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Aripiprazole Induced Hypersexuality in A 42-Year-Old Woman with Bipolar Disorder: A Rare Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Background: Aripiprazole use is associated with a very rare side effect of hypersexuality, which was experienced by the patient described in this case study. Hypersexuality can be a very distressing symptom and may also hinder medication compliance.
Case Presentation: A 42-year-old woman with bipolar II disorder developed hypersexuality three weeks after starting aripiprazole, which was used in the treatment of her bipolar disorder.
Discussion: Aripiprazole works by reducing dopaminergic neurotransmission in the mesolimbic pathway. It is believed that due to aripiprazole's agonistic dopaminergic action in the mesolimbic circuit, it can increase sexual desire.
Conclusion: This case report emphasizes the importance of closely monitoring patients taking aripiprazole for hypersexuality and adds to the existing body of knowledge of aripiprazole-induced hypersexuality.

Keywords: Aripiprazole; bipolar disorder; hypersexuality.

1. INTRODUCTION

Aripiprazole is an antipsychotic with partial agonistic activity at the dopaminergic D2 receptor [1,2]. The FDA approved it to treat schizophrenia and mood disorders in 2002 and 2006, respectively [3]. It is widely prescribed because of its low adverse effects compared to other antipsychotics, such as weight gain, extrapyramidal symptoms, hyperprolactinemia, dyslipidemia, and insulin resistance [4]. However, it has rarely been associated with hypersexual behaviors such as excessive sex, excessive masturbation, and excessive watching of pornography [5]. This case report describes a patient with a mood disorder who developed hypersexual behaviors after initiating treatment with aripiprazole.

2. CASE PRESENTATION

Ms. A was a 42-year-old unemployed Caucasian female on follow-up at a clinic for depression. The patient had a history of depression and was recently on fluoxetine. The patient reported a positive family history of depression in her daughter and brother. There was no significant medical history except a low Vitamin D level at 21 years. There was no report of prior hospitalization, suicidal attempts, hypersexuality, seizures, or traumatic brain injury (TBI). The patient is unemployed, on social security disability, and lives with her friend. There was a positive history of cannabis and alcohol use.

On examination, the patient appeared as stated age, irritable, frustrated, yelling from time to time, somewhat labile, denied auditory or visual hallucinations, homicidal ideation, suicidal ideation, and had fair insight and judgment. A thorough diagnostic workup including complete blood count, vitamin D level, vitamin B12 level, thyroid-stimulating hormone, urine toxicology, and urinalysis were within normal limits.

Further history acquired elicited periods of insomnia, persistently increased energy, and elevated mood, suggesting hypomania, which led to the diagnosis of bipolar II disorder, and treatment was switched from fluoxetine to aripiprazole 5 mg every night at bedtime. A significant improvement was noticed after one week on the medication. However, on the third week of treatment with aripiprazole, the patient complained of increased sexual urge, sexual fantasies, preoccupation with sexual thoughts, and frequent masturbation, all of which significantly impaired her social functioning. Aripiprazole was discontinued, and paliperidone started at 6mg. After a month on paliperidone, her hypersexual symptoms resolved, but her depression symptoms relapsed. The patient requested and consented to restart aripiprazole. One month after restarting aripiprazole 5mg, the hypersexual symptoms returned, giving her the urge to masturbate multiple times a day. The patient declined a medication switch, stating, "I have never been this stable for years." The patient was seen for two more follow-up appointments and continued to report symptoms of hypersexuality.

3. DISCUSSION

This case focuses on the unique hypersexuality side effect that our patient experienced while using aripiprazole for bipolar disorder treatment. Hypersexuality Disorder (HD) is a clinical condition marked by an excessive obsession with sexual fantasies, desires, and behaviors [6].

While testosterone is thought to be the primary mediator of sexual desire in both men and women, dopaminergic and serotonergic pathways in the central nervous system (CNS) appear to play an essential role. The interconnections between monoaminergic receptors in the brain and sex hormones (e.g., testosterone) are essential for sexual impulses and behaviors. Sexual excitation is usually accompanied by increased dopaminergic neurotransmission [6].

Aripiprazole is a second-generation antipsychotic approved by the FDA for schizophrenia, major depressive disorder, and bipolar disorder. It works by reducing dopaminergic neurotransmission activity in the mesolimbic pathway and enhancing dopaminergic activity in the mesocortical pathway [7]. It is the first clinically atypical antipsychotic medication that achieves an atypical antipsychotic profile through partial agonism at the dopamine D2-receptor [8]. Because of its agonistic dopaminergic action in the mesolimbic circuit, particularly in the nucleus accumbens, aripiprazole can increase sexual desire, as suggested by previous studies [7]. The hypothesis is that aripiprazole restores previously reduced dopaminergic activity in the mesolimbic dopaminergic circuit, particularly in the nucleus accumbens. 5-HT1A partial agonist and 5-HT2A antagonist properties of aripiprazole may boost sexual activity [9].

Although drug-induced hypersexuality is a well-known side effect of dopaminergic medications (e.g., antiparkinsonian drugs) [10], there are only a few cases of hypersexuality secondary to second-generation antipsychotics which have been described in clinical studies [11,12].

An important caveat is that hypersexuality can also be seen in the manic phase of bipolar disorder, which can lead to misinterpretation of the hypersexuality symptoms as a feature of bipolar disorder. In the case we are reporting, the patient was managed with aripiprazole initially and had symptoms of hypersexuality; due to this side effect, her medication was switched to a different antipsychotic, paliperidone, which showed remission of the hypersexual symptoms, but her depression persisted. However, when he was restarted on aripiprazole, after a month of paliperidone, her symptoms of hypersexuality relapsed. This finding is similar to the case reported by Priya et al., where a 24-year-old male with schizophrenia developed hypersexuality symptoms after initiation of aripiprazole, and cessation of the aripiprazole led to a reduction in hypersexual behaviors [2]. Therefore, due to the remission of symptoms after discontinuing aripiprazole and further relapse when it was restarted, the hypersexual symptoms are likely associated with aripiprazole use.

4. CONCLUSION

Regularly screening patients for side effects such as hypersexuality may increase the likelihood of early detection of this side effect and the application of measures to limit the consequences of hypersexuality, like interpersonal conflicts that patients and their partners may encounter. This case report also adds to the growing knowledge and evidence regarding the association of aripiprazole with hypersexual symptoms, which may add to the list of side effect profiles. Therefore, we recommend further studies on the impact of aripiprazole on the sexuality of patients with co-existing psychiatric and sexual challenges.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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