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Case Report

세포교정영양요법(OCNT)을 통한 우울, 불안 등 정신질환 개선 사례 보고

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A Case Report on the Improvement of Mental Disorders, Including Depression and Anxiety, through Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Mental health refers to overall psychological well-being that enables individuals to function smoothly and contribute as members of society. Recently, the incidence of mental disorders that affect this well-being has surged, and studies have reported that such conditions can significantly impact quality of life. Various treatment approaches—such as psychological counseling, occupational therapy, and pharmacological treatment—are currently being applied. However, pharmacological treatments often face criticism due to unclear mechanisms of action or emerging concerns about side effects. As a result, the modern trend is shifting toward personalized psychiatry, which applies diverse treatment methods tailored to each patient's specific symptoms.

Case Report: This case study focuses on a woman in her 80s who has been experiencing symptoms of mental disorders, including long-standing depression, anxiety, and insomnia. She also exhibited aggressive verbal and behavioral patterns to the extent that communication was difficult. To address these symptoms, Ortho-Cellular Nutrition Therapy (OCNT) was applied, utilizing nutrients such as anthocyanins, vitamins B, C, and E, zinc, and magnesium, as well as natural extracts including hemp seed oil, bamboo leaf, St. John's wort, passionflower, ginkgo leaf, and fennel. As a result, there was a significant alleviation of the patient's symptoms related to depression, anxiety, and insomnia, along with a noticeable improvement in her ability to communicate.

Conclusion: This case study demonstrates that OCNT, which considers the patient's circumstances, can significantly improve symptoms related to mental disorders such as depression, anxiety, and insomnia, as well as enhance cognitive function. Although this study's limitation lies in its focus on a single case, the observed improvement in symptoms and the resulting enhancement in the patient's quality of life are considered meaningful.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), mental disorders, cognitive function, personalized psychiatry

Introdudction

Mental health refers to overall psychological well-being that enables individuals to withstand life's stressors and contribute effectively to their communities as members of society. This state can be influenced by personal factors such as emotional regulation abilities, genetic factors, or drug use. Also, It can be affected by various social, economic, and environmental conditions such as financial status and surrounding environment. When mental health is in a good state, individuals are able to realize their potential and contribute to the development of both themselves and their communities. However, good mental health cannot simply be defined as the absence of mental illness, as its standards may vary depending on personal experiences, health conditions, and social circumstances.[1]

Disorders that can affect mental health are collectively referred to as mental disorders. These include schizophrenia, unipolar or bipolar depressive disorders, panic disorder, eating disorders, and substance use disorders. The diagnosis and severity of these conditions can be determined using diagnostic criteria such as the DSM (Diagnostic and Statistical Manual of Mental Disorders) and ICD (International Classification of Diseases) based on the behavioral patterns exhibited by the patient.[2] In modern times, with increasing social changes and

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rising levels of stress, the incidence of mental disorders has also surged. According to a global survey conducted across 204 countries, the number of diagnosed cases of mental disorders rose from 654.8 million in 1990 to 970.1 million in 2019, marking an approximate increase of 48%.[3] In a 2021 survey conducted on the Korean population, 27.8% of all respondents reported having been diagnosed with a mental disorder at some point in their lives.[4]

Mental disorders can significantly affect the overall quality of life. This impact can be measured through indicators such as Years Lived with Disability (YLD), which calculates the number of years lived with a disease; Years of Life Lost (YLL), which calculates the years lost due to premature death caused by a specific disease; and Disability-Adjusted Life Year (DALY), which combines both YLD and YLL to assess the total loss of healthy life years. Among these, YLD due to mental disorders accounts for 125.3 million years, representing 14.6% of all YLDs worldwide. While mental disorders account for 4.9% of total DALYs, the number has increased significantly—from 80.8 million years in 1990 to 125.3 million years in 2019—marking a 55% rise.[3]

One of the ways mental disorders impact quality of life is through the loss of cognitive function. Cognitive function refers to the brain's overall ability to process information and encompasses various domains such as working memory, executive function, attention, and information processing. When impaired, this function can hinder overall language ability, thinking capacity, and attention span and may lead to a decline in physical function. Additionally, it can reduce medication adherence and may result in impulsive or aggressive behavior. By considering these factors comprehensively, a diagnosis of the patient's condition can be made, and appropriate treatment methods can be applied.[5]

In modern times, various methods are being applied to treat mental disorders. Representative approaches include psychological counseling, occupational therapy, and pharmacological treatment. In particular, drug-based therapies aim to control symptoms by regulating specific metabolic or neural circuit responses. However, for certain medications, the exact mechanisms through which they regulate symptoms remain unclear, and side effects continue to be a significant challenge. Moreover, most medications are not tailored to individual patients but target general symptoms. As a result, terms like "personalized psychiatry" have recently emerged, reflecting a growing trend toward efforts to address mental disorders by considering each patient's unique circumstances.[6]

The patient in this case study had been suffering from mental disorders such as depression and generalized anxiety disorder for a long time, with symptoms worsening to the point of requiring hospitalization and pharmacological treatment. However, these treatments did not show significant effects in alleviating the symptoms, and after discharge, Ortho-Cellular Nutrition Therapy (OCNT) was implemented. This report presents a case in which symptoms were significantly improved through OCNT, with the patient's consent.

Case Study

1. Subject

This study involved one patient diagnosed with a mental disorder, including depression and anxiety.

1) Name: Moon OO (80 years old / F)
2) Diagnosis: Depression, Generalized Anxiety Disorder, Cognitive Impairment
3) Date of onset: Since age 40
4) Treatment period: December 2024 – Present
5) Chief complaints: Depressed mood, anxiety, aggressive behavior, stereotyped speech
6) Past medical history: Cystitis in 2023, COVID-19 infection
7) Social history: None
8) Family history: None
9) Current illness and medications: Buspar Tab. 10mg, Zyprexa Tab. 2.5mg, Trazodone 25mg, Stilnox CR Tab. 6.25mg, Alpram Tab. 0.25mg, Clonazepam 0.5mg, Mirtax Tab. 15mg, Mirtax ODT Tab. 30mg

2. Method

The OCNT applied to the patient is detailed in Table 1.

Results

The patient exhibited symptoms of depression along with severe anxiety, aggressive behavior, and stereotyped actions and was taking related medications but showed little improvement. Additionally, the patient expressed resistance to long-term use of psychiatric medications, which led to the initiation of OCNT. The patient's progress during OCNT is detailed in Table 2.

Discussion

The patient in this case study is a Korean woman in her eighties who had been suffering from depression and generalized anxiety disorder for a long time. It was confirmed that she had been taking psychiatric medications related to these conditions for an extended period. Recently, she reported worsening symptoms, including persistent insomnia, difficulty in communication, and aggressive behavior and language use. Furthermore, before visiting the pharmacy, she exhibited dramatic behaviors suggestive of suicidal ideation, which led to hospitalization in a psychiatric ward.

During hospitalization, the patient received prescribed medications and treatment in the ward and was discharged afterward; however, she refused outpatient follow-up care after discharge. Additionally, the caregiver held a negative view of psychiatric medications and reportedly discontinued the patient's medication. Therefore, OCNT was applied to the patient instead of medication to promote overall symptom improvement.

Reviewing the medications, the patient was taking revealed that they were mostly drugs used to treat mental disorders such as depression, anxiety disorders, bipolar disorder, and sleep disorders, primarily acting on the nervous system. Therefore, Noeufa hemp seed oil was prescribed first to induce symptom improvement and to assess the patient's adaptability to OCNT. It was found that the oil extracted from hemp seed contains cannabidiol (CBD).[7] This ingredient has been suggested to influence signaling mechanisms by regulating intracellular

Table 1. OCNT Applied to the Patient

Sessions / Products	Session 1 (Dec 20, 2024 – Jan 15, 2025)	Session 2 (Jan 2025)	Session 3 (Feb 2025)	Session 3 (Mar 2025)	Session 4 (Apr 2025)	Session 5 (Current)	Note
Cyaplex A Granules	-	101	101	101	101	-	
Eufaplex Alpha	-	101	101	101	101	101	
Noeufa hemp seed oil*	101	101	101	101	101	101	
Hwapyeongwon*	-	101	101	111	111	prn	
Jubaplex F Granules*	-	001	001	001	001	-	
Jubaplex Speed Liquid	-	-	-	-	-	prn	
Hemoplex Capsules	-	202	202	-	-	-	
Hemoplex Speed Liquid	-	-	-	111	111	111	
Yohanplex Granules	-	101	101	111	111	110	
Magplex Capsules	-	202	-	-	-	-	Prescribed for 15 days
Heartberry Lemon	-	-	100	100	100	-	Administered after dissolving in 500 ml of water
Aqua SAC Pure	-	-	100	100	100	-	
Cyaplex Mineral Rock Salt	-	-	100	100	100	-	
Resplex Alpha Capsules	-	-	-	-	202	200	
Lipotron M Capsules	-	-	-	-	202	-	
Paragon	-	-	-	-	001	-	Prescribed for 3 days
Bioplex F	-	-	-	-	001	001	
Cyaplex X Granules	-	-	-	-	-	101	

* Prescribed for optional use if symptoms worsen

** 001: once daily, 1 sachet/capsule per dose, taken in the evening; 101: twice daily, 1 sachet/capsule per dose, taken morning and evening; 111: three times daily, 1 sachet/capsule per dose, taken morning, noon, and evening; 200: once daily, 2 sachets/capsules per dose, taken in the morning; 202: twice daily, 2 sachets/capsules per dose, taken morning and evening; prn: administered as needed.

Table 2. Patient Progress Observed During OCNT

Existing symptoms	· Unable to perform daily activities independently; requires constant assistance from caregivers · Persistent insomnia reported; exhibits aggressive behavior and speech to the extent that communication is nearly impossible. · History of cystitis as an underlying condition; had a urinary catheter in place but removed it on her own, resulting in severe bleeding and hospitalization. · Medications: Zyprexa Tab. 2.5 mg, Trazodone 25 mg, Stilnox CR Tab. 6.25 mg, Alpram Tab. 0.25 mg, Clonazepam 0.5 mg, Mirtax Tab. 15 mg, Mirtax ODT Tab. 30 mg.
Before OCNT (~ Dec. 2024)	· Symptoms worsened to the extent that she exhibited impulsive behavior, such as suddenly running out of the house and actions suggestive of suicide. As a result, she was admitted to the psychiatric ward and received medication treatment for approximately 20 days. · *Prescribed medications*: Alpram Tab. 0.25 mg 101, Busron Tab. 10 mg 111, Indenol Tab. 10 mg 110, Ativan Tab. 0.5 mg 011, Argotin Tab. 001, Solian Tab. 100 mg 001, Mirzentac Tab. 15 mg HS, Trazodone Tab. 25 mg HS, Zanapam Tab. 0.5 mg PRN · After discharge, the patient refused to visit the psychiatric clinic, and the caregiver discontinued psychiatric medications due to negative perceptions.
After 1st & 2nd OCNT prescription (~ Jan. 2025)	· No significant behavioral changes were observed. · Symptoms such as leg tremors due to restless legs syndrome, involuntary hand shaking, and rabbit syndrome were noted but improved after taking Magplex Capsules for one week. · Diarrhea, phlegm, coughing, and pruritus occurred but were considered signs of a healing response; symptomatic treatments such as steroid ointment were prescribed.
After 3rd OCNT prescription (~ Feb. 2025)	· The frequency of insomnia symptoms decreased by about half compared to before. · Symptoms of dry mouth and eye rubbing occurred, and difficulty swallowing water or food was observed. OCNT (Heartberry Lemon, Aqua SAC Pure, Cyaplex Mineral Rock Salt) was additionally prescribed to address these symptoms.
After 4th OCNT prescription (~ Mar. 2025)	· The periods of behavioral stability increased compared to before, with occasional improvement allowing for some communication. · Intermittent insomnia occurs, and symptoms of anxiety, stereotyped speech, and aggressive behavior continue to be observed.
After 5th OCNT prescription (~ Apr. 2025)	· The periods of behavioral stability increased further, and the chief complaints showed signs of improvement, although fluctuations between improvement and deterioration occurred. · In addition to mental health issues, the patient complained of difficulty urinating and hot flashes. These symptoms were considered to result from intestinal bacterial imbalance (dysbiosis) caused by antibiotics taken for cystitis, leading to the addition of OCNT (Paragon, Bioplex). · After the additional OCNT, improvement in urination difficulties and hot flashes was observed, along with clear progress in cognitive function.
After 6th OCNT prescription (~ present)	· Communication ability improved enough to exchange opinions with others, and the chief complaints were significantly alleviated.

calcium ions. Clinical trials showed that when administered to patients with disease groups accompanied by epilepsy, such as Dravet syndrome, Lennox-Gastaut syndrome, and tuberous sclerosis, it was able to reduce seizures. Additionally, it was confirmed to have an impact on overall quality of life, including sleep.[8] hemp seed oil was continuously prescribed thereafter to induce improvement in the seizure symptoms experienced by the patient.

After prescribing hemp seed oil, the patient was observed and showed no significant resistance to OCNT. Consequently, the prescription was expanded to address symptoms such as anxiety and insomnia. Among the ingredients, anthocyanins were primarily used at this stage. Anthocyanins are a type of polyphenol commonly found in berries and are known to significantly contribute to antioxidant function by alleviating oxidative stress. In behavioral and biochemical studies conducted on rats administered with blueberry extract rich in this compound, a significant reduction in immobility time was observed, indicating potential antidepressant effects. Furthermore, increased secretion of serotonin, which promotes emotional stability, and norepinephrine, which enhances concentration, was also confirmed.[9] Anthocyanins were supplied using various products such as Cyaplex A Granules, Heartberry Lemon, and Cyaplex Mineral Rock Salt, and these are thought to have contributed to the patient's neural function and emotional stability.

Omega-3 fatty acids are a type of unsaturated fatty acid and a form of phospholipid, a major component of cell membranes. They include various components, such as eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), and alpha-linolenic acid, are widely known for supporting cardiovascular health and providing anti-inflammatory effects. In recent years, several studies have drawn attention to the potential effects of omega-3 fatty acids in improving symptoms of mental illness. One notable study focused on the immune cytokine interferon-α (INF-α). Although INF-α can be used as a treatment for hepatitis, it is also known to induce depression potentially. In this context, EPA was shown to significantly suppress depression induced by INF-α. Additionally, omega-3 has been found to promote the production of brain-derived neurotrophic factor (BDNF), which may support antidepressant functions. Furthermore, DHA acts as an agonist for the nuclear receptor RXR, which induces the expression of ABCA1. This protein removes amyloid beta (A), which is known to contribute to the development of Alzheimer's disease. This mechanism has been reported to lower the risk of developing Alzheimer's. Other mechanisms have also shown that omega-3 fatty acids can have a positive impact on various mental illnesses such as schizophrenia and ADHD. Based on this, Eufaplex Alpha, which is rich in these components, was prescribed to help improve the overall symptoms associated with the patient's mental illness. [10]

In addition, it was found that supplementing nutrients such as vitamins B, C, and E groups, folic acid, and zinc is essential to influence the patient's cognitive function positively. Vitamin B, especially B6, folic acid (B9), and B12, help induce neurotransmitter synthesis, while vitamin C is involved in producing hormones such as dopamine and norepinephrine. Vitamin E plays a role in preventing nerve cell damage by inhibiting the oxidation of fatty acids, and zinc helps stabilize nerves by regulating antioxidant enzymes.[11] These nutrients were supplied using Lipotron M capsules.

Recently, numerous studies have been published researching the mechanisms of improving mental disorders using natural substances. Therefore, alongside using nutrients, natural substances that help improve various psychiatric symptoms were
used to aid in the patient's symptom improvement. The products used for this purpose were Hwapyeongwon, Yohanplex Granules, and Jubaplex F Granules.

Hwapyeongwon contains various natural extracts such as bamboo leaf, thistle, *Scutellaria baicalensis* root, and reed root. Among these, bamboo leaves and *Scutellaria baicalensis* roots have been shown to improve symptoms caused by mental disorders in animal experiments. *Scutellaria baicalensis* contains baicalin, and in groups administered this compound, significant improvement was observed in depression-like behaviors such as anxiety, cognitive decline, and despair. Additionally, molecular experiments confirmed that it activates the BDNF/ERK/CREB signaling pathway involved in the growth and maintenance of nerve cells.[12] In the case of bamboo leaf extract, the experimental group administered this compound, which showed a reduction in immobility time, and biochemical analysis confirmed a significant increase in dopamine levels.[13]

Yohanplex Granules and Jubaplex F Granules contain extracts of St. John's wort and passionflower, respectively. St. John's wort has recently been found to help significantly improve symptoms of depression. The main active components of this plant are hyperforin and hypericin. Hyperforin activates the TRPC6 channel, which induces the growth and activation of nerve cells, helping reduce anxiety and depressive behaviors. Hypericin inhibits the breakdown of neurohormones such as serotonin, norepinephrine, and dopamine, which can positively affect depressive symptoms. Additionally, it has been reported to have fewer side effects compared to conventional antidepressants, making it a notable natural alternative.[14] Clinical trials of passionflower extract showed that the group taking this extract experienced an increase in sleep duration, an improvement in sleep quality, and a significant reduction in anxiety levels. This extract interacts with GABA receptors, which play an important role in neuropsychiatric disorders such as anxiety and depression, and it was confirmed to help with sedation and anxiolytic effects.[15] These natural components are believed to have contributed to the improvement of the patient's symptoms, including depression, anxiety, and insomnia.

Abnormalities in the nervous system often cause mental disorders such as depression and anxiety. However, recently, it has become difficult to explain all mental disorders solely by nervous system abnormalities, leading to numerous studies searching for other causes. As a result, several additional hypotheses have been proposed. The first is that angiogenesis or blood flow has an influence. Some related studies have confirmed reduced cerebral blood flow in patients with disorders such as schizophrenia, epilepsy, and autism spectrum disorder.[16] A main cause is the reduction in the production of nitric oxide (NO), which plays a role in vasodilation due to aging. Numerous animal experiments have shown Ginkgo leaf extract to induce NO production and help improve blood flow. When applied to humans, it was confirmed to improve coronary artery blood flow.[17] Therefore, Resplex Alpha Capsules were prescribed to help improve the patient's cerebral blood flow.

Among the newly proposed causes related to mental disorders, the brain-gut-microbiome axis has received significant attention. The brain-gut-microbiome axis refers to the interaction between gut microbiota and the nervous system,

endocrine system, metabolites, and immune signals. It contributes to the production of chemical signals such as short-chain fatty acids, serotonin, and GABA. Numerous studies have revealed that the brain-gut-microbiome axis affects the immune system and neurotransmitters, thereby influencing symptoms of depression.[18] The patient was taking antibiotics for cystitis and complained of hot flashes and discomfort during urination after long-term antibiotic use. It was assumed that intestinal bacterial imbalance occurred, and OCNT was prescribed to address these symptoms and depression.

Among the ingredients of Paragon, fennel and clove are known to help improve the gut microbiome balance. Fennel is rich in essential amino acids, phenolic acids, and flavonoids and has been confirmed to exhibit antibacterial activity against pathogenic bacteria such as *Salmonella*, *Escherichia coli*, and *Shigella*.[19] Clove has long been used to improve gastrointestinal symptoms, and it has been confirmed to eradicate Helicobacter pylori without toxicity to normal cells in the body.[20] Fructooligosaccharides contained in Bioplex F can help selectively increase beneficial intestinal bacteria such as *Bifidobacterium*, and psyllium husk extract has also been shown through clinical studies to aid the growth of beneficial intestinal bacteria.[21,22] After taking the above OCNT, the patient showed noticeable improvement in symptoms related to cystitis and in periods of clear consciousness.

The patient experienced various symptoms besides mental illness, including dryness of the mouth and eyes and muscle tremors due to long-term use of psychiatric medications. The OCNT treatment was aimed at addressing and improving these symptoms. Proper mineral intake is essential to improve the body's hydration. In particular, it was confirmed in an experiment where a group consuming deep sea water rich in trace minerals showed significantly better improvement in hydration loss after physical exercise compared to groups consuming purified water or sports drinks.[23] Magnesium is a mineral that plays a key role in muscle contraction, and its deficiency may cause muscle cramps and fatigue symptoms.[24] Based on this, minerals were supplied through Aqua SAC Pure and Cyaplex Mineral Rock Salt, and magnesium was supplied through Magplex granules to help improve symptoms of body dryness and muscle tremors.

The various OCNT treatments described above attempted to improve the patient's symptoms of depression, anxiety disorder, seizures, and other mental illnesses. As a result, the patient, who initially showed severe seizures and anxiety symptoms, showed very significant symptom improvement to the extent of being able to communicate interactively, and the patient and caregiver both expressed their intention to continue management through ongoing OCNT. However, since this study was conducted on a single patient, there are limitations to applying the same OCNT to all patients. Nonetheless, it is considered meaningful that appropriate OCNT was applied according to this patient's symptoms and condition, leading to significant symptom improvement. Therefore, with the patient's consent, this case study is reported.

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