European Brain Council

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Schizophrenia

Fact Sheet

What is Schizophrenia?

Schizophrenia is a long-term condition that results from changes in the mind and causes a range of different psychological symptoms[1] such as hallucinations and delusions.

People with schizophrenia require lifelong treatment. Anyone can develop schizophrenia: it can affect men and women in the same proportion and can develop in people of any age, although usually the first symptoms appear before the twenties.

Key facts

Schizophrenia is a severe mental disorder, which affects 0.8-1.5% of the population. Around 1 in 200 (or 0.5% of) people in Europe is estimated to be diagnosed with schizophrenia[2].

It is a clinically heterogeneous illness with highly variable courses, typically episodic. Schizophrenia has a substantial impact on patients, their families, caregivers, and society in general. It is one of the top 25 leading causes of disability worldwide, negatively affecting all aspects of a person's life.

Currently, more than 50% of people with schizophrenia do not receive appropriate, timely, and adequate treatment[3].

History

The word schizophrenia comes from the Greek roots schizein ("to split") and phrēn, ("mind"), describing the separation of function between personality, thinking, memory and perception[4]. The term was coined by Eugen Bleuler in 1908. This idea of a "split personality" is refused by contemporary psychiatry, which considers that schizophrenia does not involve a person changing among distinct multiple personalities. Those living with schizophrenia were long persecuted and considered unfit for everyday life, with stigma still considered a major hurdle in life today.

Known causes of Schizophrenia

The causes of schizophrenia are still partially unknown. However, scientists have put forward several models to explain the link between altered brain function and schizophrenia[5]. The two best-known models refer to neurotransmitters (substances that brain cells use to communicate with each other) dopamine and glutamate that may involve an imbalance in interrelated reactions of the brain. Some experts also think problems during brain development before birth may lead to faulty connections. The brain also undergoes major changes during puberty and these changes could trigger psychotic symptoms in people who are vulnerable due to genetics or brain differences.

Genetic origin
It is known that there are some hereditary factors that influence the possibility of the disease occurring. The chance that a person will develop schizophrenia is increased from about 1 in 100 to about 1 in 10 if one of their parents has the condition. Scientists also think that interactions between genes and aspects of the individual's environment (for example, exposure to viruses, malnutrition before birth, problems during birth, psychosocial factors) are necessary for schizophrenia to develop.

Environmental causes
The external factors that can lead to the onset of the disease are numerous, such us growing up in a city centre, drug use and experiencing stressful life events. Short-lived illness can be associated with drug misuse, particularly with cocaine, amphetamines and cannabis. Cannabis use, especially, has been observed to influence established schizophrenia as well as increasing the risk of schizophrenia developing. Childhood trauma, death of a parent and being bullied or abused increase the risk of psychosis[6]. Environmental factors associated with a slight risk of developing schizophrenia in later life include oxygen deprivation, infection, prenatal maternal stress and malnutrition in the mother during fetal development.

Diagnosis

To be diagnosed with schizophrenia, only two symptoms are required to be met over a period of at least one month, with a significant impact on social or occupational functioning for at least six months.
People with schizophrenia often have additional mental health problems such as anxiety, depression and/or substance-use disorders.
One of the most established tools for assessing the severity of positive and negative symptoms is the Positive and Negative Syndrome Scale (PANSS). The patient is rated from 30-210 on 30 different symptoms during an interview as well as through reports from family members. Scores are often given separately for the positive items, negative items and general psychopathology.

Symptoms

Schizophrenia involves a range of problems which affect thinking, behaviour and emotions. Signs and symptoms may vary and are classified into three categories.

Positive symptoms: all the symptoms that are psychotic behaviors not generally seen in healthy people[7]. These include hallucinations (hearing, seeing, feeling, tasting or smelling something that is not there), delusions (believing in something that cannot be true), movement disorders (agitated body movements) and paranoid thoughts (believing the worst).

Negative symptoms: these symptoms are associated with disruptions to normal emotions and behaviours. These include low motivation (reducing feelings of pleasure in everyday life), lack of emotion (reducing expression of emotions via facial expression or voice tone) and social withdrawal (difficulty beginning and sustaining activities).

Cognitive symptoms: these symptoms are the earliest and most constantly found symptoms in schizophrenia[8] and are often the first symptoms noticed by the patient. These include disorganized thoughts and speech (responding to questions with an unrelated answer), lack of concentration or attention (trouble in focusing or paying attention) and memory problems (especially the "working memory", the ability to use information immediately after learning it).

Treatment

There is no sure way to prevent schizophrenia but adhering to the treatment plan can help prevent relapses or worsening of symptoms. The primary treatment of schizophrenia is the use of antipsychotic medications, often in combination with psychosocial interventions and social supports[9].
As the causes of schizophrenia are still unknown, treatments focus on eliminating the symptoms of the disease. Treatments include:

Antipsychotics: they work by blocking the effect of dopamine on the brain. Atypical antipsychotics are now generally used for first-line treatment for psychosis, such as amisulpiride, risperidone, quetiapine and olanzapine. These are preferred to older, typical antipsychotics because they cause fewer extrapyramidal reactions. However, they can still cause significant side-effects and patients need to be screened for endocrine disorders (e.g. diabetes) as well as neurological and cardiovascular problems. Once a patient has recovered from an acute episode of schizophrenia, they will usually remain on preventative doses of an antipsychotic for one to two years, being supervised by both primary and secondary health care professionals. After that time, if they are symptom free, the therapy will be withdrawn gradually with careful monitoring for relapse[10].

Psychosocial Treatments: these can help reduce symptoms, improve functioning and prevent relapse, although their availability is often limited by a lack of trained therapists. Cognitive Behavioral Therapy (CBT) has been shown to reduce persistent symptoms and improve insight. Family therapy and other forms of educational therapy can help to improve communication, raise awareness and reduce distress in both patients and their family members. Additionally, it can help reduce relapse rates, admission rates and improve compliance with treatment.

Coordinated specialty care (CSC): This treatment model integrates medication, psychosocial therapies, case management, family involvement and supported education and employment services, all aimed at reducing symptoms and improving quality of life .

Futher information

European Psychiatric Association
www.europsy.net

Global Alliance of Mental Illness Advocacy Networks-Europe (GAMIAN-Europe)
www.gamian.eu

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