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Case Report

세포교정영양요법(OCNT)을 이용한 비문증 및 광시증 개선 사례

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A Case Study on the Improvement of Myodesopsia & Photopsia Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT
Objective: Study on the improvement of myodesopsia and photopsia through Ortho-Cellular Nutrition Therapy (OCNT).
Methods: A 54-year-old Korean woman experienced sudden symptoms of myodesopsia and photopsia and underwent OCNT for approximately 2 months.
Results: After the application of OCNT, symptoms of myodesopsia and photopsia improved, and quality of life was enhanced.
Conclusion: Appropriate OCNT can help in alleviating symptoms of myodesopsia and photopsia.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), myodesopsia, photopsia, posterior vitreous detachment

Introduction

Myodesopsia is the symptom of seeing small particles or debris floating in one's field of vision, similar to dust or bugs, which is more noticeable against a bright background such as a clear sky. These particles do not get caught when trying to grasp them and move according to the direction the eyes or head turns.[1]

Photopsia is the sensation of seeing a flash of light either once or multiple times, also known as flashing lights. Typically, this symptom occurs when moving the head or eyes and is more easily observed in darker environments.[2]

Several factors can cause these symptoms, but most are associated with changes in the vitreous of the eye. The vitreous exists in a gel state composed primarily of water and 2% of various polymers. Over time, this gel may transform into a more liquid form, a process known as vitreous liquefaction. This phenomenon becomes more probable as aging progresses, and people with myopia are reported to have a higher chance of experiencing vitreous liquefaction at the same age.[3]

As the vitreous liquefies extensively, the adhesion to the retina weakens, potentially leading to a detachment known as posterior vitreous detachment. This detachment can cause floating particles in the vision, leading to myodesopsia. Additionally, if the detached vitreous tugs at or stimulates the retina, the retinal cells convert this stimulation into electrical signals, producing flashes causing photopsia.[4]

Myodesopsia and photopsia are natural phenomena caused by changes in the vitreous. The body often adapts to these changes, resulting in milder symptoms. However, these can be part of the symptoms of posterior vitreous detachment, which can damage the retina and lead to serious complications in rare cases, such as bleeding, retinal tears, or retinal detachment.[4] Therefore, it is crucial to undergo an examination by an ophthalmologist and receive appropriate treatment and prescriptions when these symptoms occur.

The patient in this case study sought an ophthalmological examination for sudden onset myodesopsia and photopsia and was prescribed hyaluronic acid eye drops, which did not significantly improve her condition. Subsequent Ortho-Cellular Nutrition Therapy (OCNT) led to symptom improvement, and the case is reported with patient's consent.

Case Study

1. Subject
This case involves one patient with myodesopsia and photopsia.
1) Name: O O (F/54 years old)
2) Diagnosis: Myodesopsia, photopsia
3) Date of Onset: March 2024
4) Treatment Duration: March 2024 to present
5) Primary Symptoms: Myodesopsia and photopsia in the left eye
6) Medical History: None
7) Social History: None

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8) Family History: None
9) Medications and Treatments Applied: Hyaluronic acid eye drops

2. Methods
- Cyaplex X granule (202, twice daily, two packets per dose)
- Enzaplex F granule (111, three times daily, one packet per dose) *
- Caroplex granule (100, once daily, one packet per dose)
- Notoplex granule **

* Enzaplex F granule were instructed to be taken before meals.
** Notoplex granule dosage was increased every fifteen days: 100 (once daily, one packet per dose), 101 (twice daily, one packet per dose), 111 (three times daily, one packet per dose).

Additionally, the patient was advised to ensure adequate intake of fluids, including water kimchi broth and seaweed soup broth.

Results

The OCNT was continued for two months, and myodesopsia was relieved after one month. The photopsia did not significantly improve in the first month, but there was a progression after increasing the dose of Notoplex. After two months, the symptoms were diminished. Subsequently, the OCNT prescription was reduced to Cyaplex X 101 (twice daily, one packet per dose) and Caroplex 100 (once daily, one packet dose). The degree of discomfort caused by the patient's symptoms is shown in Table 1.

Discussion

The patient was a woman in her fifties who experienced sudden symptoms of myodesopsia and photopsia. She underwent an examination by an ophthalmologist, but the hospital diagnosed her with non-retinal detachment and prescribed hyaluronic acid eye drops. However, she did not experience any significant improvement and continued to feel discomfort from persistent symptoms. Therefore, she hoped to improve her symptoms through OCNT.

One well recognized cause of myodesopsia is the interaction between hyaluronic acid and collagen within the vitreous body. These two components are part of the non-water polymers within the vitreous. However, as aging progresses, the concentration of hyaluronic acid in the vitreous gradually decreases, increasing the likelihood of collagen fibers becoming exposed to each other. These collagen fibers can aggregate and form larger bundles, which has been identified as a potential cause of myodesopsia.[3] The hospital prescribed hyaluronic acid eye drops to the patient considering that the previously described phenomenon caused myodesopsia, but the lack of symptom improvement after application suggested other potential causes.

A medical checkup from the hospital confirmed that there was no significant retinal detachment, but minor retinal detachment might have occurred due to microvascular damage caused by oxidative damage within the body. This could have led to the sudden development of myodesopsia and photopsia. Thus, OCNT was applied to help improving symptoms by reducing reactive oxygen species and inflammation.

To alleviate the patient's symptoms, reducing oxidative damage to blood vessels and tissues caused by reactive oxygen species and eliminating inflammatory proteins should be prioritized.

Anthocyanin, a primary ingredient in Cyaplex X, mitigates inflammation in plasma and tissues and helps improve the generation of reactive oxygen species. It has also been found to have excellent antioxidant capabilities that can aid in improving retinal damage.[5] Additionally, papain and bromelain contained in Enzaplex help break down inflammatory proteins.[6] In a controlled clinical trial study, patients with vitreous opacities due to conditions such as myodesopsia showed significant improvements when taking a combination formulation containing papain and bromelain.[7]

Notoplex was used to improve microvascular damage. The main ingredient of Notoplex, *Panax notoginseng*, has long been known for its ability in improving blood circulation. It contains a variety of ginsenosides, such as NR1, NRd, NRb, and NRg1, and helps to improve overall vascular damage symptoms by providing vascular and nerve protection, reducing ischemia, anti-inflammatory effects, and exhibiting hemostatic and anticoagulant properties.[8] This approach was believed to have helped address vascular damage that could have caused minor retinal detachment. The dosage was gradually increased to minimize discomfort experienced during treatment, considering that the patient's body was not in a state of sufficient vital fluids.

Caroplex contains a variety of carotenoids that can aid in improving eye function and preventing eye diseases. Alpha-carotene and beta-carotene, precursors to vitamin A, influence vision and various eye functions and help prevent damage to ocular tissues through their antioxidant properties. Additionally, lutein and zeaxanthin have been reported to eliminate oxidative stress, thereby reducing the risks associated with age-related macular degeneration and cataracts.[9] Other carotenoids, such as lycopene and astaxanthin, help cells and mucous membranes function properly.[10] These components are presumed to help maintain the healthy state of the eyes.

This case study is a single instance and may not be

Table 1. Degree of symptoms felt by the patient during OCNT.

Symptoms/Month	March 2024	April 2024	May 2024
Floaters observation	8	4	1
Vision obstruction	3	2	1
Flashes / Flickers	10	8	0

* The numeric Rating Scale (NRS) is used to indicate the patient's degree of symptoms. The degree is rated with 0 to 10 and higher numbers specify greater discomfort.

universally applicable to all patients with myodesopsia and photopsia. However, it is significant to note that appropriate OCNT improved the symptoms of myodesopsia and photopsia, as well as the patient's quality of life. Thus, this case is reported with patient's consent.

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