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TEXTBOOK OF PSYCHIATRY

Concepts to Clinics

As per the Competency-based Medical Education Curriculum (NMC)



Praveen Tripathi

JAYPEE

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2 Schizophrenia and Other Primary Psychotic Disorders

Praveen Tripathi, Priyanka Goyal

PS5.1	Classify and describe the magnitude and aetiology of schizophrenia and other psychotic disorders
PS5.2	Enumerate, elicit, describe and document clinical features, positives
PS5.3	Describe the treatment of schizophrenia including behavioural and pharmacologic therapy
PS5.4	Demonstrate family education in a patient with schizophrenia in a simulated environment
PS5.5	Enumerate and describe the pharmacologic basis and side effects of drugs used in schizophrenia
PS5.6	Enumerate the appropriate conditions for specialist referral in patients with psychotic disorders

Schizophrenia is the prototype of psychotic disorders. It is one of the "**serious mental disorders**" and possibly evokes more curiosity and interest in the general public than any other psychiatric disorder. It causes immense health, social, and economic burdens that affect the patients, caregivers, and society at large.

HISTORY

The understanding of schizophrenia has evolved over time, with the contribution of many eminent personalities.

Emil Kraepelin

Based on the symptoms and course of illness, Emil Kraepelin classified psychiatric disorders into the following two major categories:

1. **Dementia praecox:** It was characterised by symptoms of delusions and hallucinations, a **long-term deteriorating course** and gradual **cognitive decline** (i.e., gradual decline of cognitive functions such as memory, attention and goal-directed behaviour). Kraepelin believed that this disorder was caused by a neurodegenerative process and emphasised on cognitive decline (hence the term dementia) and early age at onset (hence the term praecox). Later, Eugen Bleuler, a Swiss psychiatrist, renamed "dementia praecox" as "schizophrenia", which is the current name of this disorder.
2. **Manic-depressive psychosis:** It was characterised by distinct manic and depressive episodes. The patient would have **episodic illness** alternating with periods of normal functioning, unlike dementia praecox, which was a continuous and progressively deteriorating illness.

Table 2.1: Dementia praecox and manic depressive psychosis.

	Dementia praecox	*Manic depressive psychosis*
Clinical features	Delusions and hallucinations	Distinct manic and depressive episodes
Course	Continuous and deteriorating	Episodic
Cognitive decline	Present	Absent

Further, unlike dementia praecox, there was **no cognitive decline** in manic depressive psychosis. Later "manic depressive psychosis" was renamed "bipolar disorder" **(Table 2.1)**.

Eugen Bleuler

Bleuler coined the term "**schizophrenia**". The term "schizophrenia" is derived from the Greek words schizein (which means splitting) and phrene (which refers to mind). The term 'schizophrenia' literally means 'splitting of mental functions', which refers to the loss of coherent mental functioning seen in schizophrenia. Schizophrenia is not the same as "split personality". The "split personality" or "multiple personality disorder" is a personality disorder and should not be confused with schizophrenia.

Bleuler observed that the illness was not always associated with a cognitive decline and did not always have an early onset, as suggested by the Kraepelin. Bleuler described four fundamental (primary) symptoms, which he believed were diagnostic of schizophrenia. These are often referred to as 4 A's of Bleuler **(Table 2.2)**.

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Table 2.2: Four A's of Bleuler.

Autism	The term "autism" refers to the withdrawn behaviour wherein the patient is preoccupied with his thoughts and appears uninterested in external events. Bleuler's "autism" should not be confused with the childhood disorder of "autism", which is a distinct clinical entity
Ambivalence	Ambivalence refers to the inability to take decisions. Patients with ambivalence face difficulty in deciding for or against. For example, while walking, a patient with schizophrenia suddenly appeared confused as he could not decide whether to put his foot forward or backwards
Affect disturbances	It refers to emotional disturbances such as inappropriate affect
Association disturbances	It refers to disturbances in the organisation of thought, such as loosening of associations

Note: Apart from the fundamental symptoms, Bleuler also described the accessory (secondary) symptoms of schizophrenia, such as delusions and hallucinations.

Kurt Schneider

Schneider described a list of eleven symptoms that were seen frequently in patients with schizophrenia and could be used for making the diagnosis. However, Schneider had stressed that these symptoms, referred to as **First Rank Symptoms**, could be seen in other psychiatric disorders too and are not specific to schizophrenia **(Table 2.3)**. These include:

PRIMARY AND SECONDARY DELUSIONS

- **Primary delusions:** These delusions arise as a direct result of a morbid psychological process caused by the underlying disorder
- **Secondary delusions:** These develop secondarily to some other psychopathology. For example, a patient who had auditory hallucinations and heard a voice that repeatedly said, "you will be killed", started believing that "somebody wants to kill him". This "delusion of persecution" that developed is a secondary delusion as it developed secondarily to the auditory hallucinations.

Table 2.3: Schneiderian first-rank symptoms (SFRS).

The 11 SFRS can be further clubbed into subgroups:	
Three thought alienation phenomena (passivity of thought)	In the thought alienation phenomenon, the patient experiences that his internal thought processes can be influenced or tampered with by others. Three types of thought alienation have been described as first-rank symptoms. These include: 1. **Thought insertion:** In thought insertion, the patient experiences thoughts being inserted into his mind by an external force 2. **Thought withdrawal:** In thought withdrawal, the patient experiences that thoughts are being taken away from his mind by an external force 3. **Thought broadcast:** In thought broadcast, the patient experiences that thoughts are "escaping" his mind and others can access them
Three "made" phenomenon	Here, the patient experiences that his actions, emotions or drives are being controlled by external forces. Three types of made phenomenon are included in SFRS: 1. **Made volition (passivity of volition):** Here, the patient experiences that an external agency is controlling his actions. For example, a patient with schizophrenia would repeatedly attempt to touch the blades of a running fan. When asked for the reason, he replied, 'I don't want to touch the fan, but I am being made to. An alien control my hands and makes me do all these dangerous activities. I am helpless" 2. **Made affect (passivity of emotion):** Here, the patient experiences that an external force is controlling his emotions. For example, a patient said, "at times I start laughing loudly, and at times I cry. The neighbours control my emotions, they play with my emotions. They can change how I feel whenever they want to. I am helpless" 3. **Made impulse (passivity of impulse):** Here, the patient experiences that impulses (sudden drives or urges) are being imposed upon him by external forces. For example, a patient suddenly threw his coffee mug at a nurse. When asked for a reason, he replied, "an impulse came over me; this impulse was sent by CBI officers who wanted me to throw the mug. I tried resisting the impulse but could not. I am sorry." Please note that the patient with made volition experienced that an external agency controlled the movement of his hand. In contrast, the patient with made impulse experienced that the external agency put an impulse in him, and the patient himself took action on that impulse

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The 11 SFRS can be further clubbed into subgroups:	
Three auditory hallucinations	There are three distinct types of auditory hallucinations, which are first-rank symptoms. These include: 1. **Voices heard arguing:** Here, the patient reports hearing two or more voices (the term **'voices'** is often used to describe 'auditory hallucinations') which argue about or discuss the patient. The patient is usually referred to in the third person (hence called **third-person auditory hallucination**). For example, a patient-reported hearing two voices that were having a conversation about the patient. The first voice of a middle-aged man said, "he is a strange man; he doesn't have any good qualities". The second voice of an elderly woman responded, "yes, also look how fat has he become". In this example, the patient is hearing two voices, and the voices are using the word "he" to refer to the patient. Hence the patient is being referred to in the third person 2. **Voices giving running commentary** (Voices commenting on patient's action): Here, the patient hears voices that give a running commentary on the patient's activities. For example, a patient working in the kitchen heard the following voice "she has peeled the potato, and now she is about to switch on the gas. Now, she has started to wash the potatoes". The voice usually refers to the patient in the third person, and hence this is also an example of third-person auditory hallucinations 3. **Audible thoughts (thought echo):** Here, the patient hears a voice that says the patient's thoughts aloud. For example, a patient thought, "I will have dinner at a restaurant tonight". Immediately he heard a voice of a middle-aged woman saying: "I will have dinner at a restaurant tonight". The German word **"Gedankenlautwerden"** or the French word **"echo de pensee"** are occasionally used to describe audible thoughts
Somatic passivity	Here, the patient experiences specific somatic hallucinations (such as tactile hallucinations) and believes that an external force is causing them. For example, a patient felt an intense burning sensation inside his right knee and claimed that it was because of UV rays sent by CIA agents from New York
Delusional perception	In delusional perception, a normal perception is interpreted delusionally, or in other words, a delusional explanation is attached to a normal perception. For example, a patient with schizophrenia looked at the ceiling fan and immediately understood that "all the people in the city consider him a homosexual". In this example, there was a normal perception in the first step (i.e., the patient saw a ceiling fan), and in the second step, a delusional meaning was attached to this normal perception (i.e., the delusion that everybody in the city considers the patient a homosexual). Delusional perception is a type of **"primary delusion"**

Ernst Kretschmer

Kretschmer studied the association of body types with psychiatric disorders and described that schizophrenia occurred more in persons with **asthenic** (thin, less muscular) and **athletic** (muscular) body types, whereas bipolar disorder was more likely to occur in **pyknic** (short and stocky) body type.

EPIDEMIOLOGY

- The lifetime prevalence of schizophrenia is around 1%.
- The point prevalence ranges from 0.27 to 0.83%.
- The incidence rate of schizophrenia is around 0.2/1,000/year.

Indian data: According to the **National Mental Health Survey (NMHS 2016)**, the lifetime prevalence and current prevalence of schizophrenia and other psychotic disorders were 1.41% and 0.42%, respectively. (Kindly note that the NMHS 2016 prevalence was for the entire schizophrenia spectrum disorders and not schizophrenia alone).

Schizophrenia is equally prevalent in men and women; however, the onset of illness is earlier in males and later in females. The peak age of onset is in adolescence and young adulthood (15–24 years). There is a **bimodal distribution** with a second peak in middle age in females.

If the onset is after 45 years of age, it is called **"late-onset schizophrenia"**.

Studies have found that persons who develop schizophrenia are more likely to be born in winters than in summers, although the reason for the same is unclear. Few studies found **prenatal influenza exposure** and **advanced paternal age** to be associated with the risk of the development of schizophrenia. Higher rates of birth complications and physical anomalies at birth have also been found in patients with schizophrenia.

PREVALENCE OF SCHIZOPHRENIA IN SPECIFIC POPULATIONS

- Monozygotic twin of patients with schizophrenia (**monozygotic concordance rate**): 47%
- Dizygotic twin of patients with schizophrenia (**dizygotic concordance rate**): 12%
- Non-twin siblings of patients with schizophrenia: 8%
- Children with both parents having schizophrenia: 40%
- Children with one parent having schizophrenia: 12%
- General population: 1%

DOWNWARD DRIFT HYPOTHESIS

The prevalence of schizophrenia is higher in the lower socioeconomic class. The reason for this, according to the downward drift hypothesis, is that patients with schizophrenia often face difficulties in finding meaningful employment and get estranged from their family and thus, drift down the socioeconomic class. Hence, belonging to lower socioeconomic classes does not increase the chances of developing schizophrenia; instead, developing schizophrenia leads to migration to the lower socioeconomic class.

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CLINICAL FEATURES

The symptoms of schizophrenia can be divided into the following groups:

Positive Symptoms (Psychotic Symptoms)

Hallucinations and **delusions** are the two positive symptoms (psychotic symptoms) of schizophrenia. The term "positive" is used as there is an **addition of new experiences** (i.e., hallucinations and delusions) due to the disease process of schizophrenia. The predominance of positive symptoms is associated with a better prognosis in schizophrenia.

Hallucinations can occur in any five sensory modalities, the most common being auditory hallucinations. More than 70% of patients with schizophrenia experience auditory hallucinations. The content of "voices" is usually threatening, derogatory and negative (e.g., a patient-reported hearing a voice that said, "you will not be allowed to work as you are a useless person"). Certain auditory hallucinations like "voices discussing or arguing about the patient", "voices giving running commentary", and "audible thoughts" have special significance in schizophrenia. Visual hallucinations are the second most common type of hallucinations. Olfactory, gustatory and tactile hallucinations are present less often.

Delusions are also commonly present in schizophrenia, the most common being the delusion of persecution.

The positive symptoms **respond better to the anti-psychotic medications** than the negative symptoms or disorganisation symptoms.

Negative Symptoms

Negative symptoms are so-called as they represent "**loss of normal functions**" of the brain in patients with schizophrenia. Negative symptoms remain more stable over the time than positive and disorganisation symptoms and are **better predictors of long-term disability** in the patients. The following are the negative symptoms:

a. **Avolition:** Avolition is the loss of will or drive to indulge in goal-directed activities (such as grooming and hygiene, educational and occupational activities)
b. **Apathy:** Apathy is the lack of concern for a task or results. For example, a student with schizophrenia failed an exam; however, he appeared totally unconcerned with the results.
c. **Anhedonia:** Anhedonia is the inability to experience pleasure in activities or relationships that were previously pleasurable. For example, a cricket enthusiast stopped playing and watching cricket entirely as he was no longer able to enjoy the game.
d. **Asociality:** Asociality is the lack of desire to socialise and an indifference to social relations, including with family and friends.
e. **Affective flattening (or blunting):** Affective flattening refers to the lack of or severe restriction of expression of emotions.
f. **Alogia:** Alogia is decreased speech output.

Disorganisation Symptoms

The disorganisation symptoms include the following:

a. **Disorganised behaviour:** It refers to **inappropriate** or odd behaviours. For example, a patient with schizophrenia would wear thick jackets and sweaters even during the peak summer and was often seen eating from the garbage bin.
b. **Disorganised thought and speech:** It refers to the disorganisation of thought processes, also called **Formal thought disorders**. The disorganised thought manifests in disorganised speech, which is difficult to understand and sometimes makes no sense.
c. **Inappropriate affect:** It refers to the disturbances of affect (emotions), such as having a burst of laughter in the middle of a serious conversation.

Motor Symptoms

Motor symptoms, also known as **Catatonic symptoms** or **symptoms of conation**, were first described by a German psychiatrist, **Karl Kahlbaum**, who also coined the term "**catatonia**". Motor symptoms are sometimes clubbed with disorganisation symptoms; however, recent research indicates that they constitute a separate symptom complex.

The motor symptoms include:

a. **Stupor:** Stupor is a state of extreme inactivity or immobility (akinesis). The patient is minimally responsive to any kind of stimulus.
b. **Excitement:** Catatonic excitement involves extreme hyperactivity, which is non-goal-directed. The patient may appear very active, even aggressive, but not indulge in any meaningful task.
c. **Mutism:** Lack of verbal response or minimal verbal response.
d. **Posturing:** It refers to the maintenance of the same posture for prolonged periods of time (e.g., a patient stood on one foot with his right hand behind his head for hours).



Fig. 2.1: Posturing.

e. **Waxy flexibility:** It refers to the feeling of plastic resistance, which the examiner experiences when he makes

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DIAGNOSIS

According to DSM-5, for the diagnosis of schizophrenia, the total duration of illness should be at least six months (this 6-month period can include the period of non-specific symptoms like changes in behaviour, development of new interests, social withdrawal, etc.). This 6 month period must also include at least 1 month during which the patient has two or more of the following symptoms. At least one of these two symptoms should be (1), (2) or (3).

1. Delusions
2. Hallucinations
3. Disorganised speech (which is a result of formal thought disorders)
4. Disorganised behaviour or catatonic behaviour (symptoms)
5. Negative symptoms (i.e., diminished emotional expression or avolition)

The ICD-11 also uses similar symptoms criteria for the diagnosis of schizophrenia; however, the duration criterion of ICD-11 is **1 month** and not **6 months**.

AETIOLOGY

Schizophrenia is caused by a combination of multiple factors, which can be divided into two major groups: Genetic factors and environmental factors.

Genetic Factors

1. **Genetics:** There is a strong genetic contribution to the development of schizophrenia. It is evident by the fact that the first-degree relatives of schizophrenia patients are more likely to develop schizophrenia than the control group, and the rate of occurrence decreases in the second-degree relatives and further drops in the third-degree relatives. Since genetic sharing also decreases as one goes from first-degree relatives to third-degree relatives, it is hypothesised that genetics play an important role. This hypothesis is further strengthened by a much higher prevalence rate in monozygotic twins of schizophrenia patients (monozygotic concordance rate) in comparison to the dizygotic twins of schizophrenia patients (dizygotic concordance rate).
2. At the same time, it must be remembered that most cases of schizophrenia in the general population are sporadic and have no affected family members.
3. It appears that schizophrenia has polygenic inheritance with multiple genes involved and all adding to susceptibility by small to moderate effects. Linkage studies have found linkage to the following chromosomal sites: 1q, 2q, 5q, 6p, 6q, 8p, 10p, 13q, 15q and 22q.
4. The candidate genes for which most evidence is available include NRG1 (neuregulin 1), DTNBP1 (dystrobrevin-binding protein 1 gene, or dysbindin), DISC1 (disrupted in schizophrenia), RGS4 (regulator of G protein signalling), COMT (catechol-o-methyl transferase) and GRM3 (glutamate metabotropic receptor 3).

SCHIZOPHRENIA AND 22Q11. 2 DELETION SYNDROME

22q11.2 deletion syndrome (DiGeorge syndrome, velocardiofacial syndrome) is a genetic syndrome associated with hemizygous 22q11.2 deletions (i.e., on one chromosome 22). Its manifestations include mild facial dysmorphic features, velopharyngeal insufficiency, submucous cleft palate, hypernasal speech, cardiac defects, learning difficulties and late-onset manifestations such as psychiatric disorders that commonly include schizophrenia. Around 1% of the patients with schizophrenia have 22q11.2 deletion syndrome, and this is the only genetic form of schizophrenia that is clinically recognisable and can be confirmed by genetic testing.

NATURE VERSUS NURTURE

The fact that there is a familial aggregation of schizophrenia alone does not prove that it is genetically transmitted. It has been argued that the fact that schizophrenia runs in families, could be explained in two different ways:

1. Schizophrenia is genetically transmitted and hence runs in families (nature).
2. The way of the upbringing of children is such in certain families that it results in the development of schizophrenia (nurture).

Adoption studies have helped in separating the effects of genetics from upbringing. It has been found that children who were born to mothers with schizophrenia and were adopted away soon after the birth (hence eliminating any effects of upbringing by mothers with schizophrenia) still had much higher rates of development of schizophrenia compared with children who did not have any family history of schizophrenia and were adopted away soon after birth. These studies indicate that familial aggregation is because of genetic transmission rather than the effects of upbringing. Twin study results also support the same inference.

Environmental Factors

While genetic factors increase the vulnerability to the development of schizophrenia, interaction with environmental factors appears to be necessary to precipitate the illness.

The following environmental factors are relevant:

a. **Obstetric complications:** Patients who have schizophrenia are more likely to have a history of pre and perinatal complications, such as low birth weight, prematurity, resuscitation at birth, etc., in comparison to controls. It has been hypothesised that hypoxic-ischaemic damage could be the mechanism that increases the risk of the development of schizophrenia later in life. Severe prenatal malnutrition has also been hypothesised to increase the risk.

b. **Season of birth and maternal exposure to infection:** Studies have shown that patients with schizophrenia are more likely to be born in late winter and spring. One of the hypotheses to explain this observation is that respiratory infections like influenza tend to occur in autumn and winter, and it is actually the viral infection that increases the risk of the development of schizophrenia later in life. Many studies have suggested maternal exposure to

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influenza during the second trimester as a risk factor; however other studies have found no such risk. Apart from influenza, few studies have also found maternal infection with rubella to increase the risk; however, there is no conclusive evidence as yet.

c. **Childhood risk factors:** Studies have found that individuals who later develop schizophrenia are more likely to have poorer motor development, speech difficulties, delayed milestones and lower premorbid (premorbid means before the illness) IQ in their childhood than the control group. This finding supports that subtle brain abnormalities (which may be genetic or environmental in origin) mediate the development of schizophrenia.

d. **Social and geographical risk factors:** Studies have found that the incidence of schizophrenia is higher amongst those who grew up in **urban areas** than in rural areas. The underlying mechanism is yet not clear. Patients with schizophrenia are more likely to belong to lower socioeconomic status (social drift hypothesis).

e. **Immigration:** Studies have found that both first-generation migrants and second-generation migrants have an increased risk of developing schizophrenia, especially for migrants from lower socioeconomic countries and blacks moving into predominantly white societies.

f. **Drug abuse:** Use of illicit substances is much more prevalent in patients with schizophrenia than in controls. Recent research suggests that **cannabis use** can be a causal factor in some cases of schizophrenia.

Neurobiology

Abnormalities in multiple neurotransmitters have been implicated in the development of schizophrenia.

a. **Dopamine:** The most extensively investigated neurotransmitter in schizophrenia is dopamine. The current hypothesis says that the positive symptoms of schizophrenia are caused by a **hyperdopaminergic** state in the **mesolimbic tract** (a tract that connects the ventral tegmental area to the nucleus accumbens), and the negative symptoms of schizophrenia are caused by a **hypodopaminergic state** in the **mesocortical tract** (a tract that connects the ventral tegmental area to the prefrontal cortex). The efficacy of the antipsychotics, most of which are dopamine antagonists, supports the dopamine hypothesis.

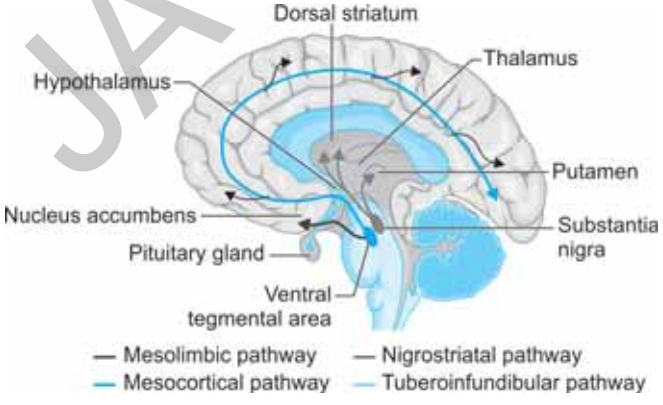

Fig. 2.2: Tracts in schizophrenia.

b. **Serotonin:** Apart from dopamine, an excess of serotonin has also been hypothesised to be involved in the development of schizophrenia. Again, the efficacy of atypical antipsychotics, which act as serotonin antagonists in addition to dopamine antagonists, supports the serotonin hypothesis.

c. Other neurotransmitters which have shown some evidence of involvement include glutamate, GABA, norepinephrine, acetylcholine, nicotine and neuropeptides.

Neuroanatomical and Neuropathological Factors

Various anatomical structures have been found to be abnormal structurally or functionally in patients with schizophrenia; however, it has not been possible to precisely localise the neuroanatomical abnormalities in schizophrenia. Some of the findings include:

- **Cerebral ventricles:** One of the fairly consistent findings is a reduction in cortical grey matter volume and enlargement of ventricles size (especially lateral and third ventricles). However, it must be remembered that though the increase in ventricular size is statistically significant, it is not grossly enlarged in most cases. And it is still not possible to use these findings for any diagnostic purposes.
- **Limbic system:** Limbic system is a set of brain structures, which have important functions, and includes the hippocampus (memory), anterior cingulate (attention), amygdala (emotions) and entorhinal cortex. Many studies have found a reduced size of these structures in patients with schizophrenia.
- **Prefrontal cortex:** It is the most anterior part of the cortex, and many studies have found decreased blood flow and decreased glucose utilisation in the prefrontal cortex in patients with schizophrenia (known as **hypofrontality in schizophrenia**)
- **Basal ganglia and cerebellum:** These structures are involved in controlling movements. Patients with schizophrenia often have abnormal movements such as stereotypies, mannerisms, etc. It appears that basal ganglia and cerebellum disturbances are related to these motor abnormalities. Further, it must be remembered that antipsychotic-induced movement disorders (a common side effect of antipsychotics) are also caused by the blockade of dopamine receptors in basal ganglia.

Other structures in which abnormalities have been found include the thalamus (neuronal loss, especially in the medial dorsal nucleus of the thalamus) and superior temporal gyrus (superior temporal gyrus is involved in auditory processing and its disturbances appear to be the reason for the development of auditory hallucinations).

Of late, it has been hypothesised that schizophrenia is caused by disturbances of neural circuits rather than dysfunction of discrete brain areas. According to preliminary research, the neural circuit linking the prefrontal cortex and limbic system appears to be involved in the development of schizophrenia.

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Electrophysiology

The study of changes in the brain's electrical activity in response to a stimulus has shown that in schizophrenia, various electrophysiological deficits are present. These deficits suggest an abnormality in information processing. Usually, in EEG, a wave called the **P300 wave** is seen about 300 milliseconds after a sensory stimulus. In patients with schizophrenia, this wave is smaller and suggests abnormal stimulus processing. Also, many patients have abnormalities in eye movement, especially smooth visual pursuit (the ability to follow a moving visual target), which again suggests abnormalities in neural pathways responsible for oculomotor control.

SOFT SIGNS IN SCHIZOPHRENIA

Soft signs are the neurological signs that do not localise the pathology and are elicited after a detailed neurological evaluation. Patients with schizophrenia often have soft signs such as astereognosis, dysdiadochokinesia, diminished dexterity and the presence of primitive reflexes.

TYPES

ICD-10 described the following types of schizophrenia.

Paranoid Schizophrenia

This clinical type is characterised by predominantly positive symptoms, i.e., hallucinations and delusions. It is the **most common type** of schizophrenia. It has a **late-onset (i.e., in the third or early fourth decade)** and a **good prognosis**. The **personality** is **usually preserved** (i.e., the person can maintain daily activities and social interactions normally).

Catatonic Schizophrenia

This clinical type is dominated by catatonic (motor) symptoms and has the **best prognosis** of all types.

Hebephrenic (Disorganised) Schizophrenia

This type is dominated by prominent disorganisation symptoms and negative symptoms. It has an **early onset (usually second decade)** and a **bad prognosis**. There is **severe deterioration of personality** (patient cannot maintain hygiene, social interactions are inappropriate, and odd behaviours such as giggling and mirror-gazing are often present).

Undifferentiated Schizophrenia

The schizophrenia not conforming to any of the above types or exhibiting features of more than one of the types is classified as undifferentiated schizophrenia.

Post Schizophrenic Depression

A depressive episode that develops after a schizophrenic illness. Some schizophrenic symptoms are still present but are no longer prominent. This disorder is associated with an **increased risk of suicide**.

Residual Schizophrenia

Residual schizophrenia is characterised by progression from an early stage (with prominent delusions and hallucinations) to a later stage where the delusions and hallucinations have become minimal and mostly negative symptoms are present.

Simple Schizophrenia

Simple schizophrenia has an insidious onset, and gradually negative symptoms develop and predominate the clinical picture. The delusions and hallucinations are not present. There is a significant behaviour change that manifests as loss of interest, idleness, aimlessness, a self-absorbed attitude and social withdrawal. These changes should be present for at least **1 year** before the diagnosis can be made.

DSM-5 AND ICD-11 CLASSIFICATION

The DSM-IV described multiple subtypes of schizophrenia similar to the above-mentioned ICD-10 subtypes. However, recent research has shown that these subtypes are not associated with different pathophysiology or prognoses and are not stable over time (e.g., a patient diagnosed with paranoid schizophrenia may show prominent motor symptoms later on and maybe diagnosed with catatonic schizophrenia later). Both ICD-11 and DSM-5 have **removed** the subtyping based on symptoms.

The types of schizophrenia that have been described in ICD-11 are according to the course of illness and include:

a. ***Schizophrenia, first episode:*** If a patient meets diagnostic criteria of schizophrenia and there have been no past episodes
b. ***Schizophrenia, multiple episodes:*** If a patient meets diagnostic criteria of schizophrenia, and there has been at least one episode in the past. Between the last and current episode, there was significant remission of symptoms
c. ***Schizophrenia, continuous:*** If a patient has been fulfilling the diagnostic criteria of schizophrenia for almost the entire duration of the illness (duration should be >1 year).

ICD-11 UPDATE

In ICD-11, Catatonia has been made a separate diagnostic category. The diagnosis of catatonia is made in the presence of significant motor symptoms or catatonic symptoms. It has been further divided into the following groups:

- Catatonia associated with another mental disorder (e.g., catatonia associated with schizophrenia, mood disorders or autism spectrum disorder)
- Catatonia induced by use of psychoactive substances (drugs of abuse) and medications

So, a patient who would have gotten the diagnosis of catatonic schizophrenia according to ICD-10 would get a diagnosis of Catatonia associated with schizophrenia according to ICD-11.

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OTHER CLASSIFICATIONS

Apart from ICD and DSM classifications, many other classifications have been used historically, and though rarely used now, they still deserve mention.

Type I and II Schizophrenia

TJ Crow attempted to find a relation between the symptoms of schizophrenia and the underlying neuropathology. He reported two syndromes in schizophrenia, called Type I and Type II schizophrenia. The differences between the two are summarised below:

	Type I	*Type II*
Characteristic symptoms	Positive symptoms	Negative symptoms
Response to antipsychotics	Good	Poor
Prognosis	Good	Poor
Underlying pathology (postulated)	Increased dopamine	Structural changes in brain manifested as dilatation of ventricles

Though this distinction between Type I and Type II is currently not used, it was an important classification as it attempted to establish the neuropathological basis of symptoms.

Pseudoneurotic Schizophrenia

The diagnosis of pseudo neurotic schizophrenia was used for patients who had significant anxiety symptoms, also called **pananxiety** (i.e., persistent anxiety symptoms), many neurotic symptoms, also called **panneurosis** (neurotic symptoms such as phobia, etc.) and preoccupation with sexual problems, also called **pansexuality**. It was found that these patients may later develop psychotic symptoms. Now, this diagnosis is no longer used. In the current classificatory system, these patients would be diagnosed with borderline personality disorder.

Pfropf Schizophrenia

This diagnosis was used when schizophrenia developed in a patient with **mental retardation**. Since their intelligence was limited, these patients would not have well-developed delusions or hallucinations; instead, the presentation was mostly with behavioural symptoms like aggression etc.

Van Gogh Syndrome

This diagnosis was used for schizophrenia patients who indulged in self-mutilation (injuring self). The syndrome is named after a famous painter, Vincent van Gogh who is believed to be suffering from schizophrenia and had cut off his left ear during the active phase of his illness.

COURSE AND OUTCOME IN SCHIZOPHRENIA

Course

The course of schizophrenia varies. The studies suggest that the patients may have one of the following courses:

1. A single psychotic episode followed by complete remission (no symptoms left and no further episodes)
2. A single psychotic episode followed by incomplete remission (symptoms improve partially however no other full-fledged episode)
3. Two or more episodes with complete remission between the episodes
4. Two or more episodes with incomplete remission between the episodes
5. Continuous illness (no remission achieved ever)

Long-term Outcomes

Schizophrenia is often believed to be a chronic, deteriorating illness with invariably poor outcomes; however, the research does not support this pessimistic view. Many long term studies that involved follow-up of patients with schizophrenia for many years (in some studies for >30 years) have shown that a significant proportion of patients have favourable outcomes. Although the results vary amongst the studies, they have shown a similar trend. Around 15–25% of the patients achieve **recovery (complete cure)**, about 43% show **significant improvemen**t with mild residual abnormalities that did not interfere with their living, around 44% had **significant symptoms** that required the patients to be hospitalised, and around 14–15% developed a severe and chronic illness.

One of the long-term follow-up studies conducted in India, called **SOFACOS (study of factors associated with the course and outcome of schizophrenia)**, had similar findings. In this study, 27% of patients had a **very favourable outcome**, 40% had a **favourable outcome**, 31% had an **intermediate outcome**, and only 2% had an **unfavourable outcome**.

The **World Health Organisation** has also carried out studies across the countries on the course and outcome of schizophrenia. These included the **International Pilot Study on Schizophrenia (IPSS), Determinants of Outcome of Severe Mental Disorders (DOSMED)** (DOSMED is also known as the 10 country study) and **International Study of Schizophrenia (ISoS)**.

One of the most interesting findings of IPSS and DOSMED was that the outcome of schizophrenia patients was **better** in developing countries compared to developed countries. It was found that the patients in developing countries had more frequent remissions, and the duration of remission was longer in comparison to patients in developed countries. The better outcome appears to be a combination of genetic factors and sociocultural factors, such as better integration of the patient into the traditional social structure that minimises social isolation in developing countries and lesser **expressed emotions** in the families in developing countries.

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EXPRESSED EMOTIONS

Expressed emotions refer to the emotions/attitudes expressed by close relatives towards a family member who has schizophrenia or other psychiatric illnesses. The negative expressed emotions include **over-involvement, criticism** and **hostility** towards the patient. It has been found that high expressed emotions predict a poorer outcome with an increased risk of relapse.

DURATION OF UNTREATED PSYCHOSIS

Duration of untreated psychosis (DUP) is the duration between the onset of psychotic symptoms and initiation of the treatment. It is correlated with the outcome of the illness, with longer DUPs predicting a poorer outcome.

DIFFERENTIAL DIAGNOSIS

Psychiatric Disorders

Psychiatric disorders that can present with delusions, hallucinations or catatonic features must be carefully ruled out before making the diagnosis of schizophrenia. These include:

1. Major depression with psychotic or catatonic features
2. Bipolar disorder with psychotic or catatonic features
3. Schizoaffective disorders, schizophreniform disorders and acute psychotic disorders
4. Delusional disorders
5. Schizotypal personality disorders
6. Obsessive-compulsive disorders with poor insight/psychotic symptoms
7. Autism spectrum disorder

Medical and Neurological Disorders

Psychotic symptoms may be a feature of the intoxication/withdrawal of certain substances. Many neurological disorders can present with psychotic symptoms too.

1. Substance-induced-cannabis, amphetamines, hallucinogens, cocaine, alcoholic hallucinosis, phencyclidine, barbiturate withdrawal
2. Epilepsy (particularly temporal lobe epilepsy)
3. Other neurological disorders such as Wilson's disease, Huntington's chorea, Systemic lupus erythematosus, etc.

MANAGEMENT

Antipsychotics (neuroleptics) are the mainstay of treatment in schizophrenia. Along with pharmacological treatment, psychosocial modalities are being increasingly used to improve the outcome in patients.

The treatment of schizophrenia can be divided into three phases:

a. **Acute phase:** In this phase patient is either in the first psychotic episode or is in relapse after prior remission. There are prominent psychotic symptoms, and the patient may be aggressive and violent. The treatment focuses on controlling symptoms and ensuring the safety of the patient and others. This stage usually lasts from **4 to 8 weeks**.
b. **Stabilisation phase:** Once the patient's acute symptoms are controlled, the patient enters the stabilisation phase. The patient continues to be at risk of relapse if medications are discontinued. The focus is to consolidate the therapeutic gains. This stage may continue for around **6 months**.
c. **Stable or maintenance phase:** After the stabilisation phase, the patient enters the stable phase. In this stage, the patient is in remission, and symptoms have significantly improved. The focus is to maintain the remission and help in rehabilitation and social integration.

Pharmacotherapy

The first antipsychotic, chlorpromazine, was introduced in 1952, and since then, many newer molecules have been developed. The use of antipsychotics helps achieve remission in around 70% of patients with schizophrenia.

In the acute phase, usually, **second-generation antipsychotics** are preferred as these have a better side effect profile than the first-generation antipsychotics. However, in certain patients, such as those who had shown a good response to first-generation antipsychotics in the previous episodes, first-generation antipsychotics can be used as the first choice. Antipsychotics work better on the positive symptoms (hallucinations and delusions) and have a lesser impact on negative and cognitive symptoms.

In highly agitated patients, where the rapid onset of action is required, the **intramuscular preparations** of antipsychotics are used. Along with antipsychotics, adjunctive medications are often used in the acute phase, such as benzodiazepines for agitation management and anticholinergics like promethazine to manage extrapyramidal side effects associated with antipsychotics and beta-blockers like propranolol for management of **akathisia** (a common side effect of antipsychotics).

With the advent of effective pharmacotherapy, the role of hospitalisation has decreased; nonetheless, hospitalisation should be done in case there is—a danger to the safety of the patient or others, in the presence of extreme agitation, severe side effects of drugs or significant disturbances of biological functions such as sleep and appetite.

Once the symptoms are under control, the stabilisation phase starts. The treatment is continued with the same medication in the same dosages in the stabilisation phase, along with monitoring of side effects.

In the **stable phase**, the continuation of antipsychotics has been found to decrease the relapse rate. Most of the guidelines do not give any definitive duration till which antipsychotics should be continued. A common practice is continuing antipsychotics for one to two years after the first episode of schizophrenia (**usually 2 years**).

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For patients with multiple episodes, the treatment should continue for at least five years, and treatment for an indefinite duration may be preferred in many cases.

Antipsychotics

Antipsychotics are the mainstay of treatment for psychotic disorders like schizophrenia, schizoaffective disorders, delusional disorders and others. Antipsychotics have been divided into two classes: (1) Typical antipsychotics, and (2) Atypical antipsychotics.

Typical Antipsychotics or First-generation Antipsychotics or Dopamine Receptor Antagonists (DRAs)

These were the first drugs found to be useful in treating schizophrenia. The first antipsychotic drug, chlorpromazine, was discovered accidentally in the early 1950s. Henri Laborit, a surgeon, had used chlorpromazine to decrease preoperative anxiety in his patients and found that after taking chlorpromazine, patients became quite relaxed and indifferent to the environment. Following this finding, Delay and Deniker used this molecule in patients with schizophrenia and mania and found it to be useful, and this started the journey of modern psychopharmacology.

The typical antipsychotics can be further classified according to chemical groups, as described below:

- **Phenothiazines:** Chlorpromazine, thioridazine, trifluoperazine, prochlorperazine, triflupromazine, fluphenazine, perphenazine
- **Thioxanthenes:** Thiothixene, flupenthixol
- **Butyrophenones:** Haloperidol, droperidol, penfluridol
- **Miscellaneous:** Pimozide, loxapine, molindone.

The typical antipsychotics can also be classified as **low potency (like chlorpromazine, thioridazine)** and **high potency (like haloperidol and fluphenazine)**. Apart from differing potency, the low potency and high potency antipsychotics also differ in their side effects profile.

***Mechanism of action*:** The typical antipsychotics are effective against positive symptoms but have minimal effect on negative symptoms. The therapeutic effect of typical antipsychotics is mediated by a blockade of dopamine-2 (D2) receptors in the **mesolimbic tract (pathway which connects the ventral tegmental area to the nucleus accumbens)**. It has been found that approximately **70%** of D2 receptors need to be blocked for clinical effects to be seen. While the D2 blockade in the mesolimbic tract is therapeutic, D2 receptors blockade in **the nigrostriatal pathway (pathway from substantial nigra to striatum)** is responsible for the extrapyramidal side effects of these medications. It has been found that the optimal dose of typical antipsychotics is at the "extrapyramidal symptoms threshold", i.e., the dose at which extrapyramidal side effects start to appear. Apart from dopamine receptors, typical antipsychotics also block cholinergic, noradrenergic and histaminergic receptors, and these actions mediate many side effects of these drugs.

The first-line treatment for catatonic schizophrenia (catatonia associated with schizophrenia) includes **intravenous lorazepam** and **electroconvulsive therapy,** unlike other types which are treated with antipsychotics.

***Pharmacokinetics*:** The typical antipsychotics are well absorbed when administered orally and reach peak levels in around one to four hours. When administered intramuscularly, the peak levels are reached in about 30–60 minutes, and this helps in the rapid onset of action as is needed in a patient with acute agitation. The half-life of most typical antipsychotics is around 24 hours. Most typical antipsychotics are metabolised in the liver by cytochrome P450 2D6 and P450 3A.

***Side effects*:** The common side effects of typical antipsychotics are as follows

Movement disorders: The antipsychotics can cause various movement disorders, collectively referred to as **extrapyramidal symptoms** (or **extrapyramidal side effects**). These side effects are caused by the blockade of dopamine receptors in the **nigrostriatal tract** (neural pathway from substantia nigra to striatum). The movement disorders are **more commonly** seen with typical antipsychotics than atypical antipsychotics. Amongst typical antipsychotics, high potency typical antipsychotics are **more likely to** cause these side effects. The movement disorders can be of the following types:

- **Acute dystonia:** It is the **earliest side effect** of antipsychotics and can be seen within minutes of receiving an injectable antipsychotic (oral antipsychotics can also cause acute dystonia, though it is less likely). It is characterised by a **sudden contraction** of a muscle group resulting in symptoms like **torticollis**, trismus (contraction of jaw muscles), **deviation of eyeballs** (oculogyric crisis due to contraction of extraocular muscles), laryngospasm, etc. The management includes immediate administration of parenteral **anticholinergics** like benztropine, promethazine or **diphenhydramine**. To prevent acute dystonia, prophylactic use of oral anticholinergics is suggested while prescribing typical antipsychotics.



Fig. 2.3: Oculogyric crisis.

- **Acute akathisia:** It is the **commonest side** effect of antipsychotics and is characterised by an **inner sense of restlessness** along with **objective, observable movements** such as **fidgeting** of legs, **pacing around**, **and inability to sit** or **stand** in one place for a long time. The treatment options include beta-blockers such as propranolol (**drug of choice**), **anticholinergics** and **benzodiazepines**. The antipsychotic can also be changed to second-generation or low potency first-generation antipsychotics, as they are less likely to cause akathisia.
- **Drug-induced parkinsonism:** It is characterised by the triad of rigidity, bradykinesia and resting tremors.

MEDICAL BROTHERS

- ❒ Zotepine
- ❒ Lurasidone
- ❒ Asenapine
- ❒ Amisulpride
- ❒ Brepiprazole
- ❒ Cariprazine
- ❒ Pimavanserin

NEWER ANTIPSYCHOTICS

- **Brexpiprazole:** It is an atypical antipsychotic that acts as a partial agonist at D2 and 5HT1A receptors and an antagonist at 5HT2A receptor.
- **Cariprazine:** It is an atypical antipsychotic that acts as a partial agonist at D2, D3 and 5HT1A receptors and an antagonist at the 5HT2A receptor. However, unlike aripiprazole and brexpiprazole, cariprazine exhibits a higher affinity for the D3 receptor than the D2 receptor.
- **Pimavanserin:** It is the first FDA approved drug to treat delusions and hallucinations in Parkinson's disease-associated psychosis. Pimavanserin has a combination of inverse agonist and antagonist activity at 5HT2A receptors (and, to a lesser extent, at 5HT2C receptors). It does not bind to D2 receptors. It can increase the QT interval.

Apart from blocking D2 and 5-HT2 receptors (primarily 5-HT2A subtype), the atypical antipsychotics have varying actions on other dopamine receptors, serotonin receptors, muscarinic, adrenergic and histaminic receptors.

All the atypical antipsychotics are well absorbed after oral administration (asenapine is taken sublingually as when swallowed, its bioavailability is extremely poor). Metabolism in liver is by CYP1A2 (for olanzapine and clozapine), CYP2D6 (for risperidone, clozapine, olanzapine and aripiprazole) and CYP3A4 (for clozapine, quetiapine, ziprasidone, sertindole, aripiprazole and zotepine). When antipsychotics are given concomitantly with inhibitors or inducers of cytochrome P enzyme, appropriate adjustments in dosages are required. Of particular importance is the need to adjust the dosage of clozapine and olanzapine in smokers as smoking induces CYP1A2.

Side effects: The side effect profile of atypical antipsychotics is as follows:

A. **Movement disorders:** Atypical antipsychotics can cause all types of extrapyramidal side effects described earlier; however, the incidence is lesser than the typical antipsychotics. **Clozapine** is least likely to cause extrapyramidal side effects. Aripiprazole is rarely associated with acute dystonia, drug-induced parkinsonism or neuroleptic malignant syndrome, but aripiprazole can often cause akathisia.
B. **Endocrine side effects:** The incidence of hyperprolactinaemia is also lesser with atypical antipsychotics (except **risperidone** and amisulpride, which have a comparatively higher incidence).
C. Weight gain and increased risk of dyslipidaemia, diabetes and cardiovascular disease are more commonly seen with atypical antipsychotics than with typical antipsychotics. Amongst atypicals, clozapine and olanzapine have the highest incidence of metabolic side effects.
D. Other side effects include nausea, vomiting, dyspepsia, postural hypotension, sedation, **and QTc prolongation (especially with ziprasidone).**
E. FDA has given a black box warning of increased mortality in patients with dementia treated with atypical antipsychotics. FDA warned of increased risk of stroke in such patients. However, this risk appears to be small, and the benefits of antipsychotics, especially in patients with dementia with behavioural problems, outweigh any risks involved.

Clozapine

It was the first atypical antipsychotic to be developed. Clozapine is the drug of choice in treatment-resistant schizophrenia.

Clozapine has a unique mechanism of action. Unlike other antipsychotics, it has a relatively low affinity for D2 receptors. Its low affinity for D2 receptors explains the lack of extrapyramidal side effects with clozapine. Clozapine has a strong affinity for **D4 receptors** and also acts as an antagonist at 5-HT2A, D1, D3 and α (alpha) adrenergic receptors. The lack of extrapyramidal symptoms makes clozapine a preferred antipsychotic in patients intolerant to other antipsychotics because of extrapyramidal side effects, including tardive dyskinesia. Clozapine is the only antipsychotic that decreases suicidal ideation in patients with schizophrenia who have been previously hospitalised for suicidality.

TREATMENT-RESISTANT SCHIZOPHRENIA

The most widely accepted definition of treatment-resistant schizophrenia is "lack of response to at least two different antipsychotics, including at least one second-generation antipsychotic, given in adequate dosages (400–600 mg chlorpromazine equivalent) and for an adequate duration (at least 4–6 weeks)". **Clozapine** is the **drug of choice** for patients with **treatment-resistant schizophrenia.**

Treatment with clozapine is started at a very low dose (12.5–25 mg/day) and is gradually increased, with 300–600 mg/day being the effective dose for most patients. A clozapine plasma level of 250–350 ng/mL is considered a reasonable target for most patients, although few studies have found that levels >350 ng/mL are associated with better response rates.

Side effects: The common side effects of clozapine include sialorrhea, sedation, syncope, hypotension, tachycardia, nausea and vomiting. Other side effects include weight gain (clozapine causes the highest weight gain amongst all antipsychotics), constipation, and anticholinergic side effects. Clozapine can also cause life-threatening side effects, including agranulocytosis, seizures and myocarditis. Agranulocytosis and myocarditis are dose-independent side effects of clozapine, whereas seizures are dose-dependent (seen only at higher dosages).

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- Prominent negative symptoms
- Absence of affective symptoms
- Family history of schizophrenia.

OTHER PSYCHOTIC DISORDERS

Schizoaffective Disorder

Schizoaffective disorder presents with features of both schizophrenia and mood disorders and has a prominence of both psychotic and affective symptoms. The following conditions should be met to make a diagnosis of the schizoaffective disorder according to DSM-5:

1. There should be an uninterrupted period of illness during which symptoms of a major mood episode (major depressive or manic episode) are present concurrently with symptoms of schizophrenia. During this period, the patient satisfies the symptom criteria for both schizophrenia and a major mood episode (either major depression or mania)
2. There should be a period of at least **2 weeks** during which the patient has delusions or hallucinations in the absence of prominent mood symptoms. This criterion helps to differentiate schizoaffective disorder from mood disorder with psychotic symptoms, as in the latter, delusions and hallucinations are present only with prominent mood symptoms. [For example, a patient with a diagnosis of Bipolar disorder (mania with psychotic symptoms) will have symptoms of both mania and psychotic symptoms (delusions and hallucinations), but in this patient, psychotic symptoms will always accompany symptoms of mania and would never be present in the absence of manic symptoms].
3. The mood episodes should be present for the **majority of the duration** of the illness (i.e., prominent mood symptoms should be present for **>50%** of the total duration of illness). This criterion is important to be fulfilled as patients with schizophrenia can present with transient mood symptoms, and until and unless mood symptoms are present for the majority of the period, a diagnosis of schizoaffective disorder should not be made.

On a continuum of psychotic disorders with schizophrenia at one end and bipolar disorders on the other end, schizoaffective disorder lies in the middle. Patients with schizoaffective disorders have a better prognosis than schizophrenia and worse than bipolar disorder.

Subtypes

According to DSM-5, the following are the subtypes:

1. **Schizoaffective disorder (Bipolar type):** If the patient had at least one manic episode as a mood episode. Often there are depressive episodes too.
2. **Schizoaffective disorder (Depressive type):** If the patient had only depressive episodes.

ICD-11 describes the schizoaffective disorder as an **episodic illness** in which the diagnostic criteria for schizophrenia and one of the mood episodes (depression, mania or mixed episode) are met simultaneously or within a few days of each other. ICD-11 further specifies that if the mood episode is depressive, it should be either moderate or severe in intensity.

More has been discussed about mood episodes in the next Chapter.

Treatment: It involves a combination of mood stabilisers, antipsychotics and antidepressants, depending on the presentation. In schizoaffective manic type episodes, a combination of antipsychotics and mood stabilisers is commonly used. In schizoaffective depressive type episodes, a combination of antipsychotics and antidepressants is often used. While using antidepressants, the possibility of an antidepressant-induced switch from depression to mania must be taken care of.

Schizophreniform Disorder

In the DSM-5 diagnosis of schizophreniform disorder, symptoms are similar to schizophrenia, and the duration of illness is between **1 to 6 months** (To make a diagnosis of schizophrenia, the duration of illness should be >6 months). The treatment involves the use of antipsychotics for 3–6 months.

Brief Psychotic Disorders

In the DSM-5 diagnosis of brief psychotic disorder, symptoms are similar to schizophrenia, and the duration of illness is >1 day but **<1 month**. A stressor may precede the disorder, and usually, there is complete recovery. Treatment involves the use of antipsychotics. Benzodiazepines have also been found effective in the short term treatment.

Acute and Transient Psychotic Disorders

ICD-11 does not use the diagnosis of either schizophreniform disorder or brief psychotic disorder. The corresponding diagnosis in ICD-11 is acute and transient psychotic disorder. These are a group of disorders characterised by the following:

1. An **acute onset** (defined as a change from a state without psychotic features to a clearly abnormal psychotic state within a period of 2 weeks or less)
2. Presence of schizophrenia-like symptoms. Also, the clinical picture is usually polymorphic (rapidly changing and variable)
3. The presence of associated **acute stress**. Usually, an acutely stressful event such as bereavement, relationship disturbances, or other psychological trauma precipitates these disorders. However, these syndromes can arise without any associated stressor.

The duration of the episode is usually <3 months, and in most cases, it is less than a month.

Treatment

Treatment involves the use of antipsychotics. Benzodiazepines have also been found effective in the short term treatment.

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- Symptom(s) must have been present at least once per week for the past month.
- Symptom(s) must have begun or worsened in the past year.
- Symptom(s) is sufficiently distressing and disabling to the individual to warrant clinical attention.

CASE BASED MCQ

A 23-year-old male was brought to the outpatient department with complaints of suspiciousness towards the family members. The patient believed that the family members were poisoning his food and were controlling his activities using a machine implanted in his brain. There was also a history of disturbed sleep, poor self-care, and talking and laughing to self. His mother reported on and off episodes of agitation. The symptoms started 3 years back while he was in his final year of college. The patient was initially taken to religious leaders for treatment for a year, and when he started to worsen, he was admitted to a psychiatric hospital for 2 weeks. There is a history of occasional cannabis and alcohol use. The patient's maternal uncle had similar complaints and has been on regular medications. The most likely diagnosis is:

a. Schizophrenia
b. Substance-induced psychosis
c. Schizoaffective disorder
d. Bipolar disorder

Ans. a. The duration of illness of 3 years with symptoms of delusion of control and persecution and positive family history (in maternal uncle) suggest the diagnosis of schizophrenia.

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He is also a mental health advocate and works tirelessly to increase awareness about mental health disorders. He is followed by more than a million people on various social media platforms and routinely gives talks on various psychiatric conditions.

Printed in India

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ISBN 978-93-5696-169-2