SCHIZOPHRENIA SPECTRUM DISORDERS

Dr. Rawan Masri

Schizophrenia and the other psychotic disorders are some of the most impairing forms of psychopathology, frequently associated with a profound negative effect on the individual's educational, occupational, and social function. Sadly, these disorders often manifest right at time of the transition from adolescence to adulthood, just as young people should be evolving into independent young adults. The spectrum of psychotic disorders includes schizophrenia, schizoaffective disorder, delusional disorder, schizotypal personality disorder, schizophreniform disorder, brief psychotic disorder, as well as psychosis associated with substance use or medical conditions.

WHAT IS SCHIZOPHRENIA?

It's a chronic, debilitating mental disorder characterized by periods of loss of touch with reality (psychosis); persistent disturbances of thought, behavior, appearance, and speech; abnormal affect; and social withdrawal. that can be disabling without care. About 1% of the population have it. People with the condition may hear voices, see imaginary sights, or believe other people control their thoughts. These sensations can frighten the person and lead to erratic behavior. Although there is no cure, treatment can usually manage the most serious symptoms. Contrary to popular misunderstanding, schizophrenia is is not the same as multiple personality disorder.

WHAT ARE THE SYMPTOMS?

1. **Positive symptoms** are things additional to expected behavior and include delusions, hallucinations, agitation and talkativeness.

2. **Negative symptoms** are things missing from expected behavior and include lack of motivation, social withdrawal, flattened affect, cognitive disturbances, poor grooming, and poor (i.e., impoverished) speech content.

3. These classifications can be useful in predicting the effects of antipsychotic medication.

   a. Positive symptoms respond well to most traditional and atypical antipsychotic agents.
   b. Negative symptoms respond better to atypical than to traditional antipsychotics.

DIAGNOSIS

1. Requires 2 or more of the following for a significant time during a 1 month period: (at least one of theses should be (1), (2) or (3))

- 1. Delusions
- 2. Hallucinations
- 3. Disorganized speech (frequent derailment or incoherence)
- 4. Grossly disorganized or catatonic behavior
- 5. Negative symptoms

2. Since onset of disturbance, level of functioning in work, social relations, or self care is below what it was prior Or failure to achieve expected level if onset is in childhood/adolescence

3. Symptoms persist for at least 6 months

4. The disturbance is not due to the physiological effect of a substance (medication or drug abuse) or another medical condition

Psychotic features typically emerge between the late teens and the mid-30s

Positive Symptoms

"Positive" refers to overt symptoms that should not be present. These include:

- Hallucinations
- Delusions
- Disorganized thoughts

Negative Symptoms

"Negative" does not refer to a person's attitude, but instead to a lack of characteristics that should be present. These include:

- Reduced speech, even when encouraged to interact (alogia)
- Lack of emotional and facial expression (affective flattening)
- Diminished ability to begin and sustain activities (avolition)
- Decreased ability to find pleasure in everyday (anhedonia)
- Social withdrawal (asociality)

Cognitive Deficits

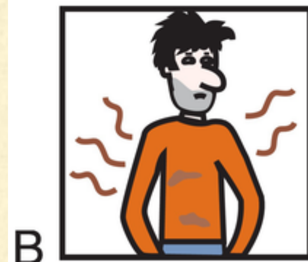
Difficulties with following aspects of cognition can make it hard to live a normal life or earn a living:

- Memory
- Attention
- Planning
- Decision Making

Key Negative Symptoms Identified Solely on Observation

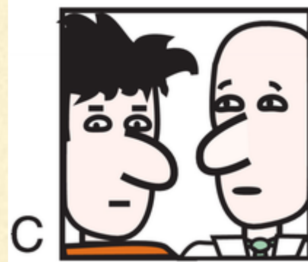
A

Reduced speech: Patient has restricted speech quantity, uses few words and nonverbal responses. May also have impoverished content of speech, when words convey little meaning*



B

Poor grooming: Patient has poor grooming and hygiene, clothes are dirty or stained, or subject has an odor*



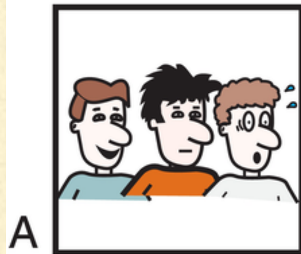
C

Limited eye contact: Patient rarely makes eye contact with the interviewer*

*symptoms are described for patients at the more severe end of the spectrum

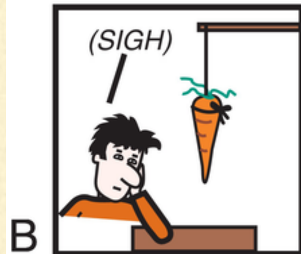
Key Negative Symptoms Identified With Some Questioning

A



Reduced emotional responsiveness: Patient exhibits few emotions or changes in facial expression, and when questioned can recall few occasions of emotional experience*

B



Reduced interest: Reduced interests and hobbies, little or nothing stimulates interest, limited life goals and inability to proceed with them*

C

Reduced social drive: Patient has reduced desire to initiate social contacts and may have few or no friends or close relationships*

*symptoms are described for patients at the more severe end of the spectrum

HOW IT AFFECTS THE THOUGHTS?

People with schizophrenia may have trouble organizing their thoughts or making logical connections. They may feel like the mind is jumping from one unrelated thought to another. Sometimes they have "thought withdrawal," a feeling that thoughts are removed from their head, or "thought blocking," when someone's flow of thinking suddenly gets interrupted.

HOW IT AFFECTS BEHAVIOR?

The disease has a major impact in many ways. People may talk and not make sense, or they make up words. They may be agitated or show no expression. Many have trouble keeping themselves or their homes clean. Some repeat behaviors, such as pacing.

Despite myths, the risk of violence against others is small.

What is the relationship between symptoms of schizophrenia and employability?
Unemployment rates in patients with schizophrenia are as high as 70%. However, there is a relatively low correlation between psychopathology and the ability to hold a job, the level of negative symptoms being a more important predictor of work performance than positive symptoms.

WHO GETS SCHIZOPHRENIA?

Anyone can. It's equally common among men and women and among ethnic groups. It tends to begin earlier in men than in women. Peak age of onset of schizophrenia is 15–25 years for men and 25–35 years for women.

Schizophrenia rarely starts during childhood or after age 45(late onset schizophrenia). People with schizophrenia or other psychotic disorders in their family may be more likely to get it.

WHAT CAUSES IT?

Scientists don’t know the cause. A person’s genes, experiences, and setting may all be involved. Theories include how active and how well certain areas of the brain work, as well as problems with brain chemicals such as dopamine and glutamate. There may be structural differences, too, like loss of nerve cells that result in larger fluid-filled cavities or "ventricles” in the brain.

Etiology

While the etiology of schizophrenia is not known, certain factors have been implicated in its development.

1. Genetic factors

a. Schizophrenia occurs in1% of the population. Persons with a close genetic relationship to a patient with schizophrenia are more likely than those with a more distant relationship to develop the disorder .

b. Markers on chromosomes 1, 6, 7, 8, 13, 21, and 22 have been associated with schizophrenia.

2. Other factors

a. The season of birth is related to the incidence of schizophrenia. More people with schizophrenia are born during cold weather months (i.e., January to April in the northern hemisphere, and July to September in the southern hemisphere). One possible explanation for this finding is viral infection of the mother during pregnancy, since such infections occur seasonally.

b. No social or environmental factor causes schizophrenia. However, because patients with schizophrenia tend to drift down the socioeconomic scale as a result of their social deficits (the "downward drift" hypothesis), they are often found in lower socioeconomic groups (e.g., homeless people).

Neural pathology

1. Anatomy

a. Abnormalities of the frontal lobes

b. Lateral and third ventricle enlargement, abnormal cerebral symmetry, and changes in brain density also may be present.

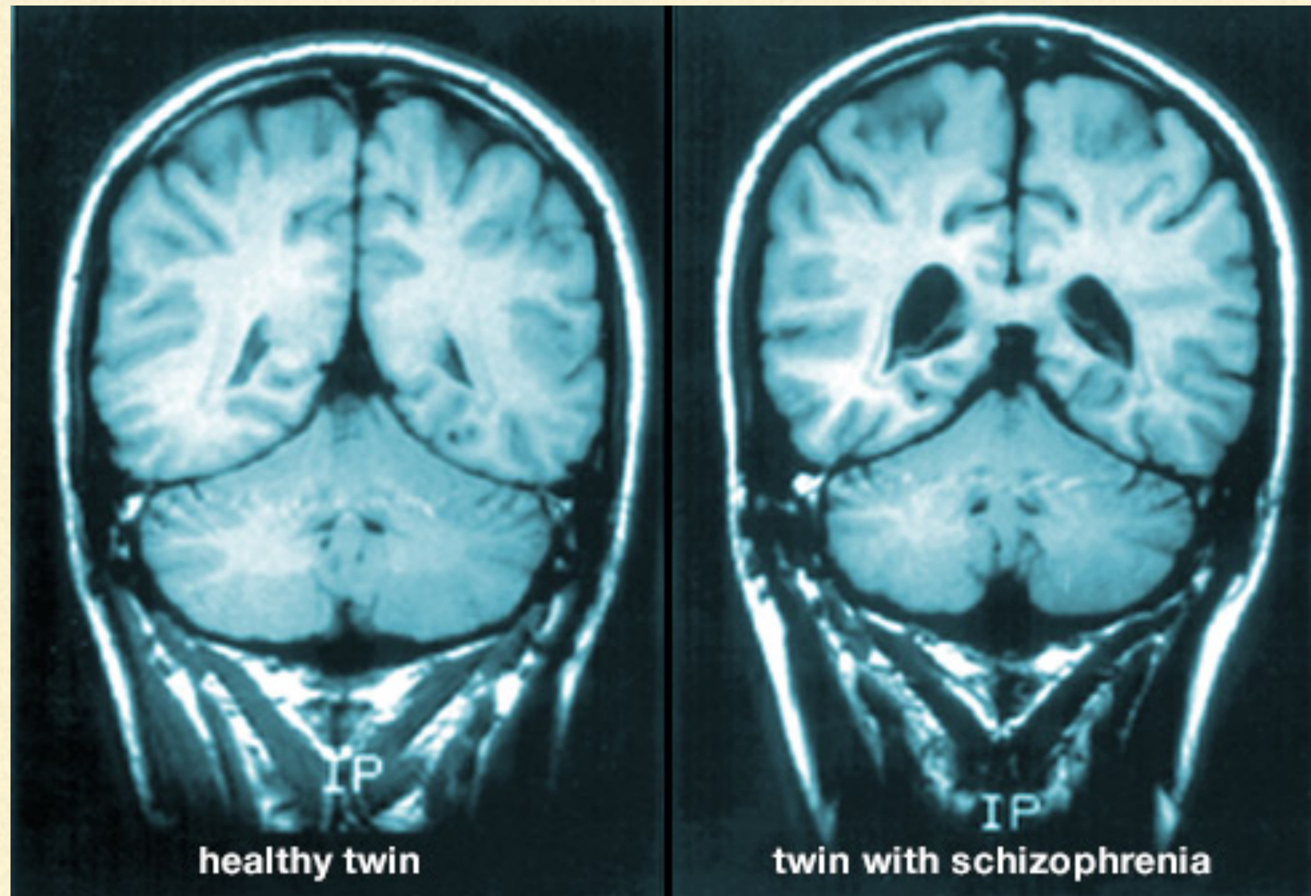
c. Decreased volume of limbic structures (e.g., amygdala, hippocampus) is also seen.

Neurotransmitter abnormalities

a. The dopamine hypothesis of schizophrenia states that the positive symptoms result from excessive dopaminergic activity (e.g., an excessive number of dopamine receptors, excessive concentration of dopamine, hypersensitivity of receptors to dopamine) in the **mesolimbic tracts**. As evidence for this hypothesis, stimulant drugs that increase dopamine availability (e.g., amphetamines and cocaine) can cause psychotic symptoms. The negative symptoms of schizophrenia are believed to result from reduced dopaminergic activity in the **mesocortical tract.**

b. Serotonin hyperactivity is implicated in schizophrenia because hallucinogens that increase serotonin concentrations cause psychotic symptoms, and because some effective antipsychotics, such as clozapine, have anti-serotonergic-2 (5-HT_2) activity.

c. Glutamate is implicated in schizophrenia; N-methyl-d-aspartate (NMDA) antagonists (e.g., memantine) are useful in treating some of the neurodegenerative symptoms (e.g., loss of cognitive abilities) in patients with schizophrenia.


IP
IP
healthy twin
twin with schizophrenia

HOW DOCTORS DIAGNOSED IT?

There are no lab tests to find schizophrenia, so doctors usually base a diagnosis on a person's history and symptoms. They will first rule out other medical causes. In teens, a combination of family history and certain behaviors can help predict the start of schizophrenia. The period when symptoms first start to arise and before the first episode of psychosis (FEP) is called the prodromal period. It can last days, weeks or even a years. Sometime it can be difficult to recognize because there is usually no specific trigger. Prodrome is accompanied by what can be perceived as subtle behavioral changes, especially in teens. These behaviors include withdrawing from social groups and expressing unusual suspicions, but that's not enough for a diagnosis.

COURSE

Schizophrenia has three **phases:** Prodromal, active(i.e., psychotic) and residual.

1. **Prodromal** signs and symptoms occur prior to the first psychotic episode and include avoidance of social activities; physical complaints; and new interest in religion, the occult, or philosophy.

2. In the **active phase,** the patient loses touch with reality. Disorders of perception, thought content, thought processes, and form of thought occur during an acute psychotic episode.

3. In the **residual phase** (time period between psychotic episodes), the patient is in touch with reality but does not behave normally.
   a. This phase is characterized by negative symptoms.
   b. In this phase the patient typically shows intact memory capacity; is oriented to person, place, and time; and has a **normal level of consciousness** (e.g., is alert).

PROGNOSIS

1. Schizophrenia usually involves repeated psychotic episodes and a chronic, downhill course over years. The illness often stabilizes in midlife.
2. Suicide is common in patients with schizophrenia. More than 50% attempt suicide (often during post-psychotic depression or when having hallucinations “commanding” them to harm themselves), and 10% of those die in the attempt.
3. The prognosis is better and the suicide risk is lower if the patient is older at onset of illness, is married, has social relationships, is female, has a good employment history, has mood symptoms, has few negative symptoms, and has few relapses.

PROGNOSIS

Good Prognosis	Poor Prognosis
Late onset	Young onset
Obvious precipitating factors	No precipitating factors
Acute onset	Insidious onset
Good premorbid social, sexual, and work histories	Poor premorbid social, sexual, and work histories
Mood disorder symptoms (especially depressive disorders)	Withdrawn, autistic behavior
Married	Single, divorced, or widowed
Family history of mood disorders	Family history of schizophrenia
Good support systems	Poor support systems
Positive symptoms	Negative symptoms
	Neurological signs and symptoms
	History of perinatal trauma
	No remissions in 3 years
	Many relapses
	History of assaultiveness

Approximate Occurrence	GROUP
1%	The general population
10%	Person who has one parent or sibling (or dizygotic twin) with schizophrenia
40%	Person who has two parents with schizophrenia
50%	Monozygotic twin of a person with schizophrenia

Differential Diagnosis

1. Medical illnesses that can cause psychotic symptoms, and thus mimic schizophrenia (i.e., psychotic disorder caused by a general medical condition), include neurologic infection, neoplasm, trauma, disease (e.g., Huntington disease, multiple sclerosis), temporal lobe epilepsy, and endocrine disorders (e.g., Cushing syndrome, acute intermittent porphyria).
2. Medications that can cause psychotic symptoms include analgesics, antibiotics, anticholinergics, antihistamines, antineoplastics, cardiac glycosides (e.g., digitalis), and steroid hormones.
3. Psychiatric illnesses other than schizophrenia that may be associated with psychotic symptoms include:
    a. Other psychotic disorders .
    b. Mood disorders (e.g., the manic phase of bipolar disorder, major depression).
    c. Cognitive disorders(e.g.,delirium, dementia, and amnestic disorder).
    d. Substance-related disorders.
4. Schizotypal, paranoid, and borderline personality disorder are not characterized by frank psychotic symptoms but have other characteristics of schizophrenia (e.g., odd behavior, avoidance of social relationships).

Management

1. Pharmacologic management of schizophrenia includes traditional antipsychotics (dopamine-2 [D_2]-receptor antagonists) and atypical antipsychotic agents. Because of their better side-effect profiles, the atypical agents are now first-line treatments. Long-acting injectable "depot" forms (e.g., haloperidol decanoate) of antipsychotics are useful options in patients whose symptoms lead to noncompliance with medication.

2. Psychological management, including individual, family, and group psychotherapy, is useful to **provide long-term support** and to foster adherence to the drug regimen.

DELUSIONAL DISORDER

- A delusion is a belief held with strong conviction despite superior evidence to the contrary
- uncommon psychiatric condition in which patients present with one or more delusions with a duration of one month or longer
- absence of thought disorder, mood disorder, or significant flattening of affect
- Auditory , visual , olfactory or tactile hallucinations related to the content of the delusion may be present
- the delusion or delusions cannot be due to the effects of a drug, medication, or general medical condition
- cannot be diagnosed in an individual previously diagnosed with schizophrenia.
- A person may be high functioning in daily life as this disorder bears no relation to one's IQ.

- 50% recover completely; many have relatively normal social and occupational functioning

DELUSIONAL DISORDER

- DSM defines six subtypes-
- erotomanic -believes that someone is in love with him/her (usually of higher status)
- grandiose - believes that he/she is the greatest, strongest, fastest, richest, and/or most intelligent person ever
- jealous - believes that the love partner is cheating on him/her
- persecutory -believes that someone is following him/her to do some harm in some way
- somatic - believes that he/she has a disease or medical condition and mixed
- The illness is chronic and frequently lifelong
- delusions are logically constructed and internally consistent
- Despite his/her profound conviction, there is often a quality of secretiveness or suspicion when the patient is questioned about it
- Delusions also occur as symptoms of many other mental disorders, especially the other psychotic disorders

SCHIZOAFFECTIVE DISORDER

Diagnosis

- Symptoms of both schizophrenia and a mood disorder
- Uninterrupted period of illness where there is a major mood episode (major depressive/manic) concurrent with Schizophrenic symptoms, or alternating
- Delusions or hallucinations for 2 or more weeks in the absence of major mood episode (depressive or manic) during the lifetime duration of illness
- Major mood symptoms are mostly present Specify type

1. Bipolar
2. Depressive

SCHIZOAFFECTIVE DISORDER

Treatment

- Mood stabilizers for bipolar type (Lithium, Depakote)
- Also anticonvulsants
- Antidepressants for depression (Prozac, Lexapro)
- Antipsychotics
- Psychoeducation
- Behavioral Therapy
- Hospitalization until positive symptoms under control

SCHIZOPHRENIFORM DISORDER

Diagnosis

1. Two or more of the following during 1 month period(at least one should be (1), (2) or (3):

- Delusions
- Hallucinations
- Disorganized speech
- Grossly disorganized/ catatonic behavior
- Negative symptoms

Symptoms similar to Schizophrenia but duration is less

2. Episode lasts at least 1 month but less than 6 months

SCHIZOPHRENIFORM DISORDER

Treatment

- Antipsychotics Therapy
- Psychoeducation
- Behavioral Therapy
- Social Skills Training
- Hospitalization until positive symptoms under control

BRIEF PSYCHOTIC DISORDER

Diagnosis

1. Presence of one or more of the following symptoms:

- Delusions
- Hallucinations
- Disorganized speech
- Grossly disorganized or catatonic behavior

2. Lasts at least one day but less than one month

3.Full return to premorbid level of functioning

4.Often in response to a very stressful event, such as a death in the family

- Rule Out

  Major depressive or bipolar disorder with psychotic features

  Other psychotic disorder

BRIEF PSYCHOTIC DISORDER

Treatment

- Anti-psychotic Therapy
- Psychoeducation
- Hospitalization until positive symptoms under control

PSYCHOTIC DISORDER DUE TO A GENERAL MEDICAL CONDITION

Diagnosis

1. Prominent hallucinations or delusions
2. Direct pathophysiological consequence of another medical condition

Not better explained by another mental disorder
Not occurring exclusively during the course of a delirium
Specify with delusions or hallucinations

SHARED PSYCHOTIC DISORDER

Folie à deux: French for "madness of two"), or **shared psychosis**, is a psychiatric syndrome in which symptoms of a delusional belief and sometimes hallucinations are transmitted from one individual to another. Shared psychotic disorders usually happen only in long-term relationships in which the person who has the psychotic disorder is dominant and the other person is passive. Usually, treatment involves separating the person who has the shared psychotic disorder from the person who has the psychotic disorder.

10%–40% recover completely when separated from the person who has the psychotic disorder.

If the symptoms continue even after separating the person from their contact who has a psychotic disorder, they may need to take antipsychotic medicines for a short time.

You are seeing a 45-year-old man with no psychiatric history who tells you that his parents are conspiring to destroy his privacy. He says they have planted a bug in his refrigerator to see what he eats. He is seeing you on his lunch break from his job of 5 years, and appears well- dressed. He denies illicit drug use, and says that he has a number of close friends who have tried to convince him his refrigerator is not bugged. What is the most likely diagnosis?

(A) schizophrenia

(B) brief psychotic disorder

(C) delusional disorder

(D) paranoid personality disorder

(E) MDD with psychotic features

A 60-year-old woman whose husband believes (in the absence of any evidence) that their house is filled with radioactive dust worries about her ability to clear the house of the dust when he is hospitalized. What is the most appropriate diagnosis for this woman?

(A) Schizophrenia
(B) Schizoaffective disorder
(C) Schizophreniform disorder
(D) Brief psychotic disorder
(E) Delusional disorder
(F) Shared psychotic disorder
(G) Psychosis due to a general medical condition

A 40-year-old attorney is convinced that his wife is trying to kill him. When he locks himself in the basement and refuses to come out, the police are called and he is taken to the emergency room of the local hospital. The wife, who denies her husband's charge, notes that the patient has been showing increasingly strange behavior over the past 9 months. An abnormal gait is observed on physical examination. The history reveals that the patient's mother and uncle, who had shown similar psychiatric and physical symptoms, died in their early 50s after being institutionalized in long-term care facilities for many years. What is the most appropriate diagnosis for this patient?

- **(A)** Schizophrenia
  (B) Schizoaffective disorder
  (C) Schizophreniform disorder
  (D) Brief psychotic disorder
  (E) Delusional disorder
  (F) Shared psychotic disorder
  (G) Psychosis due to a general medical condition

A 37-year-old man presents to your office complaining of auditory hallucinations that have worsened over the last several months. He notes that the Devil has been telling him that he is "no good," and that he will not "amount to anything." During the last several months, the patient also reports feeling "depressed" and has been sleeping poorly. He has no desire to get out of bed and has lost interest in even watching sports (normally one of his favorite activities). The patient states that even when his mood is improved, he still cannot "get the voices out of my head." He denies using any drugs or alcohol. Which diagnosis best accounts for this patient's symptoms?

(A) major depression
(B) schizophrenia
(C) schizoaffective disorder
(D) bipolar II disorder
(E) schizoid personality disorder

Good Luck