

세포교정영양요법(OCNT)을 이용한 두부진전 개선 사례

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A Case Report on the Improvement of Head Tremor Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Essential tremor (ET) is a neurological disorder involving the bilateral upper limbs, head, and other regions, characterized by action tremor that occurs independently of the patient's voluntary control. Head tremor manifests as repetitive, rhythmic movements of the head associated with essential tremor or cervical dystonia, and is understood to involve multiple pathophysiological mechanisms, including aberrant cerebellar-brainstem connectivity governing cervical muscle coordination, dysfunction within the basal ganglia-cortical circuit, and deficits in sensorimotor integration. Beyond visible or cosmetic concerns, this condition can significantly impair both physical and psychological quality of life. Although various pharmacological and surgical treatments are currently used as standard-of-care approaches, their limited response rates and associated adverse effects have led to growing clinical interest in integrative therapeutic modalities aimed at stabilizing overall neural circuitry.

Case Report: This case report describes a Korean woman in her sixties who presented with discomfort attributable to head tremor. The patient had been experiencing persistent cephalic tremor, which resulted in both physical and psychological distress. Accordingly, Ortho-Cellular Nutrition Therapy (OCNT) was administered using anthocyanin, alpha-linolenic acid, selenium, Ginkgo biloba extract, magnesium, resveratrol, and other components. Following the intervention, the patient demonstrated gradual improvement in head tremor symptoms and associated discomfort.

Conclusion: Although the present case is limited to a single patient, which restricts the generalizability of the same OCNT protocol to all patients with head tremor, the symptomatic improvement achieved through a pathophysiological approach is considered clinically meaningful.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), Essential tremor, Head tremor, Cerebellum, Neurological function

Introduction

Essential tremor (ET) is a neurological disorder involving the bilateral upper limbs, head, and other affected regions. The condition is characterized by action tremor at the affected sites that occurs independently of the patient's voluntary control, with a progressive tendency toward increased intensity or amplitude over time. ET has been reported to affect up to 1.33% of the

global population, with prevalence increasing by approximately 74% per decade of age. In older populations, more than 20% of individuals have been reported to experience associated symptoms.¹

The neurological pathophysiology of ET is explained by dysfunction of the cerebello-thalamo-cortical circuit, through which abnormal oscillations originating in the cerebellum are propagated to produce tremor in affected body regions. Functional neuroimaging studies suggest that increased oscillatory discharge from cerebellar Purkinje cells leads to hyperexcitability of the dentate nucleus, which in turn increases oscillatory firing in the ventral intermediate nucleus (VIM) of the thalamus. The resulting signals are then transmitted to the motor cortex, where they generate pathological tremor. Furthermore, diminished inhibitory activity of GABAergic neurons within the cerebellum has been proposed as an important pathophysiological mechanism. This weakens

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inhibitory modulation of the motor circuit and induces a state of rhythmic hyperexcitability. This mechanism provides the pharmacological basis for the symptomatic relief observed with primidone and beta-blockers in some patients.^{1,2}

Head tremor is a hyperkinetic movement disorder characterized by involuntary, repetitive, rhythmic movements of the head, occurring in association with ET or cervical dystonia as described above. It is a common manifestation, occurring in more than half of all patients with ET. This symptom is particularly closely associated with aberrant cerebellar-brainstem connectivity, which governs cervical muscle coordination. In cases of head tremor concurrent with cervical dystonia, dysfunction of the basal ganglia-cortical circuit and deficits in sensorimotor integration have also been shown to play a role. As a result, head tremor predominantly manifests as asymmetric and irregular oscillatory movements of the head.³

Head tremor can represent a functional disability that extends beyond cosmetic concerns, encompassing cervical muscle fatigue and pain caused by persistent tremor, consequent social withdrawal, anxiety and depression, and ultimately a deterioration in quality of life.⁴ Current standard treatments include pharmacological modalities such as beta-blockers, anticonvulsants, and botulinum toxin injections, as well as surgical interventions such as deep brain stimulation. However, the limited response rates and adverse effects associated with these treatments have highlighted the need for complementary approaches beyond existing modalities.⁵ More recently, neuroinflammation, oxidative stress, and mitochondrial dysfunction have been proposed as potential contributors to the pathophysiology of tremor, and integrative therapeutic strategies aimed at stabilizing neural circuitry through the amelioration of these factors have attracted growing clinical attention.⁶

The present case concerns a patient who had been experiencing daily functional impairment due to persistent head tremor, with concomitant anxiety and depression further diminishing quality of life. In particular, as no symptomatic improvement had been achieved despite continued treatment, Ortho-Cellular Nutrition Therapy (OCNT) was applied with the aim of inducing clinical improvement. Consequently, the patient exhibited alleviation of head tremor symptoms along with significant improvement in psychiatric symptoms, and this case is reported herein with the patient's informed consent.

Case Study

1. Subject

A single patient with head tremor was included in this report.

- 1) Name: Lee OO (63 years / F)
- 2) Diagnosis: Essential head tremor
- 3) Estimated onset: 2022
- 4) Treatment period: February 2025 – August 2025
- 5) Chief complaints: Involuntary head tremor, anxiety, depression
- 6) Past medical history: Tinnitus, poor sleep quality due to frequent dreaming during sleep
- 7) Social history: Severe psychosocial stress
- 8) Family history: None
- 9) Present illness and current medications: Acupuncture treatment at a Korean medicine clinic for approximately two years

2. Methods

The OCNT regimen prescribed to the patient is detailed in Table 1.

Table 1. 환자에게 처방한 OCNT.

session	1	2	3	4	5
Prescription					
Cyaplex X granule	101	101	101	101	101
Eufaplex Alpha stick	101	101	101	101	101
Tmplex granule	100	100	100	100	100
Viva circu capsule	101	101	101	101	101
Magplex capsule	202	202	202	202	202
Resplex capsule	-	202	202	-	-
Resplex granule	-	-	-	101	101

* 100: Once daily, 1 sachet/capsule per dose, taken in the morning;
101: Twice daily, 1 sachet/capsule per dose, taken in the morning and evening; 202: Twice daily, 2 sachets/capsules per dose, taken in the morning and evening

Results

The patient received OCNT and was followed up over a five-month period. Consequently, head tremor symptoms decreased in a stepwise manner and ultimately resolved, accompanied by improvements in anxiety and depression. With respect to tinnitus, a modest transient worsening was observed during the third month of OCNT, but it improved within a short period. Furthermore, generalized neural hyperexcitability was also alleviated, indicating an overall improvement in the patient's physical condition. The extent of symptoms experienced by the patient during OCNT is presented in detail in Table 2.

Table 2. Severity of symptoms experienced by the patient during the course of OCNT. Higher scores indicate greater symptomatic discomfort, with scores ranging from 0 to 5.

session	1	2	3	4	5
Symptom					
Head tremor	4	2	1	1	0
Anxiety	3	2	0	0	0
Depression	3	1	1	1	1
Poor sleep quality (frequent dreaming)	4	3	2	1	1
Tinnitus	1	1	3	0	0

0: No symptoms and no impact on daily activities; 1: Mild symptoms with minimal impact on daily activities; 2: Noticeable symptoms requiring minor adjustments in daily activities; 3: Symptoms significantly affect daily activities, making some tasks difficult; 4: Major difficulty performing tasks during daily activities; 5: Symptoms severely interfere with daily activities, causing substantial distress

Discussion

The present case concerned a Korean woman in her sixties who presented with discomfort attributable to persistent head tremor. The patient had been experiencing uncontrollable involuntary head movements of undetermined etiology since approximately 2022, accompanied by anxiety, depression, and diminished sleep quality due to frequent dreaming. Clinical interview further revealed that the patient was recurrently

exposed to stressful situations due to the nature of her occupation. OCNT was therefore prescribed to mitigate stress-induced physiological responses, regulate systemic oxidative stress and inflammatory activity that may affect cerebral and neurological function, and promote neural stabilization and improvement in mitochondrial function.

Anthocyanin and selenium were initially included in the present OCNT regimen to ameliorate oxidative stress. Anthocyanin is a type of polyphenol abundantly found in various pigmented fruits and vegetables, including berries, plums, and cherries, whereas selenium is an essential trace element that exerts its functions in the body after conversion into selenoproteins. Oxidative stress is triggered by reactive oxygen species (ROS), which oxidize and modify high-molecular cellular components such as carbohydrates, lipids, proteins, and DNA, thereby inducing cellular stress and promoting inflammatory responses. In this context, anthocyanin functions as a reducing agent in electron transfer reactions, one of the mechanisms involved in oxidative stress, and thereby inhibits ROS activity. Selenium, meanwhile, serves as an essential component of antioxidant enzymes such as glutathione peroxidase (GPx), thioredoxin reductase (TrxR), and iodothyronine deiodinases, contributing to the overall amelioration of oxidative stress.^{7,8} These two components were intended to be supplied through Cyaplex X and Tmplex, respectively.

Eufaplex was subsequently prescribed to modulate inflammatory responses. Eufaplex is primarily composed of unsaturated fatty acids, including omega-3 and omega-6 fatty acids, and contains particularly high levels of alpha-linolenic acid (ALA) and gamma-linolenic acid (GLA). ALA contributes to the inhibition of pro-inflammatory signaling pathways involving nuclear factor kappa B (NF- κ B) and to the downregulation of genes involved in the production of inflammatory mediators, including tumor necrosis factor-alpha (TNF- α), inducible nitric oxide synthase (iNOS), and cyclooxygenase-2 (COX-2). GLA, in turn, is converted in the body to dihomo-gamma-linolenic acid (DGLA), and metabolites generated through cyclooxygenase (COX) and lipoxygenase (LOX) pathways may contribute to anti-inflammatory activity.^{9,10}

Overall improvement of head tremor symptoms may require stabilization and enhancement of neurological function. For this purpose, magnesium and Ginkgo biloba extract were prescribed. Both components may contribute to neural stabilization by blocking NF- κ B activation and reducing the expression of pro-inflammatory cytokines such as TNF- α and interleukin-6 (IL-6), thereby diminishing neuroinflammation and attenuating neuronal hyperactivation. Moreover, excessive calcium influx into cells can aggravate neuronal injury and inflammatory responses, and magnesium may play a protective role by preventing such pathological calcium overload. In addition, Ginkgo biloba extract may support the maintenance of neurological function by inhibiting monoamine oxidase (MAO), the enzyme that degrades neurotransmitters including dopamine, serotonin, and norepinephrine.^{11,12} These two components were supplied through Magplex and Viva circu, respectively.

Nutrients aimed at improving mitochondrial function were subsequently incorporated into the regimen, including resveratrol, manganese, and iron. Resveratrol is a polyphenolic compound abundantly found in *Polygonum cuspidatum* and related sources. This component may contribute to promoting

mitochondrial biogenesis by supporting the activation of SIRT1 protein, which in turn activates PGC-1 α . Manganese and iron are respectively involved in ROS scavenging within mitochondria and in mitochondrial energy production processes, thereby supporting the maintenance and activation of mitochondrial function.^{13,14} These components were intended to be supplied through Resplex and Tmplex, respectively.

Through the present OCNT regimen, the patient exhibited improvement in head tremor symptoms that had remained unimproved despite long-term treatment, accompanied by alleviation of anxiety, depression, and sleep disturbance. In particular, the improvement observed in this case was not short-lived but sustained and progressive, and is therefore considered a clinically meaningful outcome. However, as this report is limited to a single patient, there are inherent limitations in applying the same OCNT regimen to all patients with head tremor or ET. Nonetheless, this case suggests that OCNT directed at improving head tremor may achieve clinical improvement through a pathophysiological approach, including enhancement of neurological function and reduction of oxidative stress. This case is therefore reported herein with the patient's informed consent.

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