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# A CASE OF TREATMENT RESISTANT SCHIZOPHRENIA WITH NEUROCYSTICERCOSIS

[1]Garg M, [2]Sharma A

[1]Junior Resident, [2]Junior Resident

[1] Psychiatry Department,

[1] Indira Gandhi Medical College, Shimla, Himachal Pradesh, India

*Abstract:* Introduction: Schizophrenia is a chronic psychiatric disorder with a heterogeneous genetic and neurobiological background that influences early brain development, and is expressed as a combination of psychotic symptoms — such as hallucinations, delusions and disorganization — and motivational and cognitive dysfunctions. Aim: To discuss a case of 23 years old male with history of 2 episodes of seizures due to neurocysticercosis presented with symptoms of schizophrenia. Results: Patient showed significant improvement with treatment (started interacting, suspiciousness reduced, catatonic symptoms improved) following which he was discharged from the hospital. Conclusion: Treatment Resistant Schizophrenia (TRS) represents a major clinical challenge. Clozapine is recognized as most effective treatment option worldwide. Earlier and broader use of clozapine in patients with TRS is an important measure to improve outcomes of patients with this most severe form of the illness.

***Index Terms*** **– TRS, Clozapine, Neurocysticercosis**

## I. INTRODUCTION

Schizophrenia is a chronic psychiatric disorder with a heterogeneous genetic and neurobiological background that influences early brain development, and is expressed as a combination of psychotic symptoms — such as hallucinations, delusions and disorganization — and motivational and cognitive dysfunctions. The mean lifetime prevalence of the disorder is just below 1%. Although gross brain pathology is not a characteristic of schizophrenia, the disorder involves subtle pathological changes in specific neural cell populations and in cell–cell communication. Schizophrenia, as a cognitive and behavioural disorder, is ultimately about how the brain processes information. Indeed, neuroimaging studies have shown that information processing is functionally abnormal in patients with first-episode and chronic schizophrenia. Although pharmacological treatments for schizophrenia can relieve psychotic symptoms, such drugs generally do not lead to substantial improvements in social, cognitive and occupational functioning. Psychosocial interventions such as cognitive–behavioural therapy, cognitive remediation and supported education and employment have added treatment value, but are inconsistently applied. Given that schizophrenia starts many years before a diagnosis is typically made, the identification of individuals at risk and those in the early phases of the disorder, and the exploration of preventive approaches are crucial.

## II. RESEARCH METHODOLOGY

23 years old single male educated up to 10+2 Std belonging to low socioeconomic status presented with psychotic symptoms along with history of 2 episodes of seizures due to neurocysticercosis in psychiatry out patient setting. His symptoms started 6 years prior to presentation characterized by passivity and lack of initiative, poverty of content of speech, poor non-verbal communication by facial expressions and eye contact, hallucinatory behaviour, catatonic symptoms (posturing and staring) with insidious onset and continuous and progressive course. There was no family history of similar complaints and no history of substance use. Clinical examination revealed normal vital signs and patient was conscious and oriented. The laboratory tests including complete hemogram, glucose, electrolytes, liver function and kidney function tests were within normal range. Non-Contrast Computed Tomography of Brain was grossly normal. Magnetic Resonance Imaging of Brain showed calcified lesion without perilesional oedema along the falx cerebri posteriorly. Mental Status Examination revealed poverty of speech, delusional perception, delusion of perception. He was started on T. Risperidone which was gradually increased to 6mg in divided doses and T. Lorazepam 4mg in divided doses with provisional diagnosis of Schizophrenia (F20-ICD-10) with neurocysticercosis. But there was no improvement with T. Risperidone which was gradually tapered and T. Olanzapine was started and increased to 20mg in divided doses. Electroconvulsive Therapy (ECTs) was also administered but there was no significant improvement. At this point based on history, physical examination and laboratory investigations diagnosis of Treatment Resistant Schizophrenia with Neurocysticercosis was made. T. Clozapine 12.5 mg HS was started and gradually increased to 175mg inn divided doses and T. Olanzapine was decreased to 15mg and gradually stopped. Patient showed 80% improvement with treatment.

## III. RESULTS AND DISCUSSION

Patient showed significant improvement. He started interacting with his family, his catatonic symptoms improved and his suspiciousness got reduced**.** Treatment Resistant Schizophrenia (TRS) represents a major clinical challenge. Clozapine is recognized as most effective treatment option worldwide for TRS, but clozapine is underused due to various barriers. Importantly, studies indicate that response rates are higher when clozapine is initiated earlier in the treatment course. Side effects are common with clozapine, particularly in the first few weeks, but can mostly be managed without discontinuation; they do require proactive assessment, intervention, and reassurance for patients. Therapeutic drug monitoring of clozapine trough plasma levels is helpful to guide dosing. Earlier and broader use of clozapine in patients with TRS is an important measure to improve outcomes of patients with this most severe form of the illness.

## IV. Acknowledgment

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