

세포교정영양요법(OCNT)을 이용한 중심 장액성 망막염 사례 연구

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A Case Study of Central Serous Chorioretinopathy Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Report of a case study on the resolution of central serous chorioretinopathy through cellular nutrition therapy (OCNT).

Methods: A Korean male born in 1965 who has been diagnosed with central serous chorioretinopathy in the left eye since August 22, 2022.

Results: Complete resolution of central serous chorioretinopathy following the implementation of nutritional therapy.

Conclusion: Nutritional therapy may be beneficial in alleviating symptoms in patients with central serous chorioretinopathy.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), Central serous chorioretinopathy, retinal edema, eye strain

Introduction

Central serous chorioretinopathy (CSC) or central serous chorioretinopathy (CSCR) is an ophthalmic disorder that typically causes temporary visual

impairment in one eye. This condition occurs due to abnormalities in the blood flow on the choroidal side of the retina, leading to the accumulation of fluid in the central part of the inner retina. This results in swelling, as the majority of photoreceptor cells are concentrated in this area, playing a crucial role in vision. It can cause discomfort in vision, such as metamorphopsia (distorted vision of objects) or micropsia (objects appearing smaller than their actual size). It is important to note that visual impairment may persist even after the resolution of retinal fluid leakage, warranting caution.^{1,2}

This disease primarily affects individuals in their 30s to 50s, mainly occurring in the young and middle-aged population. It is known to occur more frequently in

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males than females. Additionally, it is more commonly observed in individuals of Caucasian, Hispanic, and Asian descent compared to individuals of African descent.³

Image analysis can be used as a diagnostic method for central serous chorioretinopathy. Examples of such imaging techniques include fundus photography and fluorescein angiography (FA), which utilizes a fluorescent dye. FA, first attempted in the 1960s, remains one of the most widely used imaging techniques to date. During FA, in over 95% of patients with central serous chorioretinopathy, one or more characteristic leaking points can be identified in the retinal pigment epithelium (RPE), a layer of cells in the retina.²

While the exact cause of central serous chorioretinopathy is not yet fully understood, it is known to be influenced by factors such as circulatory abnormalities in the choroid, increased microvascular permeability, stress, sleep deprivation, weakened immune system, and inflammatory conditions, as well as long-term steroid use. Due to the lack of a clear understanding of the cause, it is common to wait for spontaneous healing in the early stages without specific treatment. However, it is challenging for spontaneous healing to occur without addressing the various contributing factors mentioned above.² Therefore, laser therapy or steroid prescription is often employed, although laser treatment is not the preferred method and is considered by some physicians as a treatment to be avoided.⁴ Oral medications such as Eplerenone or low-dose ibuprofen may also be considered. Eplerenone has been known to reduce subretinal fluid over time, but recent randomized controlled trials have shown no significant impact on chronic central serous chorioretinopathy (CSR), while low-dose ibuprofen has shown to promote recovery in certain cases. The patient in this case report was diagnosed with central serous chorioretinopathy in the left eye since August 22, 2022. Despite severe edema observed in the examination and medication usage, the condition worsened without improvement. Therefore, we aim to report the outcome of applying nutritional therapy by formulating nutrients that can enhance the natural healing ability of cells within the body and improve the aforementioned factors.

Case Report

1. Subject

The study focused on a single case of central serous chorioretinopathy.

- 1) Name: Mr. O.O. (Male, 58 years old)
- 2) Diagnosis: Central serous chorioretinopathy
- 3) Date of onset: August 22, 2022
- 4) Treatment period: August 2022 to December 2022 (approx. 6 months): Medication treatment following general ophthalmology visits. January 2023 to March 2023 (approximately 2 months): OCNT (Ocular Nutritional Corrective Therapy) treatment
- 5) Symptoms: Retinal edema, eye fatigue, metamorphopsia, micropsia, residual blur, difficulty with night driving
- 6) Past medical history: None
- 7) Social history: None
- 8) Family history: None
- 9) Current medical history: Age-related macular degeneration (atrophic), dry eye syndrome, suspected glaucoma, unspecified refractive error

2. Method

a) Medication history by period

- January 2023 to February 2023 –

Viva Circu Capsule (101, taken twice a day, 1 capsule per dose)

Eufaplex Capsule (303, taken twice a day, 3 capsules per dose)

Lutein supplement (from another company)

- Until March 27, 2023

Viva Circu Capsule (101, taken twice a day, 1 capsule per dose)

Eufaplex Capsule (303, taken twice a day, 3 capsules per dose)

Caroplex Serum (101, taken twice a day, 1 sachet per dose)

[Lifestyle Habits] Avoid high-fat and high-sugar diets and ensure sufficient sleep and stress management. Restrict the use of computer monitors and smartphones, especially during the evening and upon waking in the morning.

Results

The patient presented with a symptom of a coin-like object obscuring vision in the left eye on August 22, 2022, and underwent an ophthalmic examination. Following the examination, the patient was diagnosed

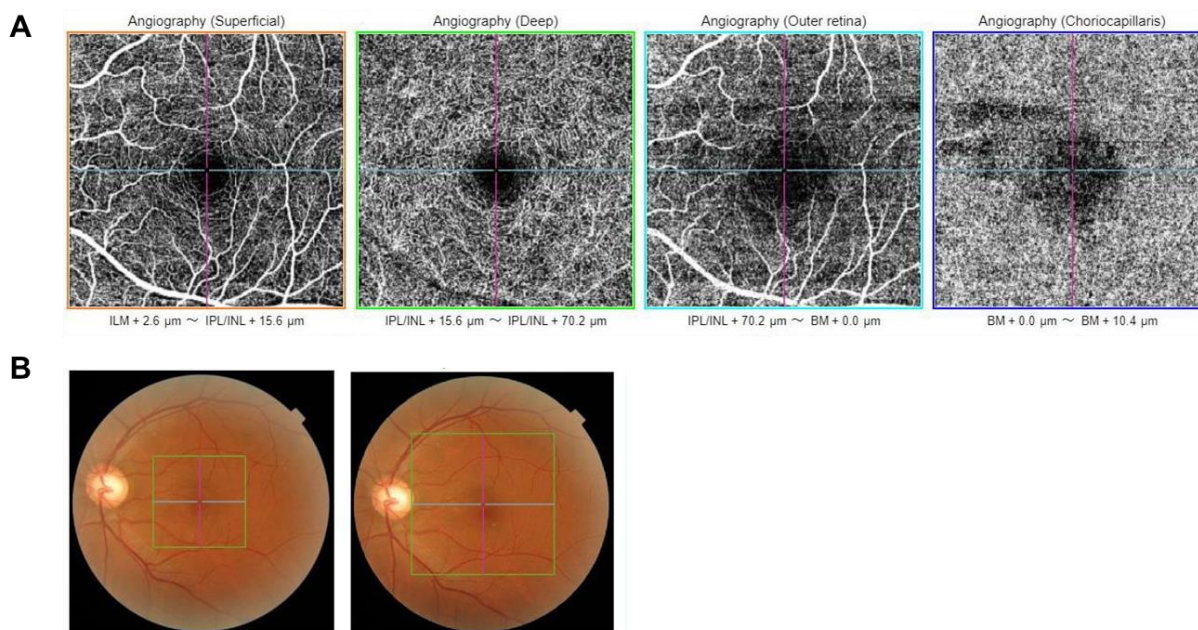


Figure 1. Eye condition at the initial disease diagnosis. (A) OCT-Angiography images (from left to right: Superficial, Deep, Outer retina, Choriocapillaris). (B) Optical coherence tomography (OCT) imaging (left: initial diagnosis, right: after medication treatment).

with central serous chorioretinopathy, and severe edema was observed. The patient's visual acuity was 0.7 in the right eye and 0.6 in the left eye, indicating signs of bilateral age-related macular degeneration (atrophic), dry eye syndrome, refractive error, and suspected glaucoma. Specifically, the patient was experiencing discomfort in the left eye due to the diagnosis of central serous chorioretinopathy. Figure 1A shows a retinal microvascular image, and Figure 1B (left) is an optical coherence tomography (OCT) image. From these images, a circular hole can be seen due to retinal inflammation. Despite the administration of medication as shown in Figure 1B, the hole did not disappear. Despite the prescribed medication and recommendations for lifestyle improvements such as smoking cessation and rest, the patient did not show any improvement and remained in a state of persistent discouragement. In order to improve the related condition, the patient underwent Ocular Nutritional Corrective Therapy (OCNT). To observe the progression of the lesion, spectral-domain optical coherence tomography (OCT) imaging was performed. Localized atrophy of the retinal pigment epithelium with engulfment by the choroid was observed in the area suspected of retinal pigment epithelial atrophy on

fundus examination (Figure 2A and 2B). The neurosensory retina was found to be detached from the retinal pigment epithelium. When medication was administered to improve the retinal condition, the atrophy of the retinal pigment epithelium worsened, and the localized engulfment became more pronounced. The patient experienced intense fear due to the lack of any significant treatment options provided in the hospital for about four months and the lack of improvement in their eye condition. Subsequently, to enhance the natural healing ability, the patient underwent OCNT for approximately one month, and the follow-up spectral-domain OCT imaging confirmed the return of the eye to a normal state (Figure 2C). Currently, the patient is undergoing observation without any specific treatment.



Figure 2. Left eye spectral-domain optical coherence tomography (SD-OCT) images. (A) At the initial diagnosis. (B) After medication treatment. (C) After OCNT application.

Discussion

In this case, the patient received three types of supplements as part of Ocular Nutritional Corrective Therapy (OCNT): Eufaplex, Viva Circu, and Caroplex Serum. Despite the medication treatment administered over the course of several weeks after being diagnosed with central serous chorioretinopathy, the patient did not experience improvement in edema. Eufaplex, in particular, contains omega-3, omega-6, and omega-9 fatty acids. Omega-3 fatty acids have the ability to regenerate retinal pigment epithelium (RPE) cells, and their deficiency can lead to photoreceptor degeneration and drusen accumulation in both the RPE and sub-RPE space. Drusen are debris that accumulates either beneath or outside the RPE layer, and their accumulation can contribute to the development of macular degeneration.⁸

In addition, there are findings that suggest omega-3 and omega-6 fatty acids, as well as long-chain polyunsaturated fatty acids (LC-PUFAs), are beneficial in regulating inflammation in the retina.⁹ Regenerating retinal cells and regulating inflammation can have a positive impact on stress and inflammatory responses, which are believed to be underlying factors in central serous chorioretinopathy. For this reason, supplements containing omega-3 and omega-6 fatty acids, such as Eufaplex, may be beneficial in improving the hypoxic state of cells related to the eye and aiding in the restoration of faulty cell membranes to normal functioning membranes, as well as providing anti-inflammatory effects, when consumed over the long term.^{8,9}

Together with Eufaplex, Viva Circu was administered, which contains an extract from Ginkgo biloba leaves that can help improve blood circulation. Ginkgo biloba leaves have been subjected to extraction processes in Germany to extract beneficial flavonoids and terpenes for blood circulation. Flavonoids inhibit vascular oxidation, preventing the formation of per-oxidized lipids, which are the main culprits of vascular aging. One of the terpenes, ginkgolide B, inhibits vasoconstrictive factors that cause blood to become viscous, exhibiting anticoagulant properties. These improvements in blood circulation can be effective in reducing edema, enhancing microcirculation, improving capillary permeability, and strengthening vascular elasticity.¹⁰ In addition, Caroplex, which contains carotenoids, was also introduced. Carotenoids and tetraterpenoids are plant pigments that assist in photosynthesis and act as a protective barrier against harmful UV radiation. They can be converted into vitamin A and possess antioxidant properties, which can help protect the eyes from sunlight and enhance immune function. Caroplex, along with Eufaplex, is considered one of the nutritional supplements that can have a positive impact on eye conditions.¹¹ The provision of such combination nutritional supplements may have the potential to aid in addressing the underlying causes of central serous chorioretinopathy.

The presented case is a single case report that overcame central serous chorioretinopathy through the application of nutritional therapy. Therefore, there are limitations in interpreting the results. However, considering the possibility that nutritional therapy may have contributed to the resolution of central serous chorioretinopathy, it is reported with the patient's consent.

References

- 1 Liegl, R., & Ulbig, M. W. Central serous chorioretinopathy. *Ophthalmologica*, (2014) 232(2), 65-76.
- 2 Shin, Y. U. Review and update for central serous chorioretinopathy. *Hanyang Medical Reviews*, (2017) 37(1), 10-17..
- 3 Yannuzzi, L. A. Type-A behavior and central serous chorioretinopathy. *Retina (Philadelphia, Pa.)*, (1987) 7(2), 111-131.
- 4 Boscia, F. When to treat and not to treat patients with central serous retinopathy. *Retin Today*, (2010) 42, 32-34.
- 5 Singh, R. P., Sears, J. E., Bedi, R., Schachat, A. P., Ehlers, J. P., & Kaiser, P. K. Oral eplerenone for the management of chronic central serous chorioretinopathy. *International Journal of Ophthalmology*, (2015) 8(2), 310.
- 6 Lotery, A., Sivaprasad, S., O'Connell, A., Harris, R. A., Culliford, L., Ellis, L., ... & Grice-Holt, A. Eplerenone for chronic central serous chorioretinopathy in patients with active, previously untreated disease for more than 4 months (VICI): a randomised, double-blind, placebo-controlled trial. *The Lancet*, (2020) 395(10220), 294-303.
- 7 Pecora, J. L. Ibuprofen in the treatment of central serous chorioretinopathy. *Annals of Ophthalmology*, (1978) 10(11), 1481-1483.
- 8 Wang, P., Chin, E. K., & Almeida, D. Antioxidants for the treatment of retinal disease: summary of recent evidence. *Clinical Ophthalmology*, (2021) 1621-1628.
- 9 Schnebelen, C., Viau, S., Grégoire, S., Joffre, C., Creuzot-Garcher, C. P., Bron, A. M., ... & Acar, N. Nutrition for the eye: different susceptibility of the retina and the lacrimal gland to dietary omega-6 and omega-3 polyunsaturated fatty acid incorporation. *Ophthalmic Research*, (2009) 41(4), 216-224.
- 10 Jung, F., Mrowietz, C., Kiesewetter, H., & Wenzel, E. Effect of Ginkgo biloba on fluidity of blood and peripheral microcirculation in volunteers. *Arzneimittel-Forschung*, (1990) 40(5), 589-593.
- 11 Kim, J., Ha, S., Lee, J., Kim, H., Yoon, S., & Kim, Y. (2003). Physiological Activities and Content Analysis of Carotenoids. *Korean Journal of Crop Science*, 48, 72-78.