

Case Report

A Case Series of Quetiapine Addiction/Dependence

Ashish Srivastava, Veeranna Patil, and Yvonne Da Silva Pereira

¹Institute of Psychiatry and Human Behavior, Goa, India

Corresponding author: Dr. Ashish Srivastava, M.D., Consultant Psychiatrist,
Institute of Psychiatry and Human Behaviour, Goa, India, E-mail: ashishsri1977@rediffmail.com

Abstract

Quetiapine is a second-generation antipsychotic, which is commonly used in clinical practice for treatment of schizophrenia, acute mania and depressive episodes as well as maintenance therapy in bipolar disorders. It is also used for other psychotic disorders and popularly for non-psychotic symptoms such as anxiety and insomnia. Quetiapine is not a controlled substance and not considered to be an addictive substance. However, contrary to this there have been few case reports world wide of its abuse. Here we are reporting a case-series of quetiapine addiction noted among patients attending the outpatient department of a tertiary care psychiatry hospital (German J Psychiatry 2013; 16(4): 152-155).

Keywords: quetiapine, addiction, dependence, antipsychotics

Received: 11.7.2013

Revised version: 7.8.2013

Published: 20.12.2013

Introduction

Antipsychotics are compounds, notoriously dysphorogenic, apparently devoid of abuse potential and subjectively noxious to the degree that medication adherence is one of the preeminent challenges of treatment. The newer or atypical antipsychotics (second generation) have generally improved on this subjective intolerability, which has led to the steadily expanding use of these compounds on non-psychotic patients.

Quetiapine is a second-generation antipsychotic, which is commonly used in clinical practice and is recommended by FDA for treatment of schizophrenia and acute mania and depressive episodes as well as maintenance therapy in bipolar disorders. It

is also used for other psychotic disorders and popularly for extra psychotic symptom clusters such as anxiety and insomnia. Quetiapine is not a controlled substance and not considered to be an addictive substance. However, contrary to this, there have been few case reports world wide of its abuse. It is generally prescribed as oral medication but has been administered through all possible routes as reported, like intranasal use (Hussain et al., 2005, Pinta & Taylor, 2007, Waters & Joshi, 2007, Pierre et al., 2004), smoking, injecting (Hussain et al., 2005) and in combination with other addictive substance. The development of street forms of quetiapine suggests its some potential illicit value and abuse potential. The popular street names for quetiapine are "Quell" (Pinta & Taylor, 2007, Waters & Joshi, 2007, Pierre et al., 2004, Keltner & Vance, 2008), "Susie-Q", "Snooze berries", "baby heroin" (Waters & Joshi, 2007, Pierre et al., 2004, Keltner &

Vance, 2008), and “Q ball” (Waters & Joshi, 2007, Pierre et al., 2004, Keltner & Vance, 2008, Gugger & Cassagnol, 2008) when used with cocaine. Quetiapine has sometimes been used as a date rape drug, causing a person to lose consciousness before a sexual exposure, especially when co-administered with alcohol.

Here we are reporting a series of four cases of quetiapine oral abuse noted among mentally ill prisoners attending the outpatient department of a tertiary care psychiatry hospital.

Clinical case series

Case No.1. Mr. A., a 32-year-old male accused of homicidal act, diagnosed to be having antisocial personality disorder with abuse of alcohol and cannabis as per DSM-IV TR criteria, who was currently abstinent (for 4 months), presented to our tertiary care hospital outpatient department (OPD) with dysphoric mood, anxiety symptoms, irritability, restlessness and sleep disturbances and for which he was started on oral amitriptyline 25 mg at night and sodium valproate 600 mg per day. On subsequent follow-up visits, he complained of inadequate sleep for which quetiapine (100mg) was considered, as it would be beneficial for his sleep disturbance and in addition, would have mood stabilising effects and help his anxiety symptoms. He was apparently better and discontinued all other medications except for quetiapine. After few days, he was found to consume an increased number of quetiapine tablets, which he used to borrow from other inmates in the prison. He demanded higher doses of quetiapine from treating doctors, which was not complied with. In jail, he apparently continued to take quetiapine in doses up-to 800mg/day, which he borrowed from other inmates. During his next visit, he presented with similar complaints of irritability, sleep disturbances, and dysphoric mood and was hospitalised. In the hospital, he was restarted on sodium valproate 800 mg per day, mirtazapine 15 mg at night along with clonazepam 0.5 mg at night with. He did not improve and quetiapine was added. Mirtazapine and clonazepam were stopped. He reported to feel better, started demanding for more quetiapine tablets and gradually stopped all other medication on his own. When this was

brought to the notice of the treating doctor, quetiapine was gradually tapered. He had restlessness, irritable behaviour, sleep disturbances and craving for quetiapine, suggestive of a probable quetiapine withdrawal syndrome. On further enquiry, he revealed that since there was no availability of other substances in the prison, he felt better with quetiapine and if he did not obtain quetiapine he would feel disturbed, and agitated. He developed an intense desire to obtain the medication, with which he would feel better and relaxed. He also claimed that with the use of quetiapine, he did not crave for alcohol and cannabis.

Case No. 2. Mr B, a 22-year-old male accused of possession of controlled substances and diagnosed with antisocial personality disorder and poly-substance abuse of cannabis, opioid and alcohol as per DSM-IV TR criteria, presented to us with irritability, leading to fights with inmates, insomnia and craving for substances. The patient attributed the above problems to unavailability of substances in the prison. He neither had mood disturbances nor psychotic features. He was put on sodium valproate to control his irritability. Later, a low dose of chlorpromazine was started for his insomnia instead of sedatives, because of his high abuse potential. At subsequent follow-up visits he reported that the prescribed medications were not giving him relief and he was borrowing and taking quetiapine 100mg tablets daily and took it along with the occasional use of cannabis. In subsequent visits, he requested to increase the dose of quetiapine as sleep disturbances persisted and he would need 200-300mg for sleep. He stopped cannabis completely and reported no craving for it. He continued to borrow quetiapine from his inmates and kept demanding to increase the dose at every visit, suggestive of craving for quetiapine. He reported feeling better and calm with quetiapine and if he did not obtain quetiapine, he would feel disturbed and agitated. On evaluation, it was noted that he was abusing medication in place of other controlled substance.

Case no. 3. Mr. C., a 32-year-old male accused of homicide and robbery was diagnosed to have antisocial personality disorder as per DSM-IV TR. He reported to the hospital with complaints of difficulty in initiation of sleep and forgetfulness, claimed to self-medicate with quetiapine 300mg daily prescribed to other inmates of the prison, and insisted for the same prescription. However, it was

denied and he was hospitalised for detailed evaluation. During the course of hospitalisation, on evaluation and investigation no cognitive deficits or related pathology nor insomnia was detected. He did not have any mood features or psychotic symptoms. He was found to be lying and showing manipulative behaviour to obtain quetiapine, which was keeping in line with his personality disorder features. In due course, because of his impulsivity, threatening behaviour, irritability and low frustration tolerance tablet sodium valproate was prescribed to calm him and he was discharged after a fortnight. During his follow-up visit, he reported quetiapine abuse, obtaining it from others, and requested to prescribe the same. Instead, zolpidem was added for the sleep disturbance reported by him. At his next visit, he reported feeling relaxed with adequate sleep, only with quetiapine tablet ranging from 400-600mg/day. He also reported that when he did not take quetiapine, he had disturbed sleep, irritability on minimal provocation and uneasy feelings. He would find it difficult to stay in prison without quetiapine and considered it to be the only helpful drug.

Case no. 4. Mr. D. is a 45-year-old male convicted in a homicidal act. He was diagnosed to have alcohol dependence, nicotine dependence and cannabis abuse currently abstinent (for about a year) with antisocial personality disorder as per DSM-IV TR criteria. He presented to the hospital with insomnia. On evaluation, he had neither mood symptoms nor psychotic symptoms. He was prescribed tablet zolpidem for insomnia. Initially he used to take one tablet of zolpidem 10mg and later self-medicated with 20mg, even then he continued to have sleep disturbances. During his next visit to the hospital, he reported persisting insomnia for which quetiapine 50mg was started. In subsequent visits, he demanded a higher dose of quetiapine in view of his persistent complains of not getting sleep. At his last visit, he claimed to have stopped taking zolpidem and started taking only quetiapine (about 200-300mg) and was demanding for higher doses as he felt better, relaxed and experienced mild euphoria with higher doses suggestive of craving and tolerance for quetiapine. He also reported that when he did not get quetiapine he had disturbed sleep, irritability, and dysphoric and had feelings of uneasiness, suggestive of some kind of a withdrawal syndrome with quetiapine.

Discussion

In view of above case reports where patients have shown tendency of addiction to quetiapine some of the genuine questions arise: (1) Does quetiapine cause dependence? (2) Does quetiapine dependence occurs only when used in those patients who are/ were abusing substance or whether in psychotic patients too? (3) What is the mechanism of addiction and how does it differ from other antipsychotics? (4) Should it be a controlled substance?

The above cases and the ones reported in the literature in the past do suggest a strong possibility of quetiapine addiction and also a dependence syndrome. From the above cases we have reported, it was found that people had craving, tolerance, withdrawal features and preoccupation with quetiapine use, which fulfils the criteria for substance dependence.

Currently, there has been no clear explanation as to the mechanism of such addiction with quetiapine and how it differs from other antipsychotics. In general, quetiapine misuse is associated with prior CNS depressant use and is more common in forensic settings. In all our cases, the patients had antisocial personality disorder as co-morbid diagnosis. These patients commonly use “uppers” (like amphetamines) or “downers” (like benzodiazepines). Thus, from the fact that patients with antisocial personality and/or poly-substance dependence take sedating drugs, it is difficult at this juncture to firmly conclude that antipsychotics with sedating properties are addiction drugs or not (Dhar et al., 2010, Reeves, 2007).

The mechanism of reinforcement for this misuse is unknown, but there is a hypothesis that it is related to quetiapine's pharmacological profile as an antihistaminic. However, with our current knowledge about the antipsychotic medications and some of the studies published, we can hypothesise the following: (1) That quetiapine has a pharmacological profile as an antihistamine with a relative low to moderate affinity for dopamine receptors and has rapid dissociation from the receptors. (2) That antipsychotics act by dopamine receptor blockade in mesolimbic pathways and are known to improve positive symptoms, but, in addition, they also negatively affect the reward system in the nucleus accumbens. Whether quetiapine has action only at the

mesolimbic and no effect or a positive effect on reward mechanisms, which makes it more addictive, needs further study. Hence, further research is necessary to be conducted to analyse this possibility. (3) The active metabolite of quetiapine, norquetiapine, is an inhibitor of norepinephrine transporters like antidepressants, which may play a role in its addictive potential.

Antipsychotics with almost the same receptor profile have not been reported to cause addiction. How quetiapine differs from these other antipsychotics needs to be studied further.

References

- Dhar R, Sidana A, Singh T. Olanzapine dependence: a case report. *German J Psychiatry*. 2010;13:51-3.
- Gugger JJ, Cassagnol M. Low-dose quetiapine is not a benign sedative-hypnotic agent. *Am J Addict*. 2008;17:454-455.
- Hussain MZ, Waheed W, Hussain S. Intravenous quetiapine abuse. *Am J Psychiatry*. 2005;162:1755-1756.
- Keltner NL, Vance DE. Incarcerated care and quetiapine abuse. *Perspect Psychiatr Care*. 2008;44:202-206.
- Pierre JM, Shnayder I, Wirshing DA, Wirshing WC. Intranasal quetiapine abuse. *Am J Psychiatry*. 2004;161:1718.
- Pinta ER, Taylor RE. Quetiapine addiction? *Am J Psychiatry*. 2007;164:174-175.
- Reeves RR. Abuse of Olanzapine by substance users. *J Psychoactive Drugs*. 2007;39(3):297-9.
- Waters BM, Joshi KG. Intravenous quetiapine-cocaine use ("Q-ball"). *Am J Psychiatry*. 2007;164:173-174.