CASE REPORT

Tianeptine Dependence: A Case Report

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Abstract

Tianeptine is an atypical tricyclic antidepressant that is prescribed mainly for the treatment of depression and anxiety disorder. There have been scattered reported cases of tianeptine dependence and abuse in the literature. We report the case of a 32-year-old gentleman with resistant major depressive disorder that was initially successfully treated with Tianeptine. When his depression relapse due to work-related issue, he step-up his dosages without supervision. He developed tolerance and withdrawal to tianeptine making it difficult for him to stop without help. This case highlights the possibility of tianeptine abuse to its high tolerability and easy access for purchase.

Keywords: Tianeptine, Dependence, Abuse, Detoxification, Depression

Introduction

Dependence is a state where a person becomes reliance on a chemical substance. A person with substance dependence would have compulsions to continue consuming the substance either to obtained its positive effect or to avoid the discomfort of its withdrawal. The Diagnostic and Statistical Manual of Mental Disorder Fifth Edition (DSM-5) made further refinement in diagnosis substance dependence with the introduction of the term “Substance use Disorder” [1]. Common substance known to cause dependence are non-prescriptive substance such as alcohol, nicotine, opioids, cocaine, cannabis, and amphetamine. However dependence are also known to develop in prescribed anxiolytics and sedatives. The prescriptive medication being abused includes the benzodiazepines, carbamates and barbiturates. There has also been some rare cases of antidepressant dependence being reported especially those with amphetaminergic effects [2].

Tianeptine is an atypical tricyclic antidepressant which is indicated primarily for treatment of depression and anxiety disorders. Its mechanism of action in managing depression is unknown. In contrast to SSRIs and tricyclic agents, systemic administration of tianeptine modestly enhanced the mesolimbic release of dopamine (DA) but it is unclear how tianeptine strengthens dopaminergic transmission [3]. It has also been suggested for the treatment of alcohol and other substance use disorders [4, 5]. Interestingly, there has been concerns that tianeptine itself
has a potential to be addictive and being abuse in recent years [2, 6, 7]. The reported case here further emphasis the possibility of Tianeptine abuse and dependence following the treatment of major depressive disorder.

Case report

A 32 years old man came to the psychiatry clinic admitting he has been abusing tianeptine and would like to be treated. He was diagnosed with major depressive disorder when he was 20 years old and was initially treated with escitalopram which was able to control his symptoms in those early years. At age 25 years old, he started working as a banker which precipitated worsening of his symptoms which was not well controlled with the same medication. Eventually he had to undergo electroconvulsive therapy at age 28 years old when he developed severe depression that was resistant to medications. Following that episode, he was on trial of many antidepressant all of which was unable get his symptoms under control. He was eventually started on tianeptine at age 29 years which finally could manage his symptoms. He felt well and able to perform in his work again and continued this medication with the dosage of 12.5mg three times a day.

After 6 months, he started to feel that the tianeptine was becoming less effective. His started to have low mood, poor appetite, poor sleep, anhedonia and inability to concentrate in his work and daily life. His work performance took the most hit and was given warnings by his employer to improve his productivity. In this period of elevated stress he decided to increase the tianeptine dosage hoping that this will resolve his symptoms and save his job. He felt that the dose increase did wonders and saw an improvement in resolving his symptoms. However with each increase in dose he would felt better only for few weeks before he felt it becoming less effective thus he would further increase the dose. This cycle continued for several months as he kept increasing the dosages once he felt the effectiveness wanes or when he felt his depression symptoms re-appears. He was able to get supply for his needs online thus had no problem continuing this pattern of consumption. In the few months before presenting himself, he started to have withdrawal symptoms with the development of palpitations, sweating, inability to concentrate, nausea and trembling. These symptoms would typically develop four to six hours after the last intake thus he had to take the tianeptine every four hours to avoid these symptoms.

He started to feel this issue as a problem as he felt his life was now resolving around getting the next dose of tianeptine. He was unable to work as a banker or be good son to his parents, as he could only think about getting the next dose of tianeptine. He also worried as he felt he was taking too much with his tianeptine intake at that point was around 150mg to 175mg six times a day making total usage per day to 900mg to 1050mg. He finally presented himself to UMMC psychiatric clinic to get help for this problem and was planned for tianeptine detoxification. He was electively admitted and the tianeptine was stopped. He was started on Mianserin 90mg once a day, clonazepam 4mg twice a day, sublingual buprenorphine 8mg /naloxone 2mcg twice a day and was observe in the ward for few days to assess any withdrawal effects. He was discharge well and is currently on review visits to monitor his major depressive disorder symptoms and also compliance to the treatment of his tianeptine dependence.
Discussion

In diagnosing substance use disorder, the patient must be identified to have presentation of impaired self-control in using the substance, social impairment due to it, persistent use even with the risks it cause and presence of pharmacological effect which is withdrawal and tolerance [1]. These presentations are detailed in eleven criterion in the DSM-5 with the presentation of at least two of eleven criterion for more than 12 month would fit into the diagnosis of substance use disorder [1]. In the presented case, he presented with symptoms of substance use disorder for at least 24 month thus meeting the duration criteria for the diagnosis. He also had more than 2 criterion for diagnosis. He had been using tiapentine in larger amount and longer than prescribed, had desire to stop, spent most of his time thinking, planning and taking tiapentine, had craving for it, unable to function as a banker, having tolerance and also presence of withdrawal symptoms. This first reported case in Malaysia is therefore further proof of the potential of abuse of tianeptine.

Tianeptine clinical efficacy in treating depression has been mentioned to be at least as effective as selective serotonin reuptake inhibitor [8]. Its mechanism of action however are still debated with the theory on enhancing serotonin re-uptake is being challenged [9]. Furthermore, its anti-depressive effects are also attributed to its action of normalization of glutamate concentration in the synapse which allows re-establishment of the optimal affective functioning [9]. It also causes release of dopamine in nucleus accumbens of the Dopaminergic reward system [10]. This effect on the mesocorticolimbic dopamine pathway is believed to be the essential part to explain cases of dependence to tianeptine [2, 7]. Furthermore, tianeptine is known to have minimal sedative and anticholinergic effects compared to tricyclic antidepressant thus making it more tolerable for abuse. To add to this, the easy access to obtain tianeptine especially through online purchases makes abuse of tianeptine more convenient [6]. This is demonstrated clearly in our reported case with easy purchase online and high tolerance with minimal side effects even with dose in access of 1000mg per day.

There have been several reported cases of tianeptine abuse [2, 6, 7]. This article the first reported case in Malaysia. Compared to previous reported case, what is apparently similar is the age group of people abusing tianeptine is around 30 to 45 years old [6, 7]. Reasons for this is unclear but probably related to the abuse following prescription and not for recreational use which usually happens in younger age group. Further findings from previous reported case are more female is affected which probably due to the higher incidence of depression among females [7]. While the doses taken by this reported case are around 1000mg per day, this is actually in keeping with previous reported cases which reports an average dose of 1645mg per day [7]. This is further proof of tianeptine high tolerability even with dose reaching 4000mg per day [7].

Once diagnose with Tianeptine use disorder, the management of such condition has no uniform standard. In this reported case, he was admitted for detoxification and was started on Mianserin 90mg once a day, clonazepam 4mg twice a day, sublingual buprenorphine 8mg /naloxone 2mcg twice a day to manage his withdrawal effects and also depression. This regime was prove to be successful in this case. Kisa et al. in their reported case also admitted their patient and started her on benzodiazepine and anti-
Their case was prescribed with Diazepam 20 mg per day of and venlafaxine, 75 mg per day which was also successful in detoxifying her tianeptine dependence [2].

In conclusion, tianeptine is an antidepressant with potential for abuse due to its high tolerability and its relatively ease of access for purchase. Clinician managing psychiatric patients should have awareness for such possibility. Further steps such as educate patients and their family on such possibility would also be necessary.

References


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