

세포교정영양요법(OCNT)을 이용한 갑상선기능저하증 환자 사례 연구

홍은아 약사

부산 진구 가야대로 745 홍약국

A Case Study of Hypothyroidism Patient Using Ortho-Cellular Nutrition Therapy (OCNT)

Pharmacist, Eun-ah Hong

Hong Pharmacy, 745 Gaya-daero, Jingu, Busan, Republic of Korea

ABSTRACT

Objective: Report on the improvement of hypothyroidism using Ortho-Cellular Nutrition Therapy (OCNT).**Methods:** A 35-year-old Korean female experiencing rapid weight gain, fatigue, and loss of motivation.**Results:** After applying nutritional therapy, the levels of TSH and T3 hormones returned to normal, and symptoms of abdominal pain and jaundice were alleviated.**Conclusion:** Nutritional therapy can be beneficial for hypothyroidism patients by restoring thyroid hormone levels and alleviating symptoms.**Keywords** Ortho-Cellular Nutrition Therapy (OCNT), hypothyroidism, TSH, T3, T4

Introduction

The thyroid gland secretes thyroid hormones that regulate the body's metabolic rate, which is the speed at which chemical functions occur in the body. Thyroid hormones have a significant impact on various vital bodily functions such as heart rate, calorie expenditure, skin maintenance, growth, thermoregulation,

reproductive capacity, and digestion. There are two types of thyroid hormones: thyroxine (T4), also known as tetraiodothyronine, and triiodothyronine (T3). The pituitary gland produces thyroid-stimulating hormone (TSH), which stimulates the thyroid gland to produce thyroid hormones. Insufficient production of these hormones or their inadequate functioning in target tissues can lead to hypothyroidism.¹

Hypothyroidism can occur due to insufficient stimulation of the thyroid gland by the hypothalamus or pituitary gland, or as a result of primary thyroid dysfunction. Hypothyroidism is a readily observable disorder, and if left untreated, it can lead to complication such as hypertension, dyslipidemia, infertility, cognitive impairment, and neuro-muscular dysfunction.² Primary hypothyroidism arises from intrinsic thyroid gland

*Correspondence: Eun-ah Hong

E-mail: eunah0720@naver.com

Received Jun 28, 2023; **Accepted** Jun 28, 2023; **Published** Jun 30, 2023doi: <http://dx.doi.org/10.5667/CellMed.spc.028>

©2023 by CellMed Orthocellular Medicine Pharmaceutical Association

This is an open access article under the CC BY-NC license.

<http://creativecommons.org/licenses/by-nc/3.0/>

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

disorders, with the most common cause in the United States being Hashimoto's thyroiditis (an autoimmune condition that gradually destroys the thyroid gland and leads to hypothyroidism). Other causes include thyroiditis, treatment for hyperthyroidism or thyroid cancer, iodine deficiency, radiation therapy to the head and neck area, and genetic disorders. Thyroid hormones are essential for generating heat and energy in the body. Therefore, a deficiency in thyroid hormones can result in decreased overall metabolic function, increased sensitivity to cold, easy fatigue, decreased appetite, body swelling, and subsequent weight gain.

Hypothyroidism can be diagnosed by measuring the levels of thyroid hormones and thyroid-stimulating hormone (TSH) in the bloodstream. If thyroid autoantibodies are found to be significantly elevated, a diagnosis of Hashimoto's thyroiditis, an autoimmune disorder, can usually be made without the need for tissue testing.³ The treatment for hypothyroidism involves supplementing the deficient thyroid hormones. In most cases, once hypothyroidism occurs, it is permanent, and lifelong medication is required. Since the medication is a form of replenishing the insufficient thyroid hormones in the body, long-term use of thyroid hormone replacement therapy does not cause any side effects.

The patient in this case study has been diagnosed with hypothyroidism, experiencing a decrease in metabolism, resulting in fatigue and a significant weight gain compared to food intake. The patient also suffers from sleep disturbances due to the consumption of appetite suppressants and abdominal pain, leading to a significant reduction in quality of life. Therefore, I would like to report a case where nutritional therapy was applied to a patient with the aim of restoring thyroid function and reducing the impact of thyroid-related discomfort on daily life.

Case Study

1. Subject

A case study was conducted on a patient with hypothyroidism.

- 1) Name: Kim O O (F/35 years old)
- 2) Diagnosis: Hypothyroidism (resulting in obesity)
- 3) Onset Date: January 4, 2022
- 4) Treatment Period: January 4, 2022 - Present
- 5) Presenting Symptoms: Enlarged thyroid gland, fatigue, lack of motivation, significant weight gain compared to food intake
- 6) Medical History: Gastroesophageal reflux disease (GERD), obesity (no history of thyroid disorders)
- 7) Social History: Alcohol consumption (an average of 2 times per month, 2 bottles per session)
- 8) Family History: None
- 9) Current Medications: Levothyroxine 0.05mg once daily, Diatamine 37.5mg once daily

2. Method

The following nutritional therapy was applied using the specified dosages:

Cyaplex F (303, twice a day, 2 tablets per dose)

Thyroplex (101, twice a day, 1 sachet per dose)

Tmplex (200, once a day, 2 tablets per dose)

Hemoplex (202, twice a day, 2 tablets per dose)

Magplex (202, twice a day, 2 tablets per dose)

Licoplex (100, once a day, 1 tablet per dose)

Vivakan (101, twice a day, 1 tablet per dose)

Eufaplex (303, twice a day, 3 tablets per dose)

Nutritional therapy was administered following this protocol.

Result

This case involved a patient who typically had low energy and poor appetite, resulting in only one meal per day. However, the patient's weight gradually increased, leading to the use of appetite suppressants and extreme fasting. As a result, the patient experienced nutritional imbalances, abdominal pain, insomnia, and a failure to lose weight. Additionally, the patient's liver and gallbladder function deteriorated, causing elevated bilirubin levels and jaundice symptoms. After the initial implementation of nutritional therapy, the abdominal pain persisted but gradually decreased over time, and the patient no longer experienced insomnia related to pain. The bilirubin levels also decreased from an initial value of 14 mg/dL to a final level of 2.3 mg/dL, indicating a return to normal range through laboratory tests. However, despite the implementation of nutritional therapy, the patient's weight did not decrease and instead showed an increase of 3.5 kg (Table 1). Hormone level changes were also observed during one month of nutritional therapy. The T3 serum concentration increased from 81.6 ng/dL to 100.9 ng/dL, while TSH dramatically increased from 1.28 μ IU/mL to 4.88 μ IU/mL. However, T4 levels decreased from 4.98 μ g/dL to 1.1 μ g/dL (Figure 1).

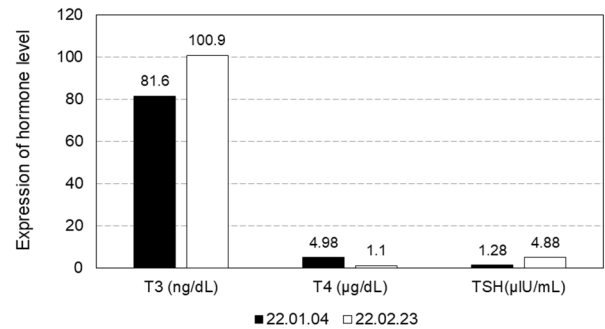


Figure 1. Changes in Serum Levels of Thyroid Hormones T3 and T4, and Thyroid Stimulating Hormone (TSH) Following Nutritional Therapy.

Normal range for each hormone: T3: 75.7-176.7 ng/dL, T4 (Thyroxine): 5.4-12.22 μ g/dL, TSH: 0.35-5.5 μ IU/mL. Normal ranges for blood tests may vary depending on factors such as gender, age, pregnancy status, testing institution, and methodology used.

Conclusion

The patient described above is a 34-year-old female who experienced persistent weight gain and bloating, despite consuming only one meal per day. After undergoing blood tests, she was diagnosed with hypothyroidism. The results showed that her thyroid hormone levels (T3, T4, TSH) were significantly lower than the average, particularly her

Table 1. Changes in Symptom Severity Over Time Following OCNT Implementation. Symptom severity rated from 1 (mild) to 5 (severe).

Symptoms	1 st 2022.05.30	2 nd 2022.07.05	3 rd 2022.09.25	4 th 2022.12.31	Remarks
Abdominal Pain	5	4	2	1	Pain causing insomnia
Body Weight	68 kg	69 kg	72 kg	71.5 kg	
Jaundice (Serum Bilirubin)	14 mg/dL	10 mg/dL	4 mg/dL	2.3 mg/dL	Within normal range 0.2~1.2 mg/dL

T4 levels. The continuous use of appetite suppressants (phentermine hydrochloride) to manage weight gain led to nutritional imbalance, insomnia, hormonal imbalance (menstrual irregularities), and chronic inflammation throughout her body (frequent vaginal infections, cystitis, and recurrent dermatitis). It is believed that these factors contributed to the development of her current condition. Therefore, in order to restore the overall health of the patient to a normal level, it was considered important to recover the body functions and hormone levels (TSH, T3, T4). It has been reported that the zinc content in Cyaplex F and Tmplex is involved in the synthesis of TSH and the synthesis of T3 and T4 hormones, as well as regulating their metabolism.⁴ Therefore, zinc supplementation may help improve hormone levels in patients with thyroid hormone deficiency. Thyroplex contains natural iodine derived from kelp, and there are reports that the incidence of hypothyroidism is higher when iodine is deficient.⁵ Therefore, supplying iodine to patients with imbalanced conditions due to decreased appetite may help alleviate hypothyroidism. Additionally, the patient showed low TSH levels and symptoms of jaundice, indicating decreased pituitary and liver function. Vivakan contains silymarin, a major component of milk thistle, which binds to the estrogen receptor (ER) and plays a similar role to estrogen.⁶ Animal experiments have shown that treatment with estradiol increases the concentration of TSH in the blood, and estradiol treatment stimulates an increase in the binding site of thyrotropin-releasing hormone (TRH), which stimulates the release of TSH. Therefore, there is a possibility that silymarin stimulates the production of TSH from the pituitary gland by increasing TRH binding.⁷ Milk thistle has been known to improve the function of the liver, spleen, and kidneys, and it is also known to be effective in treating jaundice.⁸ Initially, the progress was observed through nutritional therapy for two months, and a follow-up examination including blood tests and ultrasound was

conducted on March 2nd. As a result, some thyroid hormone levels have returned to normal, but a non-toxic thyroid nodule was found in the ultrasound examination. In addition to chronic inflammation throughout the body, thyroid nodules are symptoms that occur due to stress and excessive toxins, leading to oxidative damage to cell membranes. Therefore, the demand for non-oxidized fatty acids is necessary for the generation and maintenance of thyroid cell membranes.⁹ Eufaplex contains essential components such as omega-3 fatty acids, which are crucial for membrane synthesis. Sufficient intake of these fatty acids can contribute to the recovery of thyroid function and the alleviation of chronic inflammation. The patient will continue to take the medication consistently using the same approach, and the nodules will be observed every six months. Furthermore, the patient is also receiving concurrent treatment for obesity, insomnia, and chronic inflammation. The case report has been presented with the patient's consent.

Reference

- 1 Almandoz, J. P. & Gharib, H. Hypothyroidism: etiology, diagnosis, and management. *Med Clin North Am* **96**, 203-221, doi:10.1016/j.mena.2012.01.005 (2012).
- 2 Gaitonde, D. Y., Rowley, K. D. & Sweeney, L. B. Hypothyroidism: an update. *Am Fam Physician* **86**, 244-251 (2012).
- 3 Chiovato, L., Magri, F. & Carle, A. Hypothyroidism in Context: Where We've Been and Where We're Going. *Adv Ther* **36**, 47-58, doi:10.1007/s12325-019-01080-8 (2019).
- 4 Severo, J. S. *et al.* The Role of Zinc in Thyroid Hormones Metabolism. *Int J Vitam Nutr Res* **89**, 80-88, doi:10.1024/0300-9831/a000262 (2019).
- 5 Zimmermann, M. B. Iodine deficiency. *Endocr*

Rev **30**, 376-408, doi:10.1210/er.2009-0011 (2009).

- 6 Seidlova-Wuttke, D., Becker, T., Christoffel, V., Jarry, H. & Wuttke, W. Silymarin is a selective estrogen receptor beta (ERbeta) agonist and has estrogenic effects in the metaphysis of the femur but no or antiestrogenic effects in the uterus of ovariectomized (ovx) rats. *J Steroid Biochem Mol Biol* **86**, 179-188, doi:10.1016/s0960-0760(03)00270-x (2003).
- 7 Lean, A. D., Ferland, L., Drouin, J., Kelly, P. A. & Labrie, F. Modulation of pituitary thyrotropin releasing hormone receptor levels by estrogens and thyroid hormones. *Endocrinology* **100**, 1496-1504, doi:10.1210/endo-100-6-1496 (1977).
- 8 Kaur, A. K., Wah, A., Brijesh, K., Bhandari, A. & Prasad, N. J. I. Milk thistle (*Silybum marianum*): A review. **3**, 1-10 (2011).
- 9 Hagve, T.-A. J. S. j. o. c. & investigation, I. Effects of unsaturated fatty acids on cell membrane functions. **48**, 381-388 (1988).