Case Report

Lorazepam-induced Short-term Remission of Symptoms in a Case of Paranoid Schizophrenia

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ABSTRACT

Conventionally, antipsychotics are used to treat schizophrenia due to predominant dopamine antagonist activity. The use of various types of Benzodiazepines (BZDs) in the treatment of Schizophrenic symptoms like agitation and psychotic excitement in general and control of florid psychotic symptoms such as hallucinations and delusions is well known. However, the use of BZDs, specifically in remission of paranoid schizophrenia, is not reported so far. Here, we are reporting a case of an elderly female patient with chronic paranoid schizophrenia showing short-term remission in paranoid symptoms with injectable lorazepam.

Key words: Benzodiazepines, paranoid schizophrenia, short term remission

INTRODUCTION

The use of various types of Benzodiazepines (BZDs) in the treatment of Schizophrenia is well known. The use of BZDs in schizophrenia was mainly for symptoms like insomnia, anxiety, agitation, aggression, and psychotic excitement in general and control of florid psychotic symptoms such as hallucinations and delusions in particular. In catatonia, BZDs were therapeutically effective due to an increase in gamma amino butyric acid (GABA) activity. However, in many other studies, BZDs were further found to be useful in reduction of neuroleptic-induced side effects such as akathisia or tardive dyskinesia. The majority of the reports are inconclusive due to methodological issues.

However, the use of BZDs, specifically in remission of paranoid schizophrenia, is not reported so far. Here, we are reporting a case of an elderly female patient with chronic paranoid schizophrenia showing short-term remission in paranoid symptoms.

CASE REPORT

A 55-year-old, married, primary educated, housewife was treated for the paranoid schizophrenia (DSM IV TR) for 7 years. She was asymptomatic till the age of 48 years. The longitudinal history of her symptoms indicated gradual onset mainly in the form of suspiciousness, fearfulness, aggressive, and agitated behavior. She also had symptoms like ideas of black magic and hearing of voices which were derogatory in nature (she felt somebody was trying to kill her). Her previous case records revealed that she was treated with typical antipsychotics such as Tablet Trifluoperazine (10 to 25 mg), Tablet Haloperidol (5 to 20 mg), and Tablet Trihexyphenidyl (2 to 4 mg) daily. Patient’s clinical response was well and she remained on the same maintenance treatment. Patient was in remission and socio-occupationally functional as a housewife for a period of 5 years thereafter. She gradually developed extrapyramidal symptoms in the form of dyskinetic movements of tongue, limbs,
and rigidity on the same medication. Subsequent to these symptoms, when she reported to us, typical antipsychotics were reduced and atypical antipsychotic Tablet Quetiapine was started orally. The specific choice of Quetiapine was due to patient’s age, psychotic symptoms with agitation, and side effect profile.[6] Following this, patient was in remission for two years of follow-up and maintained on the approximate dose of 150 to 200 mg of Tablet Quetiapine daily. After two years, patient was again brought to our clinic with relapse and exhibited similar psychotic complaints on maintenance medication. Patient developed fearfulness, suspiciousness, persecutory delusion (“someone is coming to kill me”), and self neglect (did not take bath, refused to go to toilet, and had to be forced to eat food) as per reports from her son. She had decreased communication with family, disturbed sleep, and intense perplexity. Positive and Negative Syndrome Scale (PANSS) for rating the symptoms of schizophrenia could not be applied as patient was uncooperative and perplexed. In view of intense perplexity and late age of onset of psychosis, Magnetic Resonance Imaging (MRI) was planned. During MRI, patient was injected up to 6 mg lorazepam intramuscularly for sedation as she was agitated and uncooperative. After MRI, when patient returned to the ward, the patient’s son noted improvement in her psychotic symptoms and it was confirmed by the clinicians during daily rounds. She was more communicative with relatives and her fearfulness as well as suspiciousness was improved. She showed better self care, took bath, and ate food on her own. This improvement lasted for 36 hours and patient again was psychotic and agitated. In view of motion artefact in the MRI, the radiologist advised to repeat it and also advised adequate sedation this time. Patient’s MRI was planned for 2nd time after 3 days. Due to agitation, the patient was sedated up to 8 mg Lorazepam intramuscular injection this time. For a second time also, the same relative reported considerable improvement in self care, suspiciousness, and persecutory delusion (of people coming to kill her) in the ward. Patient was more interactive with relatives and ate food on her own. Both the times, the improvement in her paranoid symptoms remained for 36 to 40 hours. Both these events of short-term remission in paranoid symptoms after intramuscular injection Lorazepam was noted by relative and visiting clinicians. The finding on MRI showed mature right frontal infarct and were clinically insignificant.

**DISCUSSION**

The pharmacological properties of virtually all known antipsychotic medications seem to include the blocking of dopamine receptors, hence supporting the hyperdopaminergic system theory in schizophrenia. In this case of paranoid schizophrenia, the short-term remission in paranoid symptoms with use of injectable Lorazepam specifically warrants explanation. There are studies reporting the use of all types of BZDs as sole agents in treatment of schizophrenia and many of these have reported positive results.[7,8] However, BZDs mainly were found to be efficacious as an adjunct to neuroleptic.[9,10] The utility of BZDs in this case of paranoid schizophrenia can be explained on the common therapeutic effects of decrease in agitation, perplexity, and anxiety. This short-term improvement also can be explained on the basis that BZDs help increase efficiency of thalamic filter and may ameliorate the similar psychotic symptoms of paranoid nature. The N-methyl-aspartate (NMDA) receptor affecting the positive symptoms of schizophrenia is the most widely accepted hypothesis today. The glutamatergic neurons descend from precortex to striatum where they terminate on GABA neurons that project to thalamus. The release of GABA in thalamus creates a sensory filter that prevents too much information to reach cortex avoiding sensory overload. Failure of thalamic filter causes excess sensory information to reach cortex, due to which positive symptoms like delusion and hallucinations occur.[11]

However, this observation of short-term remission of paranoid symptoms in the case report needs further explanation. The short-term improvement in this case is not a general behavioral improvement in terms of agitation, sleep disturbances, but it could be specific to the core paranoid symptoms of schizophrenia. Through this incidental finding of short-term remission in paranoid symptoms with injectable Lorazepam, this report guides further studies on the role of BZDs in paranoid schizophrenia.

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How to cite this article: Parkar SR, Dhuri C, Kumar VA. Lorazepam-induced short-term remission of symptoms in a case of paranoid schizophrenia. Indian J Psychol Med 2011;33:205-7.
Source of Support: Nil, Conflict of Interest: None.