uncles, grandparents, or cousins) with schizophrenia also develop the disorder more often than the general population. The risk is highest for an identical twin of a person with schizophrenia.

He or she has a 40 to 65 % chance of developing the disorder.

Scientists also found that some genes and genetic mutations are associated with an increased risk of schizophrenia. Genes are not sufficient to develop schizophrenia as environmental factors play a role such as exposure to viruses and malnutrition that harm a baby's brain during pregnancy.

Tests and Diagnosis

To diagnose schizophrenia, a person should consult a mental health professional who rely on scientific criteria to check whether he/she has the disorder.

The doctor will examine you and ask about your symptoms. At least one of the symptoms must be delusions, hallucinations or disorganized speech.

He or she may ask other questions to see how you are doing emotionally. This is called a mental health assessment.

The doctor may also do blood or urine tests to rule out other conditions, that can cause similar symptoms such as substance abuse, medications or a medical condition. The doctor may also request imaging studies, such as an MRI or CT scan.

Tests and Diagnosis

Well-established and effective treatment procedures for Schizophrenia are available. With treatment, there can be complete symptomatic and social recovery in many cases. On the other hand, Schizophrenia could follow a chronic or recurrent course, with residual symptoms and incomplete social recovery. Residual symptoms include lack of interest and initiative in daily activities and work, social incompetence, and inability to take interest in pleasurable activities. During times of severe symptoms, hospitalization may be required.

Schizophrenia requires lifelong treatment, even when symptoms have stopped.

Treatment is composed of medications and psychotherapy:

1- Medications

Medications are very important for schizophrenia treatment. However, medications for schizophrenia can cause side effects which make some people hesitant to take them.

a. Antipsychotic medications are mostly used to control symptoms by affecting the neurotransmitters dopamine and serotonin. In general, antipsychotic medications are used to control signs and symptoms at the lowest possible dosage. The psychiatrist may try different medications, dosages or combinations over time to achieve the best result.

i. Atypical antipsychotics: these are second-generation medications and have a lower risk of side effects than conventional medications. They include:

- Aripiprazole
- Asenapine
- Clozapine
- Iloperidone
- Lurasidone
- Olanzapine
- Paliperidone
- Quetiapine
- Risperidone

ii. Ziprasidone Conventional, or typical antipsychotics: these first-generation medications have frequent side effects, including the possibility of developing a movement disorder (tardive dyskinesia) that may or may not be reversible. These medications are cheaper than the second generation, this is why they are considered for long term treatment.

This group of medications includes:

- Chlorpromazine
- Fluphenazine
- Haloperidol
- Perphenazine

It is important to know that it can take several weeks after starting a medication to notice an improvement in symptoms.

b. Antidepressants or anti-anxiety medications can be used as well in some cases.

2- Psychotherapy

Psychotherapy helps the person to cope with stress and identify signs of relapse. Family therapy is also a way to help families support their relatives who are dealing with schizophrenia. A lot of people also benefit from social skills training which focuses on improving communication and social interactions.

Sources and Links

www.idraac.org

www.mayoclinic.org

www.webmd.com

<http://www.nimh.nih.gov/health/publications/schizophrenia/index.shtml>