CellMed
Orthocellular Medicine and Pharmaceutical Association

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Case Report

세포교정영양요법(OCNT)을 이용한 녹내장 개선 사례

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A Case Report of Glaucoma Improvement with Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Glaucoma is a chronic ophthalmic disorder characterized by impaired aqueous humor drainage, resulting in elevated intraocular pressure (IOP), optic nerve damage, and progressive visual field constriction. If untreated, it may ultimately lead to blindness. Glaucoma is classified into primary or secondary, and open-angle or angle-closure types. Conventional medical therapy focuses primarily on lowering IOP, typically through the use of topical ocular hypotensive agents. However, glaucoma frequently remains asymptomatic even after its onset.

Case Report: This case involved a Korean woman in her sixties with elevated IOP who was diagnosed with glaucoma at an ophthalmology clinic. She had been treated with hospital-prescribed topical eye drops, but severe adverse effects necessitated discontinuation and the prescription of an alternative ophthalmic solution. In addition, taking the patient's individual circumstances into account, Ortho-Cellular Nutrition Therapy (OCNT) was implemented, including anthocyanins, bilberry extract, *Ginkgo biloba* extract, and magnesium.

Conclusion: Following the application of OCNT, the patient's IOP decreased to 15/18 mmHg, reaching the normal range. In addition, improvements were observed in insomnia and weight loss associated with glaucoma, and the patient reported enhanced physical stamina. However, since this study was based on a single patient case, there are limitations in generalizing the findings to all glaucoma patients.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), glaucoma, intraocular pressure, anthocyanin, *Ginkgo biloba* extract, magnesium

Introduction

Glaucoma is a common chronic ophthalmic disease characterized by obstruction of aqueous humor outflow, resulting in elevated intraocular pressure (IOP), optic nerve damage, and progressive narrowing of the visual field, which, if untreated, can ultimately lead to blindness. In the early stages of glaucoma, symptoms are often minimal or absent, and the disease may be associated with various ocular or systemic conditions. Glaucoma is classified into several types, traditionally distinguished as primary or secondary, and as open-angle or angle-closure glaucoma. Current medical treatments primarily focus on lowering intraocular pressure.[1]

Glaucoma is one of the leading causes of blindness in many industrialized countries. According to an epidemiological report, more than two million individuals in the United States are affected by glaucoma, among whom approximately 80,000 are reported to be legally blind. The prevalence of glaucoma is higher in certain populations, particularly in the elderly, African Americans, patients with diabetes mellitus, those with hypertension, and individuals with myopia.[2]

Patients with glaucoma generally do not present with distinct ocular or systemic symptoms, and open-angle glaucoma in particular is often asymptomatic, earning it the designation "the silent thief of sight." In advanced stages, when the disease has progressed and the optic nerve is severely damaged, patients typically experience more pronounced visual deterioration in one eye. Night vision impairment is also a common complaint. In such cases, vision loss usually begins in the peripheral field and gradually progresses toward the central field. Although less common, other symptoms may accompany visual decline, including ocular pain, hemorrhage, halos, headache, nausea, and

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Received Oct 30, 2025; **Revised** Oct 31, 2025; **Accepted** Oct 31, 2025; **Published** Oct 31, 2025
doi: http://dx.doi.org/10.5667/CellMed.spc.142
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† This report has been translated and edited by the CellMed editor-in-chief, Prof. Beom-Jin Lee.

vomiting. These manifestations are typically associated with a rapid increase in IOP and are suggestive of acute angle-closure glaucoma or inflammatory glaucoma.[3]

The conventional initial treatment for glaucoma involves the administration of topical ocular hypotensive agents. In the early phase, medication may be preferentially applied to the eye with higher intraocular pressure, and generally, a single agent is used at a time. If IOP does not decrease significantly—by approximately 15–30% relative to baseline—or if adverse effects occur, the medication is discontinued. In most cases, drugs with different mechanisms of action are combined to enhance intraocular pressure–lowering efficacy. In contrast, the concurrent use of two or more agents within the same pharmacological class is discouraged, as it provides no additional therapeutic benefit.[4]

The patient, a long-serving schoolteacher approaching retirement, reported experiencing considerable psychological stress. She visited an ophthalmology clinic due to pain associated with this stress and was subsequently diagnosed with glaucoma. However, the ocular hypotensive eye drops prescribed for treatment caused severe adverse effects, leading to discontinuation upon the recommendation of her physician. Thereafter, an alternative class of topical eye drops was administered. Given the patient's condition, an overall improvement in immune function was deemed necessary, and Ortho-Cellular Nutrition Therapy (OCNT) was applied. As the patient's symptoms improved, she consented to the reporting of this case.

Case Study

1. Subject
A single case of a glaucoma patient was included.

1) Name: Yoo ○○ (64 years / F)
2) Diagnosis: Glaucoma
3) Onset: January 2024
4) Treatment period: February 2024 – September 2025
5) Chief complaints: Fatigue, anxiety, insomnia, intestinal sensitivity, impaired digestion
6) Past medical history: Hyperthyroidism
7) Social history: None
8) Family history: None
9) Present illness and medications: Azopt Eye Drops, Xalatan Eye Drops

2. Methods
1) First OCNT (from February 2024)
Cyaplex X granule (101, twice daily, 1 sachet per dose)
Eufaplex Alpha (101, twice daily, 1 sachet per dose)
Collaplex granule (101, twice daily, 1 sachet per dose)
Caroplex F granule (101, twice daily, 1 sachet per dose)
Viva circu capsule (101, twice daily, 1 capsule per dose)
Bioplex F (001, once daily, 1 sachet per dose)
Magplex capsule (002, once daily, 2 capsules per dose)
Heartberry black (001, once daily, 1 sachet per dose)
Cyaplex mineral rock salt (001, once daily, 1 sachet per dose)
Aqua SAC pure (001, once daily, 1 sachet per dose)

2) Second OCNT (from June 2024)
Cyaplex X granule (101, twice daily, 1 sachet per dose)
Eufaplex Alpha (101, twice daily, 1 sachet per dose)
Collaplex granule (101, twice daily, 1 sachet per dose)
Caroplex F granule (101, twice daily, 1 sachet per dose)
Viva circu capsule (101, twice daily, 1 capsule per dose)
Bioplex F (001, once daily, 1 sachet per dose)
Magplex capsule (002, once daily, 2 capsules per dose)
Jubaplex granule (101, twice daily, 1 sachet per dose)
Yohanplex granule (101, twice daily, 1 sachet per dose)
Heartberry black (001, once daily, 1 sachet per dose)
Cyaplex mineral rock salt (001, once daily, 1 sachet per dose)
Aqua SAC pure (001, once daily, 1 sachet per dose)

3) Third OCNT (from February 2025)
Cyaplex X granule (101, twice daily, 1 sachet per dose)
Eufaplex Alpha (101, twice daily, 1 sachet per dose)
Collaplex granule (100, once daily, 1 sachet per dose)
Caroplex F granule (100, once daily, 1 sachet per dose)
Viva circu capsule (101, twice daily, 1 capsule per dose)
Calmaplex granule (101, twice daily, 1 sachet per dose)
Bioplex F (001, once daily, 1 sachet per dose)

4) Fourth OCNT (from September 2025)
Cyaplex X granule (001, once daily, 1 sachet per dose)
Eufaplex Alpha (003, once daily, 1 capsule per dose)
Vivaost Eye Health capsule (002, once daily, 2 capsules per dose)
Calmaplex granule (001, once daily, 1 sachet per dose)

Results

After approximately six months of initiating OCNT, in August 2024, the patient reported improvement in photophobia as well as amelioration of depressive symptoms and sleep quality. By September 2024, body weight had increased by 2 kg, and in October 2024, intraocular pressure, which had been 27/25 mmHg at the time of diagnosis, decreased to 22/20 mmHg. Further improvement was observed in February 2025, with IOP reduced to 15/15 mmHg. By July 2025, ocular discomfort had resolved completely with no evidence of recurrence, and IOP was maintained at 18/17 mmHg. Continuous administration of OCNT was maintained through September 2025, during which stable reduction of IOP was confirmed. Detailed changes in IOP following OCNT administration are summarized in Table 1.

Table 1. Changes in IOP Following OCNT Administration

IOP (mmHg) / Date	Left IOP (mmHg)	Right IOP (mmHg)
February 2024	25	27
October 2024	20	22
February 2025	15	15
July 2025	17	18
Present	15	18

* Normal IOP range: 10–21 mmHg.

Discussion

The patient in this case was a Korean female in her 60s who had worked as a schoolteacher for an extended period. As she neared the retirement, she experienced considerable psychological stress and consequently reported severe ocular pain and headaches, leading to a diagnosis of glaucoma at a hospital. Adverse effects with the antiglaucoma medication prescribed at that time, Combigan ophthalmic solution, led to its discontinuation on the hospital's recommendation. Subsequently,

alternative medication, Azopt and Xalatan Eye drops, were prescribed, and OCNT was initiated in parallel. The aim of OCNT was to achieve fundamental improvement by alleviating the underlying causes of elevated intraocular pressure, enhancing optic nerve blood flow, and providing neuroprotection to the optic nerve.

The Cyaplex X granule prescribed to the patient contained a high concentration of anthocyanins. Anthocyanins are a subclass of flavonoids and represent purple pigments commonly found in the flowers and fruits of many plants. They exert diverse biological activities, including antioxidant and neuroprotective effects, as well as anti-obesity, antimicrobial, and vision-protective properties. In one study, patients with open-angle glaucoma were administered 50 mg of blackcurrant-derived anthocyanins daily for two years to evaluate their impact on disease progression. The results demonstrated a reduction in intraocular pressure, attenuation of visual field deterioration, and increased blood flow to the optic nerve head and surrounding retina.[5] Accordingly, anthocyanins were prescribed in this case to contribute to IOP reduction and improvement of ocular health.

The Vivaost Eye Health capsule prescribed concurrently contained bilberry extract, which also provides anthocyanins. According to in vivo experimental findings, oral administration of bilberry extract suppressed retinal ganglion cell death in mice with optic nerve injury. In a light-induced retinal damage model using pigmented rabbits, daily administration of bilberry extract at doses of 250–500 mg/kg for seven days resulted in increased thickness of the outer nuclear layer and elongation of photoreceptor outer segments, thereby significantly attenuating retinal functional impairment.[6] These results suggest that bilberry extract may contribute to the improvement and protection of damaged optic nerves, and it was therefore prescribed to the patient in this case.

The Viva circu preparation administered to the patient contained *Ginkgo biloba* extract. The leaves and seeds of *Ginkgo biloba* have been used medicinally for centuries, and more than 70 flavonoid compounds have been identified in the plant, many of which exhibit free radical–scavenging activity. In an animal study, administration of *Ginkgo biloba* extract increased the survival rate of retinal ganglion cells in rats exposed to oxidative stress. Furthermore, in a clinical study, daily administration of 120 mg of *Ginkgo biloba* extract to patients with primary open-angle glaucoma and to healthy adults demonstrated beneficial effects: in glaucoma patients, single-strand DNA breaks were reduced, indicating a decrease in oxidative stress, whereas in healthy adults, the peripapillary retinal vessel density was increased.[7] Based on this evidence, *Ginkgo biloba* extract was prescribed with the aim of exerting positive effects on the patient's glaucoma.

Finally, the patient was prescribed Magplex to ensure adequate magnesium intake. Magnesium is the second most abundant intracellular cation and serves as a key cofactor in more than 300 human biochemical reactions. Magnesium deficiency is frequently observed in patients with glaucoma, as the mineral is closely associated with inflammation, fibrotic responses, and oxidative stress. Supplementation with magnesium has been reported to decrease intracellular reactive oxygen species, alleviate mitochondrial dysfunction, and exert anti-fibrotic and anti-inflammatory effects in ocular tissues and soft tissues vulnerable to fibrosis. These mechanisms suggest the potential for magnesium supplementation to improve visual field outcomes in glaucoma patients.[8] Accordingly, magnesium was prescribed in this case with the aim of contributing to the improvement of ocular tissue integrity and function.

The patient in this case was diagnosed with glaucoma due to elevated IOP and initially received pharmacological treatment, which was discontinued because of adverse effects. However, with the combined use of alternative topical agents and OCNT over a period of 1 year and 7 months, a gradual reduction in IOP was observed. Ultimately, the IOP of both eyes returned to the normal range, suggesting the potential for glaucoma improvement. Nevertheless, as this report describes the outcome of a single patient, the findings cannot be generalized to all glaucoma patients, and further research is warranted to validate these effects. Despite this limitation, the marked reduction in IOP without additional adverse events highlights the clinical significance of this case, which is reported here with the patient's consent.

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