

## 세포교정영양요법(OCNT)를 이용한 하지불안증후군 사례 연구

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## A Case Study on the Improvement in Restless Leg Syndrome Using Ortho-Cellular Nutrition Therapy (OCNT)

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## ABSTRACT

**Objective:** Improvement of the symptoms of restless leg syndrome patient by using OCNT.**Methods:** OCNT was implemented on a 50-year-old Korean female patient with symptoms of chronic fatigue and chronic gynecologic disease as well as sufferance from insomnia due to numbness in the legs following hysterectomy in the past.**Results:** Following the implementation of OCNT, the symptom of numbness in the legs improved along with other symptoms that caused inconveniences to the patient such as sleep disorder, fatigue and gynecology disease.**Conclusion:** Application of OCNT to patient suffering restless leg syndrome can be helpful in alleviation of the symptoms.**Keywords** Ortho-Cellular Nutrition Therapy (OCNT), restless leg syndrome, numbness of the legs

## Introduction

Restless leg syndrome is defined as a condition in which a person experiences abnormal tingling sensation, numbness, discomfort and,

in some severe cases, pain in the legs during rest, such as lying down or sitting, as well as an urge to move the legs in the absence of causal diseases such as peripheral neuropathy or spinal disease, etc. that could induce the aforementioned symptoms. Although the restless leg syndrome generally affects the calves and legs, symptoms can also manifest in the arms and shoulders. In particular, it gets worse at night and can even induce sleep

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disturbances.<sup>1,2</sup> Its symptoms can be temporarily relieved by moving or massaging the legs. Although the exact cause of restless leg syndrome is yet to be disclosed, it is presumed to be caused by deficiency of dopamine, which is one of neurotransmitters in the brain.<sup>3</sup> Deficiency of iron, an essential nutrient for the synthesis of dopamine, can also contribute to restless leg syndrome, as can inadequate iron intake, or iron deficiency, insufficiency or anemia during latter part of pregnancy when iron requirements increase.<sup>4</sup> In addition, chronic inflammatory state in the body can interfere with the proper utilization of iron, thereby leading to anemia-like conditions that can induce restless leg syndrome.

The treatment of restless leg syndrome is determined in accordance with the severity of the symptoms. If the symptoms are mild, such as occasional symptoms at night, they can be improved with massage, foot baths and light exercise rather than medication. However, if the manifestation of the symptoms is frequent, or if the symptoms are severe, such as numbness or discomfort accompanied by sleep disturbance, hospital treatment is generally required.

Restless leg syndrome is usually diagnosed through examination at neurology, pain medicine and psychiatry departments, and hospitals prescribe orally administered medicines such as dopamine agonists

including pramipexole (Mirapex®) and ropinirole (Requip®), anticonvulsants including gabapentin and pregabalin, and narcotic painkillers including oxycodone and tramadol, etc.<sup>5</sup> However, while the initial effects of these medications are good, their effectiveness decreases significantly and symptoms become more severe by about sometime during long-term administration of more than 2 years. Other side effects including sudden onset of sleepiness and drowsiness, hallucinations, orthostatic hypotension, generalized asthenia, fatigue, nausea, vomiting, constipation, dizziness and insomnia, etc. can occur. Anticonvulsants are sometimes given when dopamine agonists become ineffective or when pain gets severe with manifestation of side effects such as drowsiness, dizziness and weight gain, etc.

If the ferritin (stored iron) level in the restless leg syndrome patient is low, hospital may administer iron injection. In younger women and those with very low ferritin levels, although iron injection can have a quick and powerful effect, it is not suitable for long-term use due to the concerns for the risks of allergic reactions and iron poisoning, etc.

Due to the aforementioned reasons, OCNT with Hemoplex, which replenishes blood without side effects, as the base product, and other products such as Cyaplex, an antioxidant that removes chronic inflammation, and Eufaplex, a non-oxidizing omega-369 essential

fatty acid preparation, can help improve restless leg syndrome through antioxidation action and blood replenishment, etc.

In addition, it would be possible to enhance the effectiveness of treatment with medication and shorten the treatment period by concurrently implement the following lifestyle therapy to improve restless leg syndrome.

1. Take a warm bath and massage to relax the muscles.
2. Since stress and anxiety worsen the symptoms, it is necessary to assertively manage stress.
3. Appropriate exercises such as stretching and walking can alleviate symptoms.
4. Physiotherapy of the legs, and soaking legs in warm water or wrapping the legs with a hot towel are also helpful.
5. Avoid drinking beverages containing caffeine such as coffee and green tea.
6. Reduce or stop drinking and smoking.
7. Maintain sleep schedule, and waking and sleeping times consistent.

## **Case**

### **1. Subject**

It is subjected to 1 case of patient with restless leg syndrome.

- 1) Name: Kim O O (Female/50 years old)
- 2) Name of diagnosis: Restless leg syndrome/Sprains and strains of other and unspecified areas of the foot
- 3) Manifestation date: April 2023
- 4) Treatment period: April 2023 to present
- 5) Main symptoms: Numbness in legs, sleep disturbances, genital numbness, vaginitis and extreme fatigue
- 6) Past medical history: Hysterectomy, chronic fatigue, frequent vaginitis and cystitis
- 7) Past social history: Drinking alcohol 3-5 times/week, (1 glass to a half a bottle of liquor)
- 8) Past family history: Paternal - lung cancer; maternal - diabetes and vascular dementia
- 9) Current medical history and medications administered: Mirapex 0.125mg (23.04.24~23.05.20)

### **2. Method**

- Details of OCNT

Cyaplex A Granule (101, twice a day, 1 sachet at a time)

Eufaplex Alpha (101, twice a day, 1 sachet at a time)

Hemoplex Capsule (202, twice a day, 2 capsules at a time)

Viva C Granule (101, twice a day, 1 sachet at a time)

Vioplex Granule (001, once a day, 1 sachet at a time)

Magplex Capsule (003, once a day, 3 capsules at a time)

Diverol (001, once a day, 1 tablet at a time)

Selenplex Capsule (1-3/0/1-3, twice a day, 1~3 capsules at a time)

The aforementioned medication schedule has been maintained until now since May 15, 2023.

### **Results**

The patient in this case started to experience numbness in her legs from April 2023, which led to severe sleep disturbances. She started taking 1 Mirapex tablet before going to bed along with implementation of OCNT concurrently thereafter. As the result, she noticed an improvement in her numbing symptoms and decided to stop taking the medication prescribed by the hospital. In addition, the patient in this case felt chronic fatigue after her hysterectomy due to endometritis two years ago, and, recently, her fatigue became more severe and she had frequent vaginitis. As such, she visited her gynecologist and was recommended to take synthetic female hormones. However, she was concerned about the problems and side effects of synthetic hormones, and decided to start OCNT instead of taking the prescription drugs. In May 2023 thereafter, she noticed a

significant improvement in her numbness symptom in the legs and had sound sleep without any disturbance.

By June 2023, the severity of her symptoms was steadily decreasing and, most importantly, she noticed improvement in her chronic fatigue. In July 2023, due to overwork and lack of sleep, cystitis manifested. In August 2023 three months after starting OCNT, the patient, who has been suffering chronic vaginitis, was free of gynecologic problems and no longer experienced numbness in her legs. She is continually undergoing OCNT until now and has maintained her improved current conditions thereafter.

**Table 1. The severity of symptoms experienced by patients from April to September 2023.** On a scale of 1~5, higher the score, the more severe the symptoms. Ingredients that were added are marked in red.

| Symptoms            | Prior to OCNT<br>23.04.24         | 1 <sup>st</sup><br>23.05.15  | 2 <sup>nd</sup><br>23.06.05               | 3 <sup>rd</sup><br>23.07.05                                | 4 <sup>th</sup><br>23.08.14 | 5 <sup>th</sup><br>23.09.14 |
|---------------------|-----------------------------------|------------------------------|-------------------------------------------|------------------------------------------------------------|-----------------------------|-----------------------------|
| OCNT nutrients      | Commenced consumption of Hemoplex | <b>Cya A, Eufa, Hemoplex</b> | <b>Cya A, Eufa, Hemo, Viva C, Magplex</b> | <b>Cya A, Eufa, Hemo, Viva C, Mag, Vio, Diverol, Selen</b> | Same as left                | Same as left                |
| Numbness            | 5                                 | 3                            | 1                                         | 0                                                          | 0                           | 0                           |
| Sleep disorder      | 5                                 | 3                            | 0                                         | 0                                                          | 0                           | 0                           |
| Chronic fatigue     | 5                                 | 4                            | 3                                         | 2                                                          | 0                           | 0                           |
| Vaginitis, cystitis | 5                                 | 5                            | 4                                         | 5                                                          | 0                           | 0                           |

### Considerations

Since the dopamine and ferritin deficiencies are deemed to be the main causes of restless leg syndrome, and, since iron is particularly important for dopamine synthesis, iron supplementation with Hemoplex highly important in and is a critical OCNT nutrient that needs to be chosen with the top priority for the treatment of restless leg syndrome.

Since chronic inflammation can induce neurological damage and interfere with the utilization of stored iron in the body, it is necessary to effectively control inflammation in the body. From this perspective, the anthocyanin contained in Cyaplex has been reported to have anti-inflammatory properties by assisting generation of cytokine through activation of the NF-κB neurotransmission

pathway, as well as to increase blood cytokine level.<sup>6</sup> Therefore, anthocyanins can be used to reduce the inflammatory response and thereby help the body to utilize iron stored in the body more efficiently.

There are numerous factors involved with the growth of nerve cells. Among these, the nerve growth factor (NGF) is involved in the metabolism of phospholipids to induces the differentiation of nerve cells.<sup>7</sup> From this perspective, the supply of fatty acids through Eufaplex is necessary for the proper functioning of nerve cells. Studies have shown that patients suffering sleep disorder among those with restless leg syndrome have lower levels of fat in their blood compared to normal individuals.<sup>8</sup> Therefore, it is important to

supplement fatty acids to induce proper metabolism.

Viva C Granules assists with absorption of iron by supplementing natural vitamin C, and assists with antioxidation action.<sup>9,10</sup>

To improve chronic vaginitis and frequently repeating cystitis, normalization of the gastrointestinal bacteria flora is essential, and Bioplex is the best nutrient for the correct thereof.<sup>11</sup>

Since magnesium acts effectively in improving the numbness symptom by promoting relaxation of nerves and muscles, supply magnesium by means of Magplex Capsules.<sup>12</sup>

Supplementation of vitamin D, which is an essential nutrient that is often deficient in modern people who spend most of their time indoors and deficiency of which can lead to chronic fatigue and numbness symptoms, can be achieved effectively through the use of Diverol in order to improve fatigue and normalize the body's immune system.<sup>13</sup>

Selenium is a powerful antioxidant that has been shown to reduce inflammatory responses in the body, boost immunity and improve thyroid dysfunction, which is common in women. As such, its supplementation with Selenoplex can be beneficial.<sup>14,15</sup>

Although this case report is on a single case of alopecia and cannot be universally applied to all patients with restless leg syndrome, it is reported with the consent of the patient because it is

believed to be a case in which OCNT helped to improve the symptoms of the patient.

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