Hallucinations: Clinical Manifestation in Schizophrenia

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Key points:

- Introduction
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- Diagnosis
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Introduction

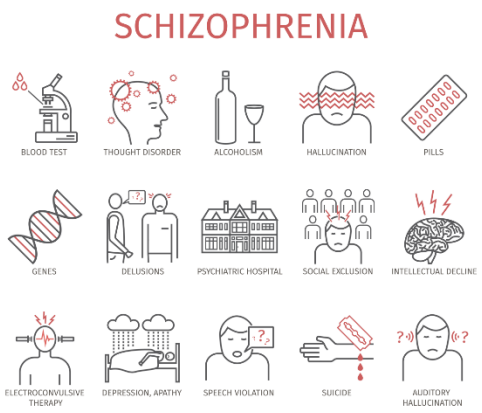


Figure 1*: Schizophrenia.*[9]

Schizophrenia is a complex, chronic, and highly disabling mental health disorder that profoundly impacts how an individual thinks, feels, and behaves. Characterized by a perceived loss of contact with reality, the illness is globally recognized by the World Health Organization (WHO) as one of the top 10 conditions contributing to the global burden of disease. The clinical presentation is classically divided into positive symptoms such as persistent delusions and hallucinations and negative symptoms, which include social withdrawal, avolition, and emotional flattening. Additionally, patients frequently experience debilitating cognitive impairments that affect working memory, attention, and executive functioning.[1]

Schizophrenia is a severe incapacitating disease of adults in every community, affecting around 1–1.5 percent of the global population.[2] The condition presents broad heterogeneity of symptoms, roving from hallucinations and delusions to cognitive dysfunction and affective emotional blunting, many of which coincide with other psychiatric conditions.[3] Many neurotransmitters, including dopamine, serotonin, gamma aminobutyric acid (GABA), glutamate, and noradrenaline, have imperative roles in the early development and future progression of the disease. It can also be caused by combination of neuroinflammation, oxidative stress, cell signalling pathways, and aberrant immune system activation.[4, 1-4]

Symptoms and Manifestations

Schizophrenia is a disease characterized by diverse symptoms; the basics are classified as positive, negative, and cognitive. Positive symptoms are the most recognizable. They reflect an excess or distortion of normal function causing delusions and hallucinations and abnormal motor movement

including catatonia and psychomotor disturbance. Negative signs are not easily identified and are linked to significant state of morbidity due to their influence on the emotional and behavioural state of the suffering individual. It refers to a diminution or absence of normal behaviours related to motivation and interest (emotional blunting and changes in volition).[5] Cognitive changes are generic; hence, they must be sufficiently pronounced for another person to observe them (thought disorder, negativism, autism, and intrapsychic ataxia). The primary symptoms and other diseases occurring simultaneously linked to schizophrenia may have a great effect on social and vocational tendencies. Affected individuals may have a hard time socialising or maintaining their education or employment due to the severity of the symptoms and need persistent care to prevent a relapse.[6]

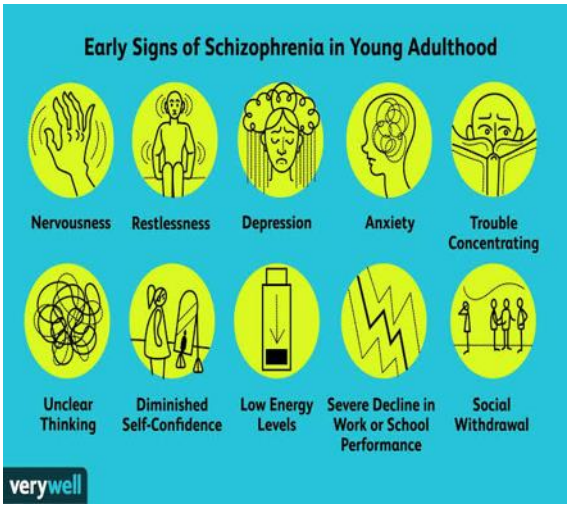


Figure 2: *Symptoms of Schizophrenia.*[7]

Possible Diagnosis

Schizophrenia is characterized as a diverse clinical illness that displays analogies with different types of other psychological disorders, delaying and complicating its diagnosis. The diagnosis of schizophrenia is determined according to the Diagnostic and Statistical Manual of Mental Disorders. Patients must show at least two or more of the specified symptoms for a duration of one month to narrow down the diagnosis to schizophrenia. The symptoms include delusions, hallucinations, incoherent speech, severely disorganized or catatonic behaviour, and negative symptoms (including emotional flatness, alogia, and avolition). The diagnostic frameworks such as the DSM-5 and ICD-11 depend primarily on symptom clusters rather than objective biomarkers. Current ongoing researches into genetic, neuroimaging, and pathophysiological markers may be able to improve future diagnostic approaches, potentially leading to more biologically grounded subtyping or a shift toward transdiagnostic frameworks

The emergence of the disease varies among individuals, roving from sudden onset to an extended prodromal phase. Negative symptoms may be seen after five years of the first onset of the psychotic episode. Modern advancements in the identification of schizophrenia-related loci, along with the delineation of specific schizophrenic symptoms, suggest that the linked SNPs may serve as possible biomarkers to aid in the diagnosis of schizophrenia in the genomic era.[3, 6]

Treatment

Schizophrenia treatment primarily relies on mGPCR antagonists medications but these therapies come along with side effects and limited efficacy, particularly in addressing cognitive and negative symptoms. Despite extensive research and advances treatment resistance still remains a challenge, emphasizing on the exploration of different strategies. The integration of natural compounds into existing pharmacotherapy represents a promising avenue for improving outcomes by mitigating side effects, enhancing therapeutic efficacy, and providing neuroprotective benefits. The clinical management of schizophrenia requires a lifelong, multimodal approach that integrates pharmacological intervention, psychosocial therapies, and structured community support. The primary objectives of treatment are to reduce the severity of psychotic symptoms, prevent disease relapse, and enhance the patient's overall functional capacity and quality of life.[4, 8]

Pharmacological Intervention

Atypical (second-generation) antipsychotics serve as the frontline pharmacological standard due to their lower risk of extrapyramidal side effects compared to typical (first-generation) agents. These medications primarily modulate dopamine and serotonin pathways to control acute positive symptoms, though their efficacy against negative and cognitive symptoms remains limited. Treatment adherence is a significant challenge; consequently, long-acting injectable (LAI) antipsychotics are increasingly utilized to stabilize plasma drug levels and prevent clinical relapse. For individuals with treatment-resistant schizophrenia defined as a poor response to at least two different antipsychotics clozapine remains the gold-standard therapy, requiring strict hematological monitoring due to the risk of agranulocytosis.[10]

Conclusion

Schizophrenia remains one of the most challenging and multi-faceted conditions in modern psychiatry, exerting a profound toll on affected individuals, their families, and global healthcare systems. Ultimately, managing this complex illness requires shifting from a purely symptom-focused approach to an integrated care model that merges advanced pharmacotherapy with robust psychosocial rehabilitation. While current antipsychotic treatments are highly effective at controlling positive psychotic episodes, significant therapeutic gaps persist, particularly regarding cognitive deficits and negative symptoms .Moving forward, the future of schizophrenia management hinges on accelerating early intervention strategies and advancing personalized medicine to target the diverse biological profiles of patients. Minimizing systemic barriers, reducing social stigma, and expanding community-level support networks are vital to helping patients achieve functional independence and long-term.[11]

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