Ad-din Medical Journal
January 2026, 4(1):46-48

Case report

A Multidisciplinary Approach to Managing Schizophrenia in a Young Adult Male in a Low-Resource Setting: A Case Report from Bangladesh

Received: 02-08-2025 Accepted: 28-10-2025

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Abstract

Schizophrenia is a chronic and severe psychiatric disorder that affects perception, thought, emotion, and behavior, with paranoid-type schizophrenia being the most prevalent form. In low-resource settings like Bangladesh, the diagnosis and treatment of schizophrenia are frequently delayed due to social stigma, limited mental health literacy, and inadequate access to psychiatric services. This case report describes a 27-year-old male who presented to the Psychiatry Outpatient Department of Sir Salimullah Medical College (SSMC), Dhaka, with persecutory delusions, second-person auditory hallucinations, social withdrawal, and functional decline. Diagnosis was made using the DSM-5 criteria following thorough psychiatric evaluation and caregiver interviews. Management included antipsychotic therapy (risperidone 4 mg/day, titrated as necessary), psychoeducation for the patient and family, and psychosocial support such as family counseling and behavioral activation. Progress was monitored over a six-month period using the Positive and Negative Syndrome Scale (PANSS). At baseline, the patient had a PANSS score of 102, indicating severe psychotic symptoms. By the third month of treatment, his symptoms showed substantial improvement, including reduced intensity of delusions, decreased frequency of hallucinations, and enhanced social interaction. By the sixth month, his PANSS score had decreased to 58, reflecting significant clinical recovery. The patient exhibited improved treatment compliance and functional independence, with no major adverse effects reported from medication. This case highlights the importance of early detection, consistent pharmacological treatment, family involvement, and comprehensive psychosocial support in the effective management of schizophrenia. It also emphasizes the urgent need to address barriers to psychiatric care in low-resource settings through public education and health system strengthening.

Key word: Schizophrenia, Paranoid type, Delusions, Antipsychotic therapy, Bangladesh, Low-resource psychiatry, Psychoeducation, Social withdrawal

Introduction

Schizophrenia is a severe, chronic mental disorder affecting approximately 1% of the global population.[1] It is characterized by disturbances in thought processes, perception, emotion, and social functioning.[2] The illness typically presents in late adolescence or early adulthood and is divided into positive symptoms (delusions, hallucinations), negative symptoms (apathy, social withdrawal), and cognitive impairments.[3] Diagnosing schizophrenia in low-resource settings like Bangladesh presents unique challenges due to cultural misconceptions, low mental health literacy, and the underdevelopment of psychiatric services.[4] Stigma attached to mental illness

How to cite this article: Fariha RSH, Hasan MA. Multidisciplinary Approach to Managing Schizophrenia in a Young Adult Male in a Low-Resource Setting: A Case Report from Bangladesh. Ad-din Med J. 2026 Jan;4(1):46-48

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often leads to delayed healthcare-seeking behavior exacerbating the disease course.[5] The pathophysiology of schizophrenia involves dysregulation of dopaminergic and glutamatergic neurotransmission, along with structural and functional brain abnormalities.[6] Early diagnosis and timely initiation of antipsychotic treatment are critical in improving long-term outcomes and functional recovery.[7] This report presents the case of a young Bangladeshi male with classic features of paranoid schizophrenia, highlighting the importance of a comprehensive and family-inclusive management approach in an outpatient setting. The case also sheds light on the social and cultural barriers that may impact care in South Asian contexts.

Case Presentation

A 27-year-old unmarried male, Mr. R.K. (name anonymized), was brought to the Psychiatry Outpatient Department of Sir Salimullah Medical College (SSMC) by his mother with complaints of behavioral changes and social withdrawal over the past year. The patient had no significant past medical or psychiatric history. He had previously been a student but had dropped out of his university program due to progressive disinterest, declining academic performance, and interpersonal difficulties.

Presenting Complaints:

- Suspiciousness and persecutory delusions for 12 months
- Auditory hallucinations (second-person voices) for 10 months
- Social withdrawal and functional decline for 8 months
- Neglect of self-care and disorganized behavior for 6 months

The mother reported that Mr. R.K. frequently claimed that neighbors and relatives were conspiring against him. He would often mutter to himself, respond to unseen stimuli, and isolate himself in his room for hours. Over time, he became emotionally detached, stopped maintaining hygiene, and developed sleep disturbances.There was no history of substance use, head trauma, seizures, or any co-occurring medical illness. Family history was negative for psychiatric disorders. The patient expressed severe distress when questioned about his beliefs and refused to accept that his perceptions were false.The patient's assessment and formulation of the treatment plan were conducted by the psychiatry team at Sir Salimullah Medical College (SSMC) under the supervision of senior faculty.

Management Plan

Pharmacological Management

1. **Antipsychotics:**
   - Initiated on **Risperidone** 2 mg/day, titrated to 4 mg/day based on response and tolerance.
   - **Trihexyphenidyl** 2 mg/day added to prevent extrapyramidal side effects.
2. **Sedative (short-term):**
   - **Lorazepam** 1 mg at night to aid sleep and reduce initial agitation.
3. **Monitoring:**
   - Baseline labs: CBC, LFT, RFT, fasting blood glucose, lipid profile.
   - ECG and prolactin level monitoring.
   - Monthly weight and metabolic screening planned.

Psychosocial and Supportive Interventions

1. **Psychoeducation:**
   - Patient and caregiver were counseled about the nature of schizophrenia, medication adherence, and signs of relapse.
   - Emphasis placed on reducing expressed emotion in the home environment.
2. **Behavioral Activation:**
   - Daily routine structure developed to reintroduce social and occupational activity gradually.
3. **Family Support:**
   - The family was advised to maintain a low-stress environment and attend monthly sessions.
4. **Long-Term Considerations:**
   - Option of long-acting injectable antipsychotics considered if medication non-adherence emerges.
   - Future referral to a psychiatric rehabilitation program discussed.

Follow-up and Outcome

Over a six-month follow-up period, the patient showed steady improvement. After two months, delusional intensity reduced, auditory hallucinations became less frequent, and the patient began to engage minimally in family interactions. By the fourth month, Mr. R.K. demonstrated improved hygiene, better sleep, and was able to participate in basic household tasks. Psychiatric assessments showed a reduction in both positive and negative symptoms. He reported fewer hallucinations and expressed partial insight into his illness. Importantly, adherence to medication was ensured through family involvement and continuous psychoeducation. No significant side effects from medication were observed. The patient tolerated risperidone well, and metabolic parameters remained within normal limits. The mother reported a decrease in stress within the family, improved communication, and greater hope for the patient's long-term recovery.

Discussion

Schizophrenia remains a major cause of disability worldwide, particularly in young adults.[8] The early twenties to late twenties is a common age of onset, as was the case with Mr. R.K. His presentation included hallmark features: persecutory delusions, auditory hallucinations, disorganized speech, and functional impairment—all

consistent with paranoid-type schizophrenia. In low-resource settings like Bangladesh, barriers such as stigma, myths about mental illness, and lack of access to psychiatric care delay diagnosis.[9] This case illustrates the consequences of untreated psychosis, including academic discontinuation and social isolation. The management of schizophrenia requires more than just pharmacological intervention.[10] While second-generation antipsychotics like risperidone are effective in treating positive symptoms, adherence can be a challenge.[11] Therefore, the inclusion of family members in psychoeducation and regular follow-ups is critical to long-term success.The psychological burden on both patient and caregivers must be addressed. Incorporating family-based therapy and involving mental health professionals in a community-based care model improves not only compliance but also reintegration into society.[12] The case also reflects the importance of tailoring interventions to individual patient needs—taking into account financial constraints, education level, and available support systems. By integrating behavioral activation, medication adherence, and psychoeducation, this case exemplifies a cost-effective and sustainable approach to treating schizophrenia in resource-limited settings.

Conclusion

This case highlights the challenges and strategies in diagnosing and managing schizophrenia in a young adult from a low-resource setting in Bangladesh. The patient presented with classic psychotic symptoms and benefited significantly from early pharmacological intervention, family involvement, and psychoeducation. Over a six-month follow-up, he showed marked improvement in social functioning, hygiene, and psychotic symptoms. The success of this case underscores the importance of a multidisciplinary and family-centered approach in treating schizophrenia and reinforces the need for expanding mental health services and awareness in developing countries.

Acknowledgment

I would like to express my deepest gratitude to the Department of PsychiatryatSir Salimullah Medical College (SSMC)for their invaluable support, guidance, and mentorship during the preparation of this case report on schizophrenia. I am especially thankful to the senior psychiatrists and faculty members whose supervision and clinical insights were instrumental in shaping my understanding of psychiatric evaluation and patient-centered care.I am also grateful to the entire outpatient department staff for their cooperation and assistance throughout the clinical assessment and follow-up of the patient. Their dedication and professionalism provided a supportive environment that enriched my clinical experience.

Conflict of Interest

The authors declare no conflict of interest exists.

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