

# Delusional Content in Patients with Schizophrenia- A Case Series

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## ABSTRACT

Schizophrenia is a chronic and severe mental disorder that affects more than 21 million people worldwide. It is characterised by distortions in thinking, perception, emotions, language, sense of self, and behaviour. Common experiences include hallucinations, mostly involving hearing voices or seeing things that are not there, and delusions, which involve having fixed, false beliefs. This case series presents three patients with schizophrenia who came to the Department of Psychiatry with peculiar delusions. One patient, a 65-year-old, complained of an inability to walk due to the fear of being electrocuted. The second patient, a 25-year-old female, reported the ability to communicate with people in America without the use of any technology. The third patient, aged 20 years, presented with nihilistic delusions. These patients were managed with psychotropics, along with symptomatic treatment for their physical problems. They improved with the interventions and rehabilitation provided to them.

**Keywords:** Mental disorder, Nihilistic delusions, Psychiatry, Psychosis

## INTRODUCTION

Schizophrenia is a chronic mental disorder manifested by positive symptoms, negative symptoms, disorganised behaviour and thought, and cognitive impairments. These symptoms have a substantial impact on quality of life, well-being, and functional outcome. These patients are more likely to be at a higher risk of cardiovascular and metabolic co-morbidities than the general population due to their poor physical fitness and sedentary lifestyle [1]. Delusions are an important symptom of psychosis, but they are false beliefs that are rigidly held with strong conviction despite contradictory evidence [2]. A delusion is a belief that is clearly false and indicates an abnormality in the affected person's thought content. The false belief is not accounted for by the person's cultural or religious background or their level of intelligence. The key feature of a delusion is the degree to which the person is convinced that the belief is true. A person with a delusion will hold firmly to the belief regardless of evidence to the contrary. Distinguishing delusions from overvalued ideas can be difficult. Overvalued ideas are unreasonable ideas that a person believes, but they have at least some level of doubt about their truthfulness.

In contrast, a person with a delusion is absolutely convinced that the delusion is real. Delusions are a symptom of either a medical, neurological, or mental disorder [3]. The debate about the nature of delusion has persisted for over a century without resolution. Currently, psychologists propose various theories to explain delusion psychologically, while psychiatrists generally regard delusion as inexplicable [4]. The concept of bizarre delusions plays a significant role in the diagnosis of schizophrenia. However, applying this concept in the clinical world may be challenging. A study measuring the inter-rater reliability to distinguish bizarre versus non-bizarre delusions consistently reported low reliability [5]. Major reviews have concluded that current conceptualisations of bizarre delusions may require rethinking and refinement. One study emphasised the importance of understanding the "primary experience traceable to the illness" in acknowledging the true nature of "delusions proper" in schizophrenia, going beyond the external characteristics of extraordinary conviction, imperviousness, and impossible content [6,7].

## Case 1

A 65-year-old male patient was admitted to the Department of Psychiatry in Meerut. He presented with complaints of hearing voices on and off, suspiciousness, wandering behaviour, decreased

self-care, self-muttering, and aggression for the past 40 years. These complaints were continuous and gradually progressive. The main reason for admission was a sudden onset of a new complaint in which the patient claimed that he would get electrocuted if he stepped on the ground. As a result, he had been bedridden for the past year and became completely dependent on caretakers for his daily activities. His sleep and appetite had also reduced in the past two weeks. During the general physical examination, bilateral pedal oedema and multiple scaly lesions on both lower limbs were noted. The Department of Dermatology diagnosed him with dermatitis neglecta. Neurological examination was challenging as the patient refused to let anyone touch his legs due to his psychopathology. However, normal deep tendon reflexes and elicitable plantar flexor response were observed. Gait assessment was not possible as the patient was bedridden and unwilling to walk. He was lying on the bed with his feet uncovered, which was inconsistent with the environment and season. The patient was poorly dressed, unkempt, and had improper hygiene with foul-smelling breath.

Establishing rapport was difficult as he had a guarded attitude. Psychomotor activity was markedly reduced, although the patient was conscious and aware. His speech rate and volume were decreased. The patient displayed a blunt affect with a restricted range and absence of relatedness. In terms of thought content, he had persecutory delusions towards family members and a bizarre delusion that he would be electrocuted if he stepped on the ground. Auditory hallucinations of a second-person male voice were also present. His social judgment was impaired as he would urinate and defecate in public. Baseline investigations were conducted, and an abnormality in the Electrocardiography (ECG) was found, prompting further clarification through echocardiography. The echocardiogram showed a left ventricular ejection fraction of 40%. Consequently, the patient was immediately referred to the Department of Cardiology. He was also reviewed by the Department of Surgery due to complaints of pain in both lower limbs. He was advised to undergo a B/L lower limb venous and arterial doppler, which revealed atherosclerotic changes. Other investigations showed age-related cerebral atrophy on a computed tomography of the head, and derangements in Liver Function Tests (LFT) with the following results: serum albumin- 2.9 g/dL, serum globulin- 4.9 g/dL, and A/G ratio- 0.59, suggestive of hypoproteinemia. The patient's treatment started immediately in collaboration with various other specialties in the hospital.

According to the International Classification of Diseases-10 (ICD-10) criteria, the patient was diagnosed with schizophrenia [8]. The patient was initiated on Tablet (Tab.) Olanzapine 10 mg at night and continued on the same dose for another six weeks. Throughout the patient's six-week stay, the nursing staff provided bedside care to maintain good hygiene. By the end of the third week, with the assistance of attendants, the patient was able to walk for the first time. Through proper nursing, physiotherapy, psycho-education of the attendants, and a combination of medications (Olanzapine 10 mg at bedtime) from the Psychiatry Department, Medicine Department (tablet Dytor plus OD and capsule Ecosprin AV 75/25 at bedtime), and Dermatology Department (topical Glycolic acid and emollients), the patient underwent vigorous rehabilitation. At the time of discharge after six weeks, the patient was walking comfortably and able to carry out daily activities independently.

## Case 2

A 25-year-old educated unmarried female patient presented to the Outpatient Department of psychiatry. She was brought by her brother with complaints of self-isolation, self-muttering, increased anger outbursts, and suspiciousness towards family members for the past year. She believed that her father had adopted her from his friend who lives in America and that she belonged to America. She claimed to communicate with this friend through magic, without any actual means of communication. As a result, she started performing daily activities at night, such as eating, cooking, and bathing.

Her symptoms began two months after her brother's marriage. Following the marriage, she became withdrawn, decreased her social interactions, and stopped eating meals with her family. She also avoided going out with friends and attending family functions. The patient's attendant reported multiple episodes of anger outbursts and physical violence, particularly directed towards her sister-in-law. The patient developed suspiciousness towards her family members, believing they were talking about her and plotting to harm her. She felt her sister-in-law was jealous of her due to her perceived beauty and intelligence. The patient's parents also noticed her engaging in self-muttering and self-smiling when alone. She refused to eat homemade food, suspecting her sister-in-law of poisoning it.

On general physical examination, the patient appeared thin and dehydrated. During the mental status examination, she exhibited decreased psychomotor activity, a guarded attitude, and avoided maintaining eye contact by hiding her face under a blanket. Her speech rate and volume were decreased, and she exhibited increased reaction time with irrelevant speech. Her affect was blunt with a restricted range and incongruence. In perceptual abnormalities, there were second-person auditory hallucinations. In the mental status examination, her abstract thinking and test judgment were not intact. All baseline investigations, including Complete Blood Count (CBC), Random Blood Sugar (RBS), Liver Function Test (LFT), and Kidney Function Tests (KFT), were conducted and were within normal limits.

According to the ICD-10 criteria, the patient was diagnosed with schizophrenia and started on a nightly dose of 10 mg of olanzapine, along with 300 mg of Oxcarbazepine twice daily. The olanzapine dose was gradually increased to 20 mg and continued for six months. Within two weeks, she began to show improvement in her symptoms, such as decreased hallucinations and resolution of delusions, with the combination of pharmacological treatment and cognitive-behavioural therapy.

## Case 3

A 20-year-old educated unmarried female patient presented to the Outpatient Department of Psychiatry. She was brought by her parents with complaints of panic attacks and multiple episodes of unprovoked crying spells for the past month. One month ago,

she experienced panic attacks with palpitations and dryness of mouth, accompanied by inconsolable crying for 2-3 hours. Her family noticed decreased social interaction, self-care, appetite, and difficulty in initiating and maintaining sleep. These symptoms worsened within a week, leading to complete loss of eating, talking, and general weakness, causing her to be unable to move her legs or lift her body without assistance. When asked about the reason for crying, she claimed that her parents and siblings had died in a road traffic accident and that everything around her had vanished.

The patient arrived in the examination room on a wheelchair, displaying thinness, dehydration, complete loss of eye contact, dull facial expressions, a guarded attitude, and failure to establish rapport. Psychomotor activity was significantly reduced, although the patient remained conscious and aware. Speech rate, tone, and volume decreased, with increased reaction time, hesitancy, and whispering. Affect was blunt and had a restricted range, with inappropriateness. Thought productivity was decreased, continuity was not maintained, and the content of thought revealed a nihilistic delusion, as she believed her family members had died and everything around her had vanished. Higher mental functions, such as abstract thinking, social judgment, and test judgment, were impaired.

Based on the ICD-10 criteria, the patient was diagnosed with schizophrenia. Baseline investigations were conducted, revealing an abnormality in CBC, with a hemoglobin level of 10.6 gm/dL. Medical consultation was sought, and intravenous fluids with multivitamin injections, as well as iron (100 mg) and folic acid (1.5 mg) tablets once a day for the next three months, were initiated. Anti-psychotic treatment was started with 10 mg of olanzapine and 1 mg of lorazepam at night. The olanzapine dosage was gradually increased to 20 mg at night. After three weeks, amisulpride 200 mg was added at night. Within 2-3 weeks, the patient began to show improvement in symptoms such as panic attacks and unprovoked crying spells, and she started eating and taking care of herself with the help of pharmacotherapy and cognitive-behavioural therapy.

## DISCUSSION

Delusions are erroneous and inflexible beliefs held with certainty, even in the face of contradictory evidence [6]. The most common symptom of psychosis in schizophrenia is delusion, which can be severely distressing and impair social functioning [7]. However, the cognitive mechanisms underlying this symptom remain elusive. Understanding these mechanisms, particularly at the computational and algorithmic levels, is crucial for advancing our understanding of psychosis. The preceding case series demonstrates the presence of different bizarre delusions in schizophrenic patients, emphasising the need for treatment from psychiatric departments and the importance of better understanding the co-occurrence of bizarre delusions in these patients. Similar case reports and series have been published in the past, addressing unusual delusional and hallucinatory content. Solomon S and Singaravelu R presented a case report on auditory hallucinations with unusual content, discussing the case of a young adult male who experienced recurrent hair pulling due to command auditory hallucinations and highlighting the distinguishing features of hair pulling in this patient compared to trichotillomania [9]. Lebelo LT and Grobler GP reported a case of a patient with severe delusions who engaged in self-mutilation [10]. Sashikar AC et al., conducted a case series on Erotomania, discussing three cases of secondary erotomania involving delusions of being loved by a well-known actor, a popular guy from school, and a church personnel [11].

Kuppili PP et al., presented a unique case of Cotard syndrome, describing a 24-year-old housewife in the second week of the postpartum period who complained of not taking care of her baby, denying her pregnancy altogether [12]. Similarly, Gold J and Gold I reported a novel delusion, primarily persecutory in form, in which

the patient believed that they were being filmed and that the films were being broadcast for the entertainment of others [13]. In the present case series, Case 1 presented with a sudden onset of a bizarre delusion that they were unable to walk due to fear of getting electrocuted. In Case 2, the patient claimed to have the ability to communicate with people in America without the use of any technology. In Case 3, the patient experienced a nihilistic delusion. The prevalence of bizarre delusions in schizophrenic patients in India was found to be 2.56%, primarily consisting of unnatural bodily sensations, misidentification, changes in sexual orientation, and religion [14]. According to Jaspers and his successors' phenomenological approach, delusions are formed through a loss of context in experiment-perceptual origin and due to dysregulation of dopamine levels [15]. Delusions arise from immediate consciousness and perception of the surroundings, making it difficult to infer the credibility of bizarre delusions and gather evidence [16]. Presenting such cases broadens our understanding of various types of delusional content, which further aids in the proper management of these patients.

## CONCLUSION(S)

It is important to identify the evolving complexity of delusions and the potential danger they pose to the patient's life. Spending adequate time assessing and labeling the theme of the delusion is key to preventing the risk of violence and self-harm, as well as aiding in the management of such cases.

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