CellMed
Orthocellular Medicine and Pharmaceutical Association

Case Report

세포교정영양요법(OCNT)을 이용한 과민성 방광 개선 사례

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A Case Study on the Improvement of Overactive Bladder (OAB) Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Overactive bladder caused by aging is accompanied by various symptoms, including urgency, frequency, nocturia, and urgency urinary incontinence. These symptoms significantly impact patients' quality of life. Therefore, appropriate treatment interventions are necessary to alleviate these conditions.

Case Report: This case study focuses on an elderly woman in her 80s who experienced significant discomfort in daily life due to nocturia. The patient reported long-term discomfort with more than five episodes of nocturia per night. Her medical history included hypertension, diabetes, hyperlipidemia, and gastritis, for which she had been prescribed medication. Ortho-Cellular Nutrition Therapy (OCNT), which includes collagen and anthocyanins, was administered to alleviate the patient's symptoms.

Results & Conclusion: After 14 days of applying the nutritional therapy, the patient's nocturia episodes were reduced by half. Additionally, improvements in sleep quality and overall quality of life were observed. This case demonstrated the utility of OCNT in patients exhibiting symptoms of overactive bladder.

Keywords ortho-cellular nutrition therapy (OCNT), overactive bladder, extracellular matrix, collagen

Introduction

Overactive bladder (OAB) was first defined in 1988 by the International Continence Society (ICS) as a syndrome characterized by urgency, with or without urgency urinary incontinence, accompanied by frequency and nocturia, in the absence of infection or other obvious pathology. In 2014, the International Continence on Incontinence—Research Society (ICI-RS) updated the globally accepted definition as a syndrome involving urgency or urgency urinary incontinence, or increased frequency and nocturia in the absence of infection or other pathological conditions.[1]

Overactive bladder occurs in both men and women, with its primary symptoms including urgency, frequency, nocturia, and urgency urinary incontinence. These symptoms significantly impact patients' quality of life, leading to sleep disorders, anxiety, and reduced physical and social activities.[2] Overactive bladder is primarily caused by the decline in physical function associated with aging. In particular, factors such as depression, social isolation, and reduced external interaction due to disability in the elderly can exacerbate symptoms. This highlights the complex interplay of physical, psychological, and social factors, demonstrating a close association between overactive bladder and aging.[3] Additionally, in women, the prevalence of overactive bladder increases primarily due to the reduction of estrogen levels following menopause.[4]

The diagnosis of overactive bladder is made through a thorough patient interview, which assesses the timing of symptom onset, factors that exacerbate or alleviate symptoms, and whether the patient uses pads. Additionally, the severity of symptoms is often evaluated using questionnaires that help determine the impact on the patient's quality of life.[5,6]

Treatment options for overactive bladder include behavioral therapy and pharmacological treatment. Behavioral therapy aims to increase the patient's voiding interval, reduce urgency and nocturia, and prevent urinary incontinence. This is achieved through pelvic floor muscle training, which encourages the inhibition of detrusor muscle contractions.[7] Pharmacological treatment involves prescribing antimuscarinic drugs, which are the primary medications for overactive bladder. These drugs can reduce symptoms by 65-70% but may cause adverse effects such as dry mouth and constipation. Additionally, there are concerns

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Received Jan 24, 2025; **Revised** Jan 31 2025; **Accepted** Jan 31, 2025; **Published** Jan 31, 2025
doi: http://dx.doi.org/10.5667/CellMed.spc.110

† This report has been translated and edited by the CellMed editor-in-chief, Prof. Beom-Jin Lee.

that anticholinergic medications may lead to symptoms such as falls, cognitive impairment, and delirium in elderly patients.[8,9]

This case study reports on an elderly patient who experienced long-term and recurrent nocturia, leading to significant discomfort. The patient's condition improved following Ortho-Cellular Nutrition Therapy (OCNT). With the patient's consent, this case is being presented.

Case Study

1. Subject

The case study focused on a single patient with overactive bladder.

1) Name: Jang OO (84 years old, F)
2) Diagnosis: Overactive bladder
3) Date of onset: March 2011
4) Treatment period: December 8, 2024 – Present
5) Chief complaint: Nocturia
6) Medical history: Hypertension, diabetes, hyperlipidemia, gastritis
7) Social history: None
8) Family history: The subject's mother had a heart attack
9) Current medical history and medications: Zanadipin tablets, Diabex XR tablets 500mg

2. Method

Starting from December 2024, the following OCNT was applied:

Collaplex granules (101, 1 packet twice daily)

Additionally, to reduce the effects of hyperlipidemia, the patient continued to take Monacol, which had been previously prescribed.

Results

The patient in this case study has a history of hypertension, hyperlipidemia, and diabetes and has been experiencing nocturia for several decades. Considering the patient's age of 84 years, it was assessed that extracellular matrix weakening may be a contributing factor. Collaplex was prescribed, and OCNT was implemented to improve the muscles around the patient's bladder.

Two weeks after the implementation of OCNT, the patient's nocturia frequency was reduced by half, improving sleep quality, which demonstrated the effectiveness of OCNT within a short period. It was observed that the patient's condition had improved in daily life. The specific indicators of the discomfort the patient experienced in daily activities are shown in Table 1.

Discussion

The subject of this case study was a Korean woman in her 80s who experienced discomfort due to impaired sleep quality caused by nocturia. Additionally, she had a history of hypertension, hyperlipidemia, and diabetes but was only taking medications for hypertension and diabetes. This suggested a potential negative feedback loop on her health, with nocturia exacerbating her condition. The patient was found to have weakened muscles around her bladder, likely due to the effects of aging on the extracellular matrix. The extracellular matrix is primarily composed of collagen, elastin, laminin, and various glycoproteins, forming a network that enables cell connections and supports the proper function of the body's tissues and organs.[10] This led to the aim of strengthening the extracellular matrix to improve the muscles around the bladder.

Additionally, the patient was diagnosed with hypertension, and the potential impact of hypertension on an overactive bladder was considered. Hypertension is a condition in which systemic arterial pressure remains elevated beyond a certain threshold due to various factors.[11] The kidneys play a crucial role in maintaining the body's homeostasis through urinary function, where filtration, reabsorption, and secretion occur in the Bowman's capsule. This process involves the filtration of urine through capillaries called glomeruli. Hypertension affects the glomerular filtration rate, potentially leading to increased urine production. Furthermore, numerous studies have indicated that high blood pressure can impair kidney function. Based on this, the approach focused on improving symptoms through OCNT while maintaining the patient's current medications.[12,13]

Collaplex contains a rich blend of collagen, hyaluronic acid, and anthocyanins. When collagen is administered orally, it plays an anti-inflammatory and antioxidant role, reducing cytotoxicity in the body and providing beneficial effects.[14] It also stimulates the production of endogenous collagen, the most important structural protein in the body, and contributes to bone health and structural remodeling by stimulating type I collagen. Additionally, various peptides found in collagen have been shown in multiple studies to promote cell proliferation and induce the production of hyaluronic acid in skin fibroblasts.[15] The molecular weight of collagen also acts as an electron donor, influencing its antioxidant capacity.[16]

Anthocyanins, a type of flavonoid, are commonly found in fruits, tea, vegetables, and cocoa. Flavonoids are primarily recognized for their anti-inflammatory and antioxidant properties, helping to treat inflammation, oxidation, stress, and bacterial infections. It has been reported that flavonoids have antioxidant capabilities by inhibiting reactive oxygen species and free radicals, thereby alleviating oxidative stress.[17] In one study, the group that consumed flavonoids showed a reduction in the risk of overactive bladder and symptom relief compared to the control group, with anthocyanins and flavones having particularly beneficial effects. As a result, it is believed that the intake of anthocyanins from flavonoids may have a significant impact on symptom relief in patients with overactive bladder.[18]

Table 1. Degree of symptoms experienced by the patient during OCNT. The discomfort felt by the patient increases from 0 to 5.

Visits / Symptom	**Visit 1** (Dec 8, 2024)	**Visit** 2 (Dec 22, 2024)	**Visit 3** (Jan 8, 2025)	**Note**
Nocturia	5	2	2	

0: No symptoms and no impact on daily life, **1:** Mild symptoms with little to no impact on daily life, **2:** Some symptoms present, requiring slight adjustments in daily activities, **3:** Significant impact on daily life, with difficulty performing some activities, **4:** Major difficulty in performing daily activities, **5:** Severe discomfort in daily life, with significant stress

The patient showed improvement in her sleep and daily life discomforts after reducing the frequency of nocturia from five times a day to twice following the implementation of OCNT. This was a short-term result, and the patient is aware of the improvement in her condition. However, despite continued use, the nocturia symptoms did not decrease further from twice a day so that Sulfoplex PK tablets will be prescribed additionally. Sulfoplex PK tablets contains a high amount of MSM, which has various beneficial effects, including anti-inflammatory and antioxidant properties, as well as benefits for seasonal allergies, interstitial cystitis, autoimmune diseases, and cancer prevention.[19] It is primarily used to improve joint health, alleviate muscle pain, and reduce inflammation, and we anticipate potential improvements for this patient.

The patient's treatment period was short duration, so it limits the ability to assess objective indicators. However, significant improvements were observed quickly, and a favorable prognosis is anticipated with the planned continuation of OCNT treatment. Therefore, the patient's condition will be continually monitored and followed up.

Additionally, as this case study was conducted on a single patient, its findings may not be universally applicable to all overactive bladder patients. However, significant symptom improvement was observed within a short period through OCNT, enhancing the patient's quality of life. This case study is presented with the patient's consent.

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