Psychiatria Danubina, 2022; Vol. 34, No. 4, pp 736-737 https://doi.org/10.24869/psyd.2022.736 *Case report*

ARIPIPRAZOLE-INDUCED DIPLOPIA IN AN ADOLESCENT PATIENT: A CASE REPORT

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received: 8.8.2022; revised: 10.9.2022; accepted: 20.9.2022

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INTRODUCTION

Aripiprazole is an atypical antipsychotic drug and it has proven efficacy for several indications in children and adolescents. Aripiprazole is preferred more frequently among other atypical antipsychotics due to its lesser side effects and limited effect on weight change in both short and long-term use (Coustals et al. 2021). Although not remarkable, ocular side effects associated with aripiprazole have been reported in the adult age group in the literature (Sönmez & Aykan 2014, Selvi et al. 2011, Atli et al. 2013, Hosseini et al. 2020). Diplopia or double vision is a common ophthalmologic complaint that may have many underlying ocular and neurological causes. Diplopia may occur as a result of damage to the extraocular muscles innervated by oculomotor nerves and the supranuclear center that controls eye movement (Iliescu et al. 2017). In this article, a case of aripiprazole-induced diplopia in an adolescent patient diagnosed with generalized anxiety disorder (GAD) and major depressive disorder (MDD) with psychotic content is presented.

CASE REPORT

A 15-years-old, high school male patient applied to our clinic with the feeling that something bad was going to happen at any moment, uneasiness, nervousness, unhappiness, reluctance, insomnia, being followed, and thinking that someone might harm him. He had been followed up with a diagnosis of GAD in an external center for about 1 year and was receiving escitalopram 10mg/day. From the family history, it was learned that olanzapine 5mg/day treatment was added for the last 1 month by the psychiatrist due to the additional pre-diagnosis of MDD with psychotic content. He applied to us because there was no significant improvement in the patient's complaints and he had rapid weight gain in the last 3 weeks. In the psychiatric examination, the patient was conscious, cooperative, fully oriented to place, time, person, and his mood and affect were depressed and anxious. He had no active suicidal thoughts, but he had passive suicidal thoughts. There was no history of attempted suicide or self-mutilative behavior. The patient's thought content included being hurt, being followed, and thoughts that something bad would happen. The patient exhibited psychomotor activity/restlessness during the history taking. His sleep and libido were normal, and there was no grandiosity. He had no known medical or other neurological disease. In her family history, it was learned that her mother was diagnosed with panic disorder and her aunt was followed up with social phobia. According to the DSM-5 diagnostic criteria, the patient was thought to have GAD and MDD with psychotic content. Olanzapine treatment was discontinued in terms of long-term follow-up and side-effect profile of the patient complaining of weight gain, and aripiprazole 5 mg/day was gradually added to the existing escitalopram 10 mg/day treatment. The patient reapplied to our clinic 10 days later. In the interview, it was learned that the patient's complaint of double vision started on the fourth day of the treatment and the double vision continued afterwards. The patient did not describe akathisia and had no extrapyramidal symptoms. In order to exclude possible neurological and ophthalmological factors that may cause double vision, consultation was made to the necessary departments. On eye examination, the patient's bilateral anterior and posterior segments were normal, bilateral visual acuity was normal, and there was no limitation of extraocular muscle movement in any direction of vision. Visual field examination did not reveal any symptom explaining double vision. Neurological examination was found to be normal. The patient had no signs of acute infection. Evaluation with the Naranjo Adverse Drug Reaction Probability Scale revealed a score of 6 (i.e. “probable”) (Naranjo et al. 1981). Therefore, aripiprazole was discontinued while escitalopram was continued at the same dose and we started a new atypical antipsychotic agent. Diplopia complaint remitted a few days after aripiprazole discontinuation and did not recur in 2 months of follow-up. Written consent was received from the patient and his family for the publication of this report.

DISCUSSION

Although aripiprazole has been reported to be a safe and well-tolerated antipsychotic, rare phenomena and dangerous adverse reactions may occur. Diplopia is an unusual phenomenon that may occur after aripiprazole ingestion (Sönmez & Aykan 2014, Selvi et al. 2011, Atli et al. 2013, Hosseini et al. 2020). Selvi et al. reported that diplopia and myopia developed 2 weeks after starting 10 mg/day aripiprazole in a 19-year-old woman with a diagnosis of OCD, and the symptoms disappeared 10 days after the treatment was stopped (Selvi et al. 2011). In two other adult cases reported in the literature, diplopia develops after the use of aripiprazole at high doses, and the complaints resolve after the treatment is stopped (i.e., 15 mg/day) (Atli et al. 2013, Hosseini et al. 2020). The younger age of the case presented here and the development of this side effect after low-dose aripiprazole are the factors that make the case unique. The fact that side effects related to antipsychotic drugs are seen more frequently in children and adolescents compared to the adult age group may be a reason for the occurrence of side effects with low-dose aripiprazole in our case (Coustals et al. 2021).

Although the underlying cause of diplopia is not fully known, it has been suggested that this may be explained by ciliary spasm, ciliary body effusion, peripheral uveal effusion, the effect of ocular serotonergic interneuronal fibers or anticholinergic activity (Sönmez & Aykan 2014, Atli et al. 2013, Iliescu et al. 2017, Brunton et al. 2011). In the presented case, diplopia cannot be attributed to anticholinergic mechanisms due to the lack of anticholinergic activity of aripiprazole (Chew et al. 2006). In addition, the patient did not show any other anticholinergic symptoms. There was also insufficient evidence for other mechanisms to explain the cause of diplopia. Evaluation with the adverse drug reaction probability scale revealed a score of 6 suggesting probable relationship with aripiprazole.

Although aripiprazole appears to be safe compared to other antipsychotics in children and adolescents, clinicians should keep in mind that diplopia may occur as a rare side effect during aripiprazole treatment.

Acknowledgements:

We are grateful to the patient and his family for their participation.

Informed Consent:

Written informed consent was obtained from the patient and his family for the publication of the case report.

Conflict of interest: None to declare.

Contribution of individual authors:

Fethiye Kılıçaslan: case design, writing the case report and approval of the final version.

Ferzan Taymur: writing the case report.

All authors have read and approved the manuscript.

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