www.jcimcr.org

JCIMCR OPEN ACCESS Journal of Clinical Images and Medical Case Reports

ISSN 2766-7820

*Short Report*

*Open Access, Volume 3*

# Olanzapine abuse: A case report

***Corresponding Author: Rajoo Saroj**

Consultant Psychiatrist, Brain Care Neuropsychiatry Center, Nabha, Patiala, Punjab 147201, India.

Email: dr.rajoosaroj@yahoo.com

ORCID ID: 0000-0003-1546-883X

Received: May 25, 2022

Accepted: Jun 29, 2022

Published: Jul 06, 2022

Archived: www.jcimcr.org



DOI: www.doi.org/10.52768/2766-7820/1929

## Abstract

Olanzapine is a 2nd generation or atypical antipsychotic medicine belongs to thienobenzodiazepine group that blocks the serontonin (5-Hydroxytryptamine [5-HT]) 5-HT2A and the Dopamine (D2) receptors in particular, and also blocks Muscarinic (M1), Histamine (H1), 5-HT2C, 5-HT3 to 5-HT6, adrenergic (αl), and D4 receptors. The olanzapine has greater affinity for blocking 5-HT2A receptors in comparison with D2 receptors in comparison to other antipsychotics except Clozapine and Quetiapine. Olanzapine is most commonly prescribed for treatment of overall positive and negative symptoms of schizophrenia, for acute, management of mania, and as Olanzapine- fluoxetine combination in bipolar depression. It is shown to possess antidepressant activity without destabilizing the mood. It is usually well tolerated But most common side effects of the drug is sedation. The patient stated that he was suffering from sleep problem and was facing problem in procuring Benzodiazepines. On suggestion of his friend, he started taking Olanzapine as sleeping pill. Soon he discovered that it would make him feel cloudiness of mind "get stoned", to which he liked most. It was a prime motivation for abusing olanzapine.

***Keywords:*** Abuse; Antipsychotic drugs; Olanzapine.

## Introduction

Olanzapine is a 2nd generation or atypical antipsychotic medicine belongs to thienobenzodiazepine group that blocks the serotonin (5-hydroxytryptamine [5-HT]) 5-HT2A and the dopamine (D2) receptors in particular, and also blocks muscarinic (M1), histamine (H1), 5-HT2C, 5-HT3 to 5-HT6, adrenergic (αl), and D4 receptors [1]. The olanzapine has greater affinity for blocking 5-HT2A receptors in comparison with D2 receptors in comparison to other antipsychotics except Clozapine and Quetiapine [2].

Olanzapine was constantly found to be superior to 1st generation antipsychotics in treatment of both positive and negative symptoms of schizophrenia. The drug is also approved for treating acute mania, bipolar disorder [3].

Olanzapine also found to have antidepressant property without destabilizing the mood. The most common side effects are weight gain and sedation [4]. This paper will describe the case of 36 yrs old man, who was abusing olanzapine.

## Case report

A 36 yrs old male with primary education, work as farmer resident of village Achal, Nabha, Patila, Punjab visited to us in 2019 with complain of spasm of neck and jaw, drooling of saliva, unable to speak, shaky movement in whole body. After initial assessment, it was found that he has been taking T. Olanzapine 5 mg 8 tablets daily since 1month. He was given Inj. Promethazine 50 mg and admitted in hospital for day care. According to medical history, he developed sleep problem around 5 month back. On suggestion of his friend, he started taking

T. Alprazolam 0.5 mg per regularly. He would procure it from nearby medical stores. Over the period of couple of months, he began to feel difficulty in falling asleep and would feel restless with same dose so he increased it to T. Alprazolam 0.5 mg 2 tab per day. After around next couple of months, he began to feel difficulty in procuring T. alprazolam without prescription by doctor. However on suggestion of his friend, he started taking olanzapine 5 mg per day. Now he would get enough sleep. He also noticed that taking olanzapine, would feel relaxed, careless and cloudiness in mind "get stoned". Thereafter, over next 3-4 months, he gradually increased the dose of T. Olanzapine 40 mg per day to "get stoned" effectively. Whenever he would not take it, would feel nervousness, anxiety, palpitation and disturbed sleep, would get relief after consuming Olanzapine. He stopped going to work despite regular arguments with his wife. After couple of weeks, one day he developed tremor in hand, slurring of speech, spasm in neck and jaw along with drooling of saliva. Family member got worried and he was brought to us for management of acute symptoms. On clinical assessment, no history of psychosis, depression, anxiety disorder or any other substance abuse disorder found except benzodiazepine (T. Alprazolam 0.5 mg per day in dependent pattern in past). On examination, tachycardia and rigidity in neck, jaw and limbs was present. He was given inj. Promethazine 50 mg intramuscularly and was kept under observation for next 4 hours. He was prescribed T. amitriptyline 12.5 mg per day which increased to 25 mg per after 4 days along with T. Clonazepam 0.5 mg per day. He was advised to stop taking Olanzapine and educated about side effects of Olanzapine. He was stable and continued follow up for next 6 month. Thereafter he dropped out of follow up but maintained well. In November 2021, he restarted taking olanzapine in previous pattern and developed similar set of symptoms again. He was restarted on T. amitriptyline 25 mg per day, T. Trihexphenidyl 2 mg per day and T. clonazepam 0.5 mg per day. He improved maintained well but in February 2022, again dropped out of follow up and stopped taking medicine. In March 2022, He restarted taking Olanzapine and increased it to 40 mg per day. Family member got worried, so he was brought to us again. On further assessment, he acknowledged that he likes "get stoned", which makes him to use it again and again. He was willing to give consuming Olanzapine if would get proper sleep. Hence this time, he was given T. Paroxetine- clonazepam 25/0.5 mg per day, T. Propranolol 20 mg two times per day and T. Quetiapine 100 mg per day. Now he is stable and continuing on follow ups regularly.

## Discussion

The medication like CNS suppressant (eg. Benzodiazepines) and CNS stimulant (eg. Methylphenidate) have obvious abuse potential. The reports of abuse of these medicines are available in literature worldwide. Although clinicians are very vigilant about patient's abuse of psychoactive substances but recent few case report suggest abuse of antipsychotics, especially Second Generation Antipsychotics (SGAs). In 2016, a research was conducted for non-medical use of olanzapine among subjects maintained on methylphenidate. In this study 92 clients participated and out of which 30% reported lifetime history of non-medical olanzapine abuse, 9 reported use of 30 mg or higher on typical day of use, 3 were literally taking 100 mg in a day. The most common reason for use was to relieve anxiety and cloudiness of mind "get stoned" [4]. Other reasons are reported to add for sleep and escape worries. The prime motivation for use of olanzapine in our patient was also to add in sleep and "get stoned". Therefore self-medication style of intake of olanzapine is the dominant motivator for use, with hedonic motivations being present in a minority. Case report describes the emerging risk of psychotropic abuse. Although neuropharmacological reason for abuse potential of olanzapine is difficult to quantify but few case report of olanzapine abuse available in literature; which suggest that patients were abusing it to derive euphoric effect [6-8]. In light of our case report, more research is needed to ascertain the extent of abuse of antipsychotics. While there is a need to be aware of risks, doctors should remain vigilant about prescription and frequency of follow ups before due date. The government needs to regulate the availability and dispensing of psychotropic on medical stores.

## References

1. Kelley DM, Conley RR, Carpenter WT. First episode schizophrenia. A focus on pharmacological treatment and safety considerations. Drugs. 2005; 65: 1113–1118.
2. Matza LS, Baker TM, Revicki DA. Efficacy of olanzapine and ziprasidone for the treatment of scbizophrenia; a systematic review. CNS Drugs. 2005; 19: 499–515.
3. Bolin RR. Psychiatric manifestations of artane toxicity. J Nerv Ment Dis. 1960; 131: 256–260.
4. Thomas K, Saadabadi A. Olanzapine. [Updated 2022 May 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022.
5. James PD, Fida AS, Konovalov P, Smyth BP. Non-medical use of olanzapine by people on methadone treatment. BJPsych Bull. 2016; 40(6): 314-317.
6. Lai CH. Olanzapine abuse was relieved after switching to aripiprazole in a patient with psychotic depression. Prog Neuropsychopharmacol Biol Psychiatry. 2010; 34: 1363–1364.
7. Reeves RR. Abuse of olanzapine by substance abusers. J Psychoactive Drugs. 2007; 39: 297–299.
8. Kumsar NA, Erol A. Olanzapine abuse. Subst Abus. 2013; 34(1): 73-74.