

Case report on Schizophrenia with extra-pyramidal Syndrome

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Abstract:

Introduction: Extra pyramidal syndrome (EPS) are serious neurological symptoms and major adverse effects of anti-psychotic drugs. These drugs block D2 receptors in the midbrain region of the brain. When patient is receiving Schizophrenia treatment, in that treatment signs include dystonia, Parkinsonism (signs i.e. stiffness), bradykinesia (slow motion), tremor, and intermittent dyskinesia. **The main diagnosis** is schizophrenia with extra pyramidal syndrome (akathisia). **Therapeutic intervention and outcomes:-** Medical management was provided to the patient i.e. antipsychotic drug. to reduce the symptoms of schizophrenia. Below are five ways therapy can help treat schizophrenia. and some therapy using in extra-pyramid Psychosocial therapy symptoms. 1. Individual psychotherapy, 2. Self-help groups. 3.Social skills training (SST), 4. Cognitive behaviour therapy 5. Occupational therapy and outcomes will be patient improve mental health and muscle relaxation. **Conclusion:** The nurses have to play important role to identify symptoms and critically think, take action immediately to prevent potential complications when the patient receives antipsychotic drugs.

Keywords: - Akathisia, Clozapine, Extra Pyramidal Side Effects

Introduction:

Akathisia is understood as a subjective feeling of motor restlessness, which manifests as a pressing need to be in constant movement. Correlate the 1st generation antipsychotic, in general, 2nd generation antipsychotic have been described to be correlated with decrease incidence rate of akathisia. Some reports also suggest a beneficial effect of clozapine on persistent akathisia too. However, few reports have also linked acute akathisia with use of clozapine but literature is still limited. We describe a case of acute akathisia associated with clozapine and review the existing literature linking clozapine with acute akathisia. Akathisia is a movement disorder marked by internal restlessness or jitteriness combined with a strong desire to move, resulting in the observation of repetitive movements such as leg crossing, swinging, or shifting from one foot to another.¹ While akathisia is most frequently associated with the side effects of some drugs, it was first recorded in the medical literature in 1901, when Czech neuropsychiatrists' Ladislav Haskovec identified a condition he called "inability to sit," i.e. a non-drug induced akathisia, in two of his patients. Kruse identified three patients who experienced "muscular restlessness" while taking phenothiazines in 1960, which was the first diagnosis of drug-related akathisia. Under the umbrella of extrapyramidal symptoms, akathisia was grouped with other antipsychotic-induced movement disorders, such as parkinsonism and dystopia (EPS). In clinical practice, akathisia is a major obstacle. Patients with akathisia frequently complain of nervousness, inner anxiety, pain, restlessness, itching, and/or an inability to relax, which

may make the clinical appearance of akathisia confusing, Suicidal ideation, hostility, and violence can escalate.²

Patient Information:

One of the female patient, 55 years old, got admitted in psychiatric ward, Acharya Vinoba Bhave Rural Hospital with known case of Schizophrenia for the past 25 years. Since then she was taking several antipsychotic drugs and regular visit to the psychiatrist. Past two years she was prescribed to take Tab. Clozapin 20 mgs and Tab. Haloperidol 5mgs by the psychiatrist. Her husband understood the cost of Tab. Clozapin 20 mgs is expensive and he stopped the medicine abruptly without consulting to the psychiatrist, continued with only Tab. Haloperidol 5 mgs for two weeks and then the patient herself skipping Tab. Haloperidol 5mgs a week before she comes to the hospital because she claims that the medications had given her chest pain, breathlessness and mouth ulcers. Patient started to develop paranoid spells, believing that her son had pinched her and her husband drained her blood and selling it secretly. She also thinks that her family members were trying to kill her for her property, suspiciousness, aggressive, sleep disturbance, irritabilities and muttering to self and abnormal movements of lips, head and neck since 2 Days. She was taken to AVBRH Psychiatric OPD by her husband and was admitted on 19/1/2020 for further evaluation. **Precipitating factors** According to the family history, she is the only one daughter and another sibling of elder brother for their parents. Her parents had special emotional attachment towards her because she is the only one daughter, after getting married she started having the symptoms of Paranoid schizophrenia and on regular treatment. Another reason one of her cousin told her that her husband is having extramarital relationships with someone in the year of 1995, since then she started doubting her husband. **Perpetuating factors** Patient is poor compliance to medication for the past week, developed delusional thinking towards her family. **Past psychiatric history** Since 1995 the first episode, she was taken to psychiatrist and taken a treatment for a while. Since then, she always develops suspiciousness towards her husband and even with her relatives when she was on medications. In 2009, after being on antipsychotics for several years, developed muscle spasms, neck rigidity, and headache and then taken to psychiatrist, she was diagnosed as suffering from extra pyramidal syndrome.

Primary concerns and symptoms of the patient.- Present case was visited in OPD bases in AVBR hospital on dated 19/01/2020 with complaints of typical symptoms of Bradykinesia, physical discomfort, agitation, anxiety, shaking legs. **Significant clinical findings:** After investigation report show that Serum creatinine was decreased, Alkaline Phosphatase was increased, Hb% level was slightly decreased and Granulocytes was increased.

Relevant past interventions with outcomes: Community base services should be available in particularly area and provide community mental health facility such as Partial hospitalization. 1. Day care center 2. Half way homes 3. Quarter way homes 4. Self –help groups 5. Suicide prevention centers 6. Foster homes 7. Sheltered Workshop 8 Mental health emergency care

Clinical Findings:

Physical examination: On physical examination, during inspection patient looking unstable, facial movements abnormal, lips was smacking and neck movements was abnormal.

Mental status examination: Abnormal speech, inappropriate affect, delusional thought Presented with phobia and Obsessive compulsive disorder . perceptual abnormalities, was presented such as

attention, concentration, recent and remote memory, intelligence, and judgment was found to be affected and impaired. Disturbed sleeping pattern and anorexia was present .

Timeline:

The patient was admitted for three weeks and the nursing care has been rendered along with the psychopharmacological interventions. The patient discharged from the hospital in a good condition and follow up has been taken regularly in the psychiatric OPD every week.

Diagnostic Assessment:

Diagnostic testing (such as PE, laboratory testing, imaging, surveys). Tremor was present Extra pyramidal symptoms confusion state difficulty in speech ,and not properly sit in one position

No any challenges during diagnosis.

Diagnosis:

After physical examination and investigation doctor diagnosed a case of Schizophrenia with extra pyramidal symptoms (akathisia).

Present case prognosis was very poor.

Therapeutic Intervention:

Types of therapeutic intervention: Medical intervention provided i.e. Tab. Paciton (Trihexyphenidyl) 12 mg for reduce muscle contracture used for treatment of parkinsonian disorders . Antipsychotic drug i.e. Tab. Clozapine (Clozaril,) 25 mg given in twice a day. Also sedative drug given to the patient that is Lorazepam 2mg twice a day .

Follow-up and outcomes

Present case took regular follow up because patient had a history of side effect of antipsychotic drug.

Primary Outcome

The evidence of extrapyramidal symptoms was minimized by anticholinergic drugs and adjunct with other psychosocial therapies.

Discussion:

Several studies have found that amisulpride is as effective as clozapin and risperidone. It continues to be the most effective antipsychotic drug for schizophrenia that has been immune to medication. . Furthermore, clozapine tends to be particularly effective in depressed patients with schizophrenia and others who have a comorbid drug use disorder.³ Despite its safety, clozapine's use in clinical practise is restricted due to the risk of many significant side effects, including agranulocytosis and thromboembolism. Clozapine has been linked to fatal myocarditis and cardiomyopathy in young adults who are otherwise stable. The literature on clozapine-related myocarditis will be discussed in this article, and clinical advice will be given on how to detect and treat this potentially lethal side effect.⁴

In terms of cardiac effects and extra pyramidal symptoms there is no distinction between olanzapine, risperidone, and ziprasidone. Aripiprazole is a standard antipsychotic that is safer for children with schizophrenia. It causes less extra pyramidal symptoms, particularly akathisia. There is evidence from

an RCT that it induces hyperprolactinemia, a lower risk of sinus tachycardia, blurred vision, dizziness, and nausea.⁵

Management of dysphagia includes discontinuing the antipsychotic, reducing the dose, dividing the dose, or switching to another antipsychotic drug. Dysphagia may be causing immediate effects of airway obstruction like choking, asphyxia, aspiration pneumonia, and there is evidence: clozapine induces metabolic syndrome and dyslipidemias but less risk of developing extra pyramidal syndromes.⁶ The main complication of anti-psychotic drug is Neuroleptic Malignant Syndrome arising from renal failure because of the presence of myoglobin in the urine produced by rhabdomyolysis; respiratory insufficiency due to aspiration pneumonia due to the presence of consciousness and dysphagia; myocardial infarction which causes heart insufficiency and arrhythmias. There are certain characteristics that predispose to the development of the syndrome, such as prior brain damage or mental retardation. There is evidence, 91% of the patients found to appear Neuroleptic Malignant Syndrome because of the dose of neuroleptics was increased. However, this syndrome can also be precipitated by the withdrawal of drugs, since they cause a sudden interruption of the dopamine availability in the brain. The attributed cases to be treated are in intensive care interventions.

Clozapine is a second-generation antipsychotic medication used in the treatment of schizophrenia. Many that have not responded to medication at the time should be referred to other specialists. It is thought to be linked to a lower risk of extra pyramidal side effects. Clozapine is known to cause akathisia, which is a rare side effect. We describe a patient who developed akathisia while taking clozapine and review the literature in this report. Except for a few early reports, the literature suggests that clozapine is related to a lower chance of akathisia. Following that, first-generation antipsychotics are more effective. The evidence comparing clozapine to other atypical antipsychotics is inconclusive.⁷

Clozapine, a dibenzodiazepine analogue, is an atypical antipsychotic with dopaminergic and serotonergic activity believed to mediate its therapeutic effects. The literature on clozapine-related myocarditis will be reviewed in this paper, and practical advice will be given on how to diagnose and manage this potentially fatal side effect. Schizophrenia is estimated to involve abnormalities in neurotransmitters such as dopamine, but the exact mechanism for this disease has not yet been clarified. Patients with chronic schizophrenia staying in hospitals for prolonged periods of time often have constipation. Probiotics are occasionally used to alleviate constipation in these patients. Treatment with probiotics sometimes alleviates psychotic symptoms. With the ordinary method of bacterial culture that is applied to limited bacteria, the influence of probiotics on the intestinal flora cannot be evaluated. The present study used the T-RFLP method as a means of examining the composition of the fecal flora. With this method, the bacteria, usually difficult to incubate and accounting for 70-80% of the intestinal flora, can be detected as specific patterns.⁸ Related studies on schizophrenia were reviewed⁹⁻¹⁴.

Patient perspective

Patient received all the treatments became free from all the extra pyramidal symptoms and discharged from the hospital.

Informed Consent

Patient was informed and taken written consent before initiation of case report.

Conflict of interest

Nil

Financial resource of the study

Nil

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