Case Report

Central Retinal Vein Occlusion Caused by Antipsychotic Drugs: A Case Report

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Abstract

A forty-one-year-old man suffering from schizophrenia was referred to Basir Eye Clinic, Tehran, Iran, for visual evoked potential (VEP) testing. His right eye was totally blind, whereas his left eye was barely able to distinguish light. The VEP P100 peak was absent in both eyes. A full workup of the patient revealed that he suffered from central retinal vein occlusion due to antipsychotic drugs.

Keywords: Schizophrenia; Visual Evoked Potential; Retinal Vein Occlusion; Antipsychotic; Drug.

Article Notes: Received: Oct. 15, 2023; Received in revised form: Nov. 06, 2023; Accepted: Nov. 29, 2023; Available Online: Apr. 02, 2024.

How to cite this article: Shushtarian SMM, Eslami Vaghar M, Pour Mazar R. Central Retinal Vein Occlusion Caused by Antipsychotic Drugs: A Case Report. Journal of Ophthalmic and Optometric Sciences . 2024;8(2):41-43.

Introduction

Schizophrenia is a devastating illness for the affected individual and their families. It is a chronic and debilitating mental illness characterized by periods of relapse that require resource-intensive management [1]. Treatments such as haloperidol, fluphenazine, and chlorpromazine have certain side effects, including tremors and dystonia [2]. Antipsychotic drugs may also have ocular side effects, such as cataracts, blurry vision, glaucoma, eyelid and keratoconjunctival disorders, uveal tract disorders, and pigmentary deposits in the lens and cornea [3-5].

The visual pathway is a part of the visual system that may be affected by some antipsychotic drugs [6]. Visual evoked potential (VEP) is a useful technique to screen for visual pathway disturbances caused by pathological conditions or the toxic effects of drugs. For example Sarzaeim et al., [7] studied the toxic effects of anti-seizure medications. They used the VEP technique and demonstrated that these drugs affect the visual pathway, which can be detected by VEP measurement.

In the present case report, we used VEP in a patient with schizophrenia and a long history of using antipsychotic drugs to evaluate the visual pathway. This study adhered to the principles of the Declaration of Helsinki and was approved by the institutional ethics committee. The patient gave written consent before the case being reported.

Case Report

A 41-year-old male was referred to Basir Eye Clinic Tehran, Iran, for VEP recording. His right eye visual acuity was no light perception (NLP), whereas his left eye barely had light perception (LP). The patient was suffering from schizophrenia. His medical history revealed that he had been under antipsychotic drug treatment for 18 years, using various antipsychotic drugs, including olanzapine, risperidone and clozapine at different doses. Due to the patient's eye condition, he was tested with the flash type of VEP. The VEP P100 peak was absent for both eyes. A comprehensive examination of the patient's visual system, including fluorescein angiography, led to a final diagnosis of central retinal vein occlusion (CRVO).

Discussion

A patient suffering from schizophrenia visited Basir Eye Clinic, Tehran, Iran, for VEP testing. He was blind in his right eye and had light perception (LP) in his left eye, with the episode occurring suddenly. He had been under antipsychotic treatment for 18 years. No VEP P100 peak could be obtained in the flash type VEP pattern testing. Fluorescein angiography and other examinations showed that the severe visual decline in both eyes was due to CRVO.

It is known that in rare cases, patients under antipsychotic drug treatment might suffer from blindness, with CRVO being the cause. Taki K et al.,[8] reported two patients who developed CRVO and were chronic users of antipsychotic medications. Case 1 was a 62-year-old woman who had a sudden reduction of vision in her right eye to 20/2000. Her fundus showed signs of an impending CRVO with marked macular edema [8]. She had been taking antipsychotic medication for about two years. Case 2 was a 43-year-old man who presented with vision reduction in his right eye of one week's duration [8]. His BCVA was 20/50, and his fundus showed signs of CRVO with cotton wool spots in the peripapillary area [8]. He had been taking sulpiride for depression for one year.

The difference between these two cases and the present case is that they recovered from the episode, while the patient in the present case had not recovered by the time of this report, six months after the episode.

Conclusion

Antipsychotic drugs used in patients with mental disorders for long durations can cause severe visual loss, including blindness, with CRVO being a possible cause.

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Footnotes and Financial Disclosures

Conflict of interest:

The authors have no conflict of interest with the subject matter of the present manuscript.