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**Case Report**

# 세포교정영양요법(OCNT)을 이용한 신체의 항상성 개선 사례 연구

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# A Case Study on Improving Body Homeostasis Using Ortho-cellular Nutrition Therapy (OCNT)

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**ABSTRACT**

**Objective:** Case study on improving body homeostasis by ortho-cellular nutrition therapy.

**Methods:** A 48-year-old Korean man underwent OCNT due to symptoms of insomnia and decreased physical function due to extreme chronic stress.

**Results:** After exposure to OCNT, fatigue, sleep quality, and brain fog symptoms improved, and overall physical performance improved, including liver function recovery.

**Conclusion:** For people who suffer from symptoms of decreased physical function in various aspects due to extreme stress, applying OCNT can help alleviate symptoms.

**Keywords** Ortho-Cellular Nutrition Therapy (OCNT), Homeostasis, Stress, Chronic Stress

## Introduction

'Stress' is a term in physics, meaning "physical force applied to an object." When applied to medicine, it means "physical and mental stimulation" that burdens an individual or the "reaction" the living body shows when such stimulation is applied.

The human body has a function called homeostasis, which always tries to maintain a certain balance. Homeostasis is a fundamental concept in life phenomena, and one of the critical definitions of disease occurrence is “a breakdown in homeostasis and a decrease in immunity.”

This homeostasis becomes distorted when a robust stressor (a factor that causes stress) is received from the outside or inside. To protect the body from such distortions, restore it, and maintain balance, the body secretes various hormones from the autonomic, nervous, and endocrine systems. In general, it is known that hormones secreted by the autonomic nervous system play an essential role in acute stress, and hormones secreted by the neuroendocrine system play an important role in chronic stress.

When exposed to stress for an extended period, information about stress is transmitted to the hypothalamus through several pathways. Then, the 'corticotropin-releasing factor' is released from the hypothalamus, which stimulates the pituitary gland to secrete adrenocorticotropic hormone. In this case, cortisol, called the 'stress hormone,' is secreted, which increases blood sugar levels and supplies the energy needed to deal with stress. When stress becomes chronic, the secretion of cortisol continues chronically, and if you do not take active measures to maintain homeostasis, the body's balance may be disrupted, and various problems may occur.

The patient, in this case, also suffered from decreased body homeostasis due to excessive chronic stress. As a result, danger signals appeared in various areas, such as insomnia, nosebleeds, arteriosclerosis, obesity, etc. After applying OCTN for a month, fatigue improved, and nosebleeds symptoms were alleviated, but after discontinuation, the same symptoms appeared again, so a second OCTN was performed with additional medication, and we would like to report the progress.

## Cases

### 1. Subject

One case of a patient with decreased body homeostasis due to chronic stress was studied.

1) Name: Kim ㅇㅇ (M/48 years old)

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2) Diagnosis: fatty liver, hyperlipidemia (suspected ischemic heart disease and arteriosclerosis), obesity
3) Date of onset: November 2022
4) Treatment period: September 2023 to present
5) Main symptoms: chronic fatigue, chronic insomnia, intermittent headaches, abdominal pain that makes it difficult to fall asleep, jaundice due to fatty liver and hyperlipidemia, severe nosebleeds
6) Past history: Insomnia, depression, panic disorder, nosebleeds around 2012
7) Social history: Smoking (a pack a day), drinking (a can of beer a day)
8) Family history: None
9) Current medical history and medications taken: Sleeping pills and prescription medications for panic disorder (Alprazolam 0.25 mg, 1 Remeron TAB 1 mg, Remixil Oddity 30 mg TAB 1 tablet)

**2. Method**

A) Oral medication
<August 20023>
Notoplex GRN (101, twice a day, 1 packet each time)
OCNT was carried on for one month as shown above.

<November 20023>
Cyaplex-F CAP (303, twice a day, 3 packets each time)
Eufaplex CAP (303, twice a day, 3 packets each time)
Viva Kan CAP (101, twice a day, 1 packet each time)
Notoplex GRN (100, once a day, 1 packet each time)
OCNT was carried on for one month as shown above.

<Present>
Cyaplex-F CAP (300, twice a day, 3 capsules each time)
Eufaplex CAP (300, twice a day, 3 capsules each time)
Viva Kan CAP (100, once a day, 1 capsule each time)
Diverol CAP (100, once a day, 1 capsule each time)

B) Lifestyle
In lifestyle, it was recommended to refrain from late-night snacking and to always have a positive mind. The patient was advised to abstain from alcohol and smoking but has not been successful in adhering to these recommendations.

## Results

The subject of this case is a 48-year-old man who has had insomnia for a long time due to extreme stress from family and work life and has been taking sleeping pills and medication for panic disorder since about ten years ago. He had not been able to take good care of his health for a long time due to mental stress. At the company's health checkup in November 2022, he was diagnosed with ischemic heart disease, peripheral vascular disease such as arteriosclerosis, and adult disease due to high LDL cholesterol levels. He was also diagnosed with moderate fatty liver disease. After a health checkup, he was prescribed the drug atorvastatin, which can reduce cholesterol levels, by the hospital. Still, he did not take it and did not actively manage the suspected disease or obesity.

As fatigue worsened around August 2023, severe nosebleeds became one of the physical symptoms, which led to the start of OCTN. After taking Notoplex for a month, fatigue improved, and nosebleeds stopped, but when the symptoms were partially alleviated, the case subject stopped taking the drug. Then, the same symptoms appeared again in November, so OCTN was performed a second time.

In the second OCTN, four products, Cyaplex-F, Eufaplex, Viva Kan, and Notoplex, were taken according to the prescribed dosage and the patient's health condition improved overall body homeostasis. After a month, fatigue was significantly reduced, sleep quality improved, and the number of times neuropsychiatric medication was taken decreased.

As a result, the brain fog phenomenon was significantly improved compared to before the implementation of OCTN, and awareness became clearer. In addition, by combining OCTN with a diet prohibiting late-night snacking, he lost about 4 kg in one month. His abdominal pain, which was so severe that he could not sleep, was reduced to level 1, and his jaundice levels due to fatty liver and hyperlipidemia were also significantly improved (Table 1).

Since the jaundice level is not yet within the normal range, OCNT is still in progress.

## Discussion

Stress stimulates the nervous system to secrete the stress hormone cortisol, and when stress becomes chronic, the secretion of cortisol continues chronically, disrupting the body's balance. Suppose you do not promptly take an active response to eliminate stress or an indirect response such as exercise or meditation.

**Table 1. The degree of symptoms perceived by the patient and measurement values during OCNT**

| Symptoms | 1st<br>2023.05.30 | 2nd<br>2023.07.05 | 3rd<br>2023.09.25<br>(After 1st OCTN) | 4th<br>2023.12.31<br>(After 2nd OCTN) | Note |
|---|---|---|---|---|---|
| **Abdominal pain** | 5 | 4 | 2 | 1 | The closer the number is to 1, the less pain there is to the point of being unable to sleep. |

| | | | | | |
|---|---|---|---|---|---|
| **Weight** | 71.5 kg | 72 kg | 69 kg | 65 kg | - |
| **Jaundice** | 14 mg/dL | 10 mg/dL | 4 mg/dL | 2.3 mg/dL | Normal range<br>0.2~1.2 mg/dL |

In that case, it becomes difficult for the body to maintain homeostasis, ultimately leading to disease development.[1,2] It is known that the nervous system is closely related to the immune system. There are reports that chronic psychological stress increases the level of cortisol and suppresses the activity of immune cells, increasing the risk of developing various infectious diseases or cancer.[3]

Typical diseases known to be related to stress are introduced as follows:

First, excessive secretion of cortisol promotes fat secretion into the blood, and when this increased fat attaches to the coronary artery wall, it causes coronary artery disease.[4,5]

Second, if excessive chronic stress continuously stimulates the sympathetic nervous system, leading to an increased risk of hypertension and atherosclerosis.[6,7]

Third, if stress becomes chronic, this state of activation continues, and if it becomes excessive, it can cause depression.[8,9]

Fourth, insomnia occurs when the brain becomes overly tense due to environmental changes or stressors.[10,11]

Diseases caused by stress not only cause discomfort in daily life but can also directly lead to health issues, making appropriate management crucial. If it's difficult to eliminate the stressor itself, methods to restore the body's homeostasis can also be helpful.

Notoplex, which the patient in this case first took due to excessive nosebleeds, has Panax notoginseng as its main ingredient and is known to be effective in treating blood-related diseases. The main effects include hemostasis to stop bleeding, acid blood to disperse stagnant blood, swelling to clear tumors and swollen wounds, and orthodox to relieve pain. Therefore, taking Panax notoginseng extract can improve the patient's microvascular circulation, assist in vascular relaxation, and help alleviate the patient's nasal congestion symptoms.[12,13]

Anthocyanins are representative antioxidant substances known to improve immune function through various studies,[14,15] and there are reports that fucoidan also enhances immune cells.[16] The zinc and selenium contained in the product can also help restore a normal immune system, including detoxification of oxidized cells.[17,18]

In addition, quercetin contained in aronia is a flavonoid compound with antioxidant and anti-inflammatory effects and increases the expression of brain-derived neurotrophic factors in animal model studies and clinical studies. It has also been shown to improve symptoms of depression by helping to increase levels of neurotransmitters such as serotonin and dopamine.[19,20]

Omega 3, the main ingredient of Eufaplex, is a non-oxidized essential fatty acid known to help produce prostaglandins 1, 2, and 3, eliminating inflammation and helping kill blood clots and cancer cells. In addition, it is known to help the inflammation control system function normally as it is a parent fatty acid that is a raw material for adrenocortical hormones, cell membrane regeneration, vitamin D synthesis, steroid hormones, and bile. In particular, omega-3 effectively reduces triglyceride and cholesterol levels in many studies.[21-23]

Omega 3 is also a component of brain cell membranes, plays a vital role in brain cell signaling and neurotransmitter production, and can help improve the function of mood-boosting neurotransmitters such as serotonin and dopamine. It has also been reported that it can help improve symptoms of depression by increasing the expression of BDNF (brain-derived neurotrophic factor) and reducing inflammatory mediators, alleviating cranial nerve inflammation.[24]

The main ingredient in Viva Kan is silymarin, a mixture of flavonoid compounds extracted from the seeds of a plant called milk thistle. The main components are silybin, silicristine, and silidanin, and research results have reported that it can help improve fatty liver through antioxidant and anti-inflammatory effects. As a result of analyzing 17 randomized controlled studies, when silymarin was consumed, liver enzyme levels, AST (GOT), decreased by approximately 27%, ALT (GPT) decreased by approximately 29%, liver fat content decreased by approximately 22%, and the HOMA-IR index, which measures insulin sensitivity, decreased by approximately 20%.[25,26]

This single case study may not be universally applied to all patients with reduced body hemostasis. However, this case is reported with the patient's consent because this treatment is believed to have helped improve the patient's symptoms.

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