

Case Report

Visual Evoked Potential Findings in a Vitiligo Patient

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Abstract

A 45-year-old man was referred to the Basir Eye Clinic in Tehran, Iran, for a visual evoked potential (VEP) assessment due to complaints of blurred vision in his left eye. His condition remained untreated because of his corticosteroid phobia, despite medical recommendations. VEP results revealed a delay of VEP P100 peak in both eyes, indicating optic nerve involvement, a finding observed in some patients with this condition.

Keywords: Vitiligo; Optic Nerve; Visual Evoked Potential.

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Introduction

Vitiligo is an autoimmune disease that targets pigment-producing melanocytes in the skin, leading to patches of depigmentation that appear as white spots ¹.

The ocular system can also be affected in vitiligo patients, with dry eye, uveitis, glaucoma, and choroidal pigmentary changes being the most common ocular manifestations ².

Visual evoked potential (VEP) is a valuable technique for assessing visual pathway abnormalities, including those involving the optic nerve ³.

This study presents a vitiligo patient with optic nerve involvement, as evaluated through VEP testing. The patient's VEP recordings were analyzed to assess optic nerve dysfunction.

This case report was approved by the institutional Ethics Committee, and informed consent was obtained from the patient before publication.

Case Report

A 45-year-old man was referred to the Basir Eye Clinic in Tehran, Iran, for a visual evoked potential (VEP) assessment. He complained of blurred vision in his left eye and stated that he had consulted multiple ophthalmologists, but none were able to reach a definitive diagnosis. The last ophthalmologist referred him to a neurologist, who recommended VEP recording along with brain magnetic resonance imaging (MRI). The MRI results were normal, whereas the VEP recordings in both eyes were abnormal, showing P100 peak latencies of 105 ms in the right eye and 118 ms in the left eye (the normal latency for VEP P100 peak is approximately 100 ms). These findings indicated a delay in VEP P100 peak latency in both eyes.

Ultimately, the patient was diagnosed with optic nerve disturbances in both eyes,

predominantly in the left eye, a finding characteristic of some vitiligo patients with autoimmune-related optic nerve involvement.

Discussion

A vitiligo patient was referred for VEP test. He had blurry vision in his left eye. The VEP was abnormal which was due to optic nerve involvement in the patient. The findings of the present case are supported by previous studies, including the following references:

Perossini et al., 2010 worked on involvement of optic nerve in 40 (12 males and 28 females) vitiligo patients. 16 patients had altered VEP (9 with amplitude reduction, 7 with amplitude reduction and increased latency)

They finally concluded that in some patients with vitiligo pathological changes of VEP is characteristics of the diseases and involvement of optic nerve in these patient ⁴.

Yusof Z et al 1990 reported a case of 30 year old male developed bilateral choroiditis followed by vitiligo, poliosis and canities. CT scan showed nodular thickening of the optic nerve. Characteristic abnormalities were seen in VEP ⁵.

A vitiligo patient was referred for a visual evoked potential (VEP) test due to blurred vision in his left eye. The VEP results were abnormal, indicating optic nerve involvement. The findings of this case are supported by previous studies, including those by Perossini et al., ⁴ and Yusof et al., ⁵.

Perossini et al., ⁴ investigated optic nerve involvement in 40 vitiligo patients, including 12 males and 28 females. Among them, 16 patients exhibited altered VEP results, with 9 showing amplitude reduction and 7 presenting both amplitude reduction and increased latency. The study concluded that in some vitiligo patients, pathological VEP changes

are characteristic of the disease and indicate optic nerve involvement.

Yusof et al.,⁵ reported a case of a 30-year-old male who developed bilateral choroiditis followed by vitiligo, poliosis, and canities. A CT scan revealed nodular thickening of the optic nerve, and VEP results showed characteristic abnormalities.

Conclusion

Vitiligo patients may exhibit optic nerve dysfunction, which can be detected using visual evoked potential (VEP) testing.

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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.