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Case Report: Diplopia Caused by Aripiprazole in a Depressed Patient With Healthy Eyes

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ABSTRACT

Background: Diplopia, or double vision, is a common ophthalmologic complaint with many underlying causes, ocular and neurological. Aripiprazole has been reported to have fewer adverse effects and better efficacy than other atypical antipsychotics. Although ocular side effects of aripiprazole are not remarkable, two cases of diplopia associated with aripiprazole have been reported in the literature.

Objectives: Herein, we report the third case of diplopia, after the aripiprazole prescription in a woman with depressive disorder.

Case Presentation: A 37-year-old woman was brought to our clinic with symptoms of sleep loss, displeasure, auditory hallucination, and pessimistic thoughts. After a clinical interview, the patient was diagnosed with depression with psychotic features according to the Diagnostic and Statistical Manual (DSM-V) of mental disorders. She underwent treatment with 15 mg/d aripiprazole and 20 mg/d fluoxetine. Her symptoms reduced after three months as indicated by the visual analog scale. However, the patient returned to the clinic and complained of double vision. Neither neurological nor ophthalmological problems were observed following examinations by specialists. When the dose of the drug decreased and eventually discontinued, diplopia disappeared over 24 hours.

Conclusion: Since the patient had no history of diplopia and two cases of diplopia associated with aripiprazole were previously reported in the literature, we expected that the diplopia was related to the recently prescribed aripiprazole treatment. Physicians should be aware of the possible risk of diplopia-induced by aripiprazole and recommend patients discontinuing the drug immediately if complications have occurred.

Introduction

Diplopia, or double vision, is a common ophthalmologic complaint that can have many underlying causes, ocular and neurological [1]. Diplopia can occur as a result of damage to extraocular muscles that are innerved by oculomotor nerves and supranuclear centrum, which controls eye movement [2]. Effective management of diplopia needs a precise diagnosis based on an accurate history taking and careful physical examination [3]. In adults, the most common cause of diplopia is

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oculomotor nerve paralysis owing to ischemia. However, other causes of diplopia should still be considered, such as brain tumors, stroke, intracerebral aneurysms, and certain medications [4]. Aripiprazole is defined as an atypical antipsychotic drug. It is a quinolone derivative with proved partial agonist activity at dopamine (D2) and serotonin type1 (5_HT1A) receptors, and antagonist activity at 5_HT2A receptors [5].

Aripiprazole has been reported to have fewer adverse effects and better efficacy than other atypical antipsychotics [6]. Common adverse effects of aripiprazole include agitation, weight gain, headache, insomnia, anxiety, nausea, and vomiting [7]. Although ocular side effects of aripiprazole are not remarkable [8], two cases of diplopia associated with aripiprazole have been reported in the literature [9, 10]. Herein, we report the third case of diplopia, after the consumption of aripiprazole in a woman with depressive disorder.

Case Presentation

A 37-year-old married woman was brought to our clinic for symptoms of sleep loss, displeasure, auditory hallucination, and pessimistic thoughts. After a clinical interview, the patient was diagnosed with depression with psychotic features according to the Diagnostic and Statistical Manual (DSM-V) of mental disorders. She had no history of drugs or substance abuse. Regarding family history, her mother had an experience of depression. She underwent treatment with 15 mg/d aripiprazole and 20 mg/d fluoxetine. The symptoms were reduced after three months as indicated by the visual analog scale. However, the patient returned to the clinic and complained of double vision in the 10th month of treatment. She was referred to a neurologist and no problem following examinations was observed. Besides, after the eye checkup by an ophthalmologist, the patient's bilateral anterior, posterior segments, and retina appeared to be normal. Since the patient had no history of diplopia and two cases of diplopia associated with aripiprazole were reported in the literature, we expected that the diplopia was related to the recently started aripiprazole treatment. Thus, the dose of the drug decreased from 15 mg per day to 2.5 mg. However, her complaint persisted. So we discontinued aripiprazole, and her diplopia disappeared over 24 hours and did not return.

Discussion

Here, we reported a female who developed diplopia after aripiprazole therapy. Psychotropic drugs such as topiramate and lamotrigine have been also reported as causing this condition [11-15]. There have been case reports of diplopia secondary to citalopram and sertraline therapy as well as aripiprazole-induced acute myopia and diplopia in the literature [16-19]. The exact mechanism of this phenomenon is unclear but it may be associated with ciliary spasm, peripheral uveal effusion, or the effusion of the ciliary body. It may also be related to ocular interneuronal serotonergic fibers or anticholinergic activity [10]. In this case, diplopia cannot be associated with anticholinergic mechanisms as aripiprazole lacks anticholinergic activity [18]. Also, the rapid resolution of diplopia after discontinuation of aripiprazole treatment in our case, indicate a relationship between the adverse effect and the drug.

In this report, we introduce the third case of diplopia related to aripiprazole. Thus, the physicians should identify these situations, educate patients about this ocular adverse effect when prescribing aripiprazole, and recommend discontinuing the drug immediately if complications occur.

Ethical Considerations

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Authors' contributions

Visited and followed up the patient, gathered the data, and approved the final draft: Hamzeh Hosseini; Analyzed the data and wrote the first draft: Neda Zamani; Analyzed the data and critically revised the final draft of the manuscript: Amirhossein Ahmadi.

Conflict of interest

The authors declare no conflict of interest.

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