



Visual Evoked Potential Findings in a Patient with Pemphigus Vulgaris Treated with Rituximab

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Abstract

A 45-year-old man was referred to the Basir Eye Clinic for visual evoked potential (VEP) recording. He reported retrobulbar pain, headache, and photophobia at presentation. His medical history indicated that he had pemphigus vulgaris and was receiving injection therapy. VEP findings were normal in both eyes.

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Introduction

Pemphigus vulgaris (PV) is a rare autoimmune disorder characterized by the development of flaccid blisters and erosions, typically in the oral cavity, on otherwise normal skin or mucous membranes [1]. In patients with moderate-to-severe PV, rituximab combined with short-term prednisone is an effective treatment. Patients treated with rituximab have lower

corticosteroid exposure and are less likely to experience severe or life-threatening corticosteroid-related adverse events [2].

Despite its therapeutic benefits, rituximab may be associated with ocular adverse effects. Reported ocular effects include blurred vision, elevated intraocular pressure, limitation of eye movements, eyelid swelling, eye

pain, and a poor response to light [3].

Ocular electrophysiological examinations, particularly visual evoked potential (VEP) testing, can be useful for evaluating unexplained visual disturbances when routine ophthalmic examination is normal and the fundus appears normal [4]. Based on a detailed review of the literature, the authors decided to record VEPs in a patient with pemphigus vulgaris treated with intravenous rituximab to evaluate possible changes in the visual pathway.

Case Report

A 45-year-old man was referred to the Basir Eye Clinic for visual evoked potential testing. A pattern-reversal checkerboard was used as the visual stimulus. The P100 peak latencies were 99 and 100 ms in the right and left eyes, respectively, and were within the normal range. The patient's medical history indicated that he had pemphigus vulgaris (PV) and had been receiving rituximab treatment for 4 months. Treatment followed a standard protocol consisting of rituximab and corticosteroids. The indications for VEP testing were retrobulbar pain, headache, and photophobia. Brain magnetic resonance imaging (MRI) was normal, and fundus examination by an ophthalmologist was also normal.

Discussion

A patient with pemphigus vulgaris who was receiving rituximab was referred to the Basir Eye Clinic for evaluation of the visual pathway using VEP testing. Both VEP and brain MRI findings were normal. Thus, no visual pathway abnormality was identified in this patient during the reported evaluation. The present findings can be considered in the context of the following reports.

Akhyani et al. (2014) investigated ocular involvement in patients with PV and reported ocular involvement in 16.5% of patients. Conjunctivitis was the most prevalent manifestation, followed by erosion of the palpebral conjunctiva. The authors did not report visual pathway involvement [5].

Tahara et al. (2020) investigated the safety and efficacy of rituximab in neuromyelitis optica spectrum disorders and used visual evoked potentials in the study population. Their study provides additional clinical information regarding rituximab treatment and visual pathway assessment [6].

Conclusion

In this patient with pemphigus vulgaris treated with rituximab, VEP findings were normal, and no visual pathway abnormality was identified by VEP testing. Because this report describes a single patient, these findings do not establish that pemphigus vulgaris or rituximab treatment has no effect on the visual pathway.

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