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Case Report

세포교정영양요법(OCNT)을 이용한 요실금 개선 사례

김미진 약사
전라남도 영암군 삼호읍 신항로 63-12 한솔온누리약국

Improvement of Urinary Incontinence Using Ortho-Cellular Nutrition Therapy (OCNT)

Pharmacist, Mijin Kim
Hansol Onnuri Pharmacy, 63-12, Sinhang-ro, Samho-eup, Yeongam-gun, Jeollanam-do, Republic of Korea

ABSTRACT
Objective: Case report on the improvement of urinary incontinence symptoms through Ortho-Cellular Nutrition Therapy (OCNT).
Methods: OCNT was administered to an 80-year-old woman suffering from urgency and frequent urination, causing frequent changes of underwear and inconvenience in daily life.
Results: Approximately 10 days after starting OCNT, there was a significant improvement in the frequency and intensity of urgency urination, which enhanced the patient's quality of life.
Conclusion: OCNT can help improve symptoms in patients experiencing urinary incontinence.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), urinary incontinence, urgency urinary incontinence, anticholinergic drugs

Introduction

The human bladder stores and excretes urine. Urinary incontinence is defined as the involuntary leakage of urine, which occurs when it is not controlled for various reasons. The primary cause of incontinence is neurological dysfunction in the urinary bladder. The bladder is regulated by a complex interaction between the autonomic nervous system—comprising sympathetic and parasympathetic nerves—and the somatic nervous system, which together control the tension of the bladder and urethral sphincters to manage urine excretion. Any disruption in this control, resulting in muscle relaxation, can lead to urinary incontinence. Other risk factors for urinary incontinence include excessive abdominal pressure, damage from childbirth or surgery, and urinary tract infections.[1]

Urinary incontinence can be classified into several types based on various causes:[2] urgency urinary incontinence, where abnormal bladder muscle contractions lead to involuntary urine leakage; stress urinary incontinence, which occurs during situations that increase abdominal pressure like coughing or sneezing; overflow incontinence, where the bladder overfills and exceeds the pressure of the urethra, causing leaks; and mixed urinary incontinence, which involves symptoms of both stress and urgency types.

It is known that urinary incontinence is more common in women than in men. Approximately 50% of adult women have experienced incontinence, and 10-20% of all women have some form of urinary incontinence. In elderly women, the prevalence rate is as high as 77%. However, approximately 25% of those affected seek medical help, and only half of those receive treatment.[3]

Although urinary incontinence is not life-threatening, it can cause frequent urination and an increase in the number of bathroom visits, which can be inconvenient and adversely affect social life and mental health.[4] Therefore, appropriate treatment is crucial to improving the quality of life of patients. Treatment methods can broadly be divided into those that patients can implement themselves and those involving medication or surgery. Self-administered methods include two approaches: adjusting behavior and lifestyle patterns, such as controlling caffeine and alcohol consumption, quitting smoking, and managing weight; and strengthening urinary and sphincter muscles through pelvic floor muscle exercises. In addition, strengthening exercises for the pelvic floor muscles help improve bladder and sphincter muscle function. If these measures do not improve symptoms, medications like Darifenacin, Fesoterodine, or Oxybutynin may be used to control bladder sensations through neurological adjustments. If medications are ineffective, surgical options are considered, such as inserting synthetic materials around the urethra to increase pressure or lifting the urethra with a tape or sling.[5]

*Correspondence: Mijin Kim
E-mail: navi9011@hanmail.net
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In this case study, the patient exhibited frequent urination typical of urinary incontinence and was already taking several medications for other symptoms, which caused her anxiety. Therefore, Ortho-Cellular Nutrition Therapy (OCNT) was initiated to resolve this.

Case Study

1. Subject

A case study was conducted on a single patient with urinary incontinence.

1) Name: Choi OO (81 / F)
2) Diagnosis: Urgency urinary incontinence
3) Date of onset: Unknown
4) Treatment duration: September 2024 - October 2024
5) Primary symptoms: Frequent urination, urgent urination, incontinence
6) Medical history: None
7) Social history: None
8) Family history: None
9) Current medical conditions and medications: Hypertension medication (Telmir tablets 40 mg once daily), diabetes medication (Amaryl-M tablets 2/500 mg once daily), antithrombotic drug (Aspirin Protect tablets once daily), medication for cognitive disorders (Scerate capsules once daily), medication for hyperlipidemia (Crecheck tablets 10 mg once daily), medications for urgency urinary incontinence (Toviaz SR tablets 4 mg twice daily, Betmiga PR 50 mg once daily)

2. Methods

The following OCNT was applied:

Heartberry Cran (001, once daily, 1 packet per dose)
Hoduplex capsule (001, once daily, 1 capsule per dose)

These OCNT treatments were taken alongside the previously administered Caroplex Capsule (001, once daily, 1 capsule per dose).

Results

The patient had severe urgent urination symptoms, which made it difficult to control urination even while traveling to the restroom, requiring her to change underwear more than three times a day because of frequent urination. Therefore, OCNT was implemented to improve these symptoms.

Immediately after starting OCNT, the patient reported that the frequency of urgent urination decreased to approximately once upon waking up in the morning without taking her prescribed incontinence medications, Toviaz 4mg twice daily and Betmiga 50mg once daily. Also, the intensity of urgency significantly reduced. Subsequently, she continued OCNT while only taking Toviaz 4mg once in the morning. Despite the reduction in medication, the patient reported a significant decrease in the discomfort from incontinence symptoms, and it did not significantly influence her daily life. Moreover, she reported that the difference in discomfort was not significant when taking any of the three incontinence medications.

Discussion

The case subject was an elderly Korean woman in her 80s, who had been taking medications for hypertension, diabetes, hyperlipidemia, and cognitive disorders. She began taking medications for urinary incontinence in January 2019. Initially, she started with Toviaz 4 mg once daily, but later, Betmiga 50 mg once daily was added due to insufficient improvement in symptoms. By November 2022, another tablet of Toviaz 4 mg was added due to the ongoing lack of symptom relief.

At the time of visiting the pharmacy, the patient reported feeling generally weakened due to personal circumstances and her environment. She also experienced dizziness and lethargy associated with her medications, raising concerns about whether the medications were suitable for her or if a dose reduction was possible.

Anticholinergics alleviate incontinence symptoms by relaxing detrusor muscles by blocking muscarinic receptors in the bladder.[6] However, long-term use of this ingredient has been reported in multiple studies to increase the risk of cognitive disorders such as dementia; thus, short-term use is recommended. Fesoterodine, used by the patient, is known among anticholinergics for having a lower central nervous system accumulation rate, potentially reducing side effects compared to other components, but concerns about adverse effects still warrant cautious prescription and administration.[7,8]

Mirabegron is an active ingredient of Betamiga, which is another urinary incontinence drug prescribed to the patient. It differs from anticholinergics as it binds to the beta-3 receptors in the bladder to relax the detrusor muscle. It exhibits similar effects to anticholinergics but with relatively fewer side effects. However, cardiovascular side effects still exist, and care must be taken when administering to patients with high blood pressure.[9]

Before starting OCNT, the patient had undergone a health examination where her lipid profiles and cognitive function tests were within normal ranges. Despite this, the patient was already taking multiple medications for cognitive abilities, cholesterol, and high blood pressure, and the addition of drugs for urinary incontinence added to her burden. Concerns about the cognitive impairing side effects of anticholinergics were evident. Therefore, an OCNT approach was planned to alleviate urinary incontinence symptoms by improving bladder function through antioxidant enhancement and reducing the drugs that have a potential negative effect on cognitive ability.

The patient was prescribed Heartberry Cran which contains anthocyanins, anthocyanidins extracted from Aronia, and Vitamin C. Anthocyanins are known to aid in antioxidant functions by significantly reducing levels of inflammation markers such as interleukin-1β, TNF-α, and malondialdehyde.[10] A study showed that a group consuming anthocyanidins had a significantly reduced risk of developing an overactive bladder compared to a control group.[11] Vitamin C is known to aid in muscle damage recovery by promoting muscle differentiation by regulating the expression of cysteine-rich protein 3 (CSRP3).[12] These components are thought to have assisted in improving the patient's bladder function and the muscles around the bladder.

Cranberries are abundantly rich in flavonoids such as anthocyanins and proanthocyanidins, which assist in antioxidant processes. Notably, multiple studies have demonstrated that when cranberries are consumed in forms such as juice,

concentrated powders, capsules, and tablets, they significantly reduce the risk of exposure to bacteria like *E. coli* in the urinary tract compared to control groups that did not consume these products. This significantly reduces the risk of urinary tract infections and aids in overall bladder health. The role of proanthocyanidins, which constitute about 71% of the flavonoids in cranberry, was considered significant in these effects.[13]

Hoduplex contains high levels of alpha-linolenic acid and polyphenols, which help aid the antioxidant function within the body by reducing lipid protein oxidation and the effects of oxidative stress.[14] It also contains phytosterols, which play a role similar to animal cholesterol in plant cell membranes. This is more hydrophobic than cholesterol and helps inhibit the absorption of low-density lipoprotein (LDL), thus aiding in antioxidant functions.[15] The intention was to gain a synergistic effect through the antioxidant functions of natural berries by co-administering Hoduplex.

By utilizing OCNT, the patient's antioxidant capabilities were reinforced, which likely contributed to enhanced bladder performance and relief from urinary incontinence symptoms. Although the patient was instructed to take the OCNT twice daily, the patient demonstrated compliance with only a once-daily dosage. Nevertheless, there was a significant improvement in urinary incontinence symptoms over a relatively short period, and the patient also reported a reduced burden of medication.

This case study is limited to a single patient and the fact that the prescribed OCNT was not fully adhered to. However, the significant and rapid improvement of symptoms through OCNT is considered significant. Thus, this case is reported with the patient’s consent.

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