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Case Report-A learning from clinical experiential history

세포교정영양요법(OCNT)을 이용한 백혈구 감소증 사례 연구

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A Case Study on Leukopenia Patients Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: A case report on the Leukopenia Patients Using Ortho-Cellular Nutrition Therapy (OCNT)

Methods: A Korean female in her 50s suffering from the rare side effect of leukopenia after taking athlete's foot medicine (Terbinafine HCl)

Results: The results revealed that the white blood cell count, which had dropped before the OCNT, had improved to a normal level.

Conclusion: The application of the OCNT can help change health-related figures in patients with relevant problems.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), leukopenia, drug side effects

Introduction

Onychomycosis is a fungal infection that causes thickening, discoloration, and separation of the fingernails and toenails. Onychomycosis is caused by various organisms, most commonly by Dermatophytes of the genus *Trichophyton* accounting for 80-90%, and non-dermatophyte molds such as *Aspergillus, Scopulariopsis,* and *Fusarium* accounting for about 2%-10%. In addition, yeasts such as *Candida albicans* occupy a minority of the percentage.[1,2] Although it is a common disease that accounts for about 50% of skin-related outpatients, it has a bad effect on the quality of life of patients due to its poor aesthetic clinical findings. The first-line oral medications recommended for onychomycosis may include terbinafine, fluconazole, and itraconazole, and in a meta-analysis of onychomycosis treatment, it revealed that the fungal cure rate was 76% for terbinafine, 59% (pulse dosing) for itraconazole, and 48% for fluconazole[3]. As much as

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the treatment rate of the drug is good, the corresponding side effects of the drug also appear frequently, and mildly, not only headaches, gastrointestinal problems, and rashes, but also liver toxicity and Stevens-Johnson syndrome (SJS) may appear in patients. In addition, in rare cases, leukopenia may occur, and it has been reported that leukopenia due to terbinafine prescription occurs in 1 in 200,000 patients. If the patient has a low white blood cell count, symptoms such as high temperature, oral inflammation, skin rash, and tiredness may appear, and in severe cases, sepsis and blood cancer including leukemia may occur.

Although the mechanism that causes the side effects of leukopenia is not exactly known, leukocytes are important cells for the body's immunity as they defend the body for protection[5].

It is known that the normal figure of leukocytes is 4,000 to 10,000/ul, and figures less than 4,000/ul are known as mild, and those less than 1,000/ul are known as dangerous.

Blood cells, including white blood cells and red blood cells, are differentiated from pluripotent stem cells. They can be largely classified into white blood cells that contain cytoplasmic granules (intracellular granules) inside, such as granulocytes, and agranulocytes, which are white blood cells that do not contain granules inside. Granulocytes include neutrophils, eosinophils, and basophils, and agranulocytes may include red blood cells, white blood cells (macrophages), and lymphocytes. A general blood test called complete blood count (CBC), not only does it reviews the overall white blood cell count but also granulocytes and agranulocytes to differentiate the infection or inflammation status of the patient[5,6].

We understand that bacteria, fungi, viruses, etc. are the cause of inflammation and disease, but they can live only under appropriate conditions. In other words, the condition of the patient's body indicates the turbid blood conditions in which these bacteria can live in due to increased waste products caused by inflammation and reduced detoxification ability. The patient of this case was diagnosed with leukopenia due to side effects of taking onychomycosis treatment drugs and was experiencing discomfort with symptoms such as tiredness, abdominal distension, and eyestrain. In addition, the body is in a state in which toxins are accumulated due to reduced immunity from aging as well as chronic fatigue, and immunity required to clear out chronic toxins accumulated for a long time is also reduced. Furthermore, with an antifungal agent called terbinafine, the detoxification function of the antifungal agent itself rapidly decreased as it acted as an external toxin, preventing more white blood cells from being produced. Therefore, it can be thought that the white blood cell count continued to drop rapidly. For the treatment of toenail onychomycosis, terbinafine HCl (250mg/days) was administered for more than one month from Jan. 6, 2021, and the white blood cell count of the patient in a blood test for the liver function was 3.2 uL on Feb. 20, 2021 and decreased to 3.09 uL on Feb. 27, 2021 and 2.8 uL on Mar. 13, 2021. The result of the blood test showed that the white blood cell count decreased by 0.11 uL after 7 days compared to the initial test and rapidly decreased to 0.29 uL after 21 days. Thus, it was recommended that this patient visit the oncology department of a general hospital. It is considered that an antifungal drug called terbinafine acted as an external toxin in patients with reduced immunity and promoted leukopenia in a person with deteriorated detoxification function. Therefore, OCNT was initiated with the goal focused on detoxifying toxins accumulated in the body to inhibit the root cause, bacteria, fungi, and viruses from residing inside and supplying clean blood to regenerate white blood cells.

Cases

1. Target

It targeted one patient with leukopenia.

1) Name: Oh, O O (F/50 years old)

2) Diagnosis: Leukopenia

3) Date of Onset: Feb. 20, 2021

4) Treatment Period: Mar. 27, 2021 to Oct. 11, 2021 (Approximately 7 months)

5) Chief Complaint: Tiredness, abdominal distension, vertigo (dizziness), eyestrain, insomnia, temperamental, athlete's foot on toenails

6) Past History: None

7) Social History: None

8) Family History: None

9) Current Medical History: None

2. Method

OCNT was applied as shown in **Table 1**, and additional dietary therapy and fruit and vegetable juice were administered.

Table 1. Details of OCNT Administration. (Administration Time: Indicated as Morning-Lunch-Afternoon-Before Bedtime), since the administration is high in the morning and afternoon, in the case of products taken in the morning, ① Eufaplex, Enzaplex, Sulfoplex, Collaplex at 8:00 ② Betaplex, Chloplex, Macalplex Cap., Selen, and Thyroplex at 10:00 separately. For products taken in the afternoon, it was recommended to separately take the same ones as ① at 4:00 and the same ones as ② at 7:00, as well as Curcuplex.

Product of Administration	Details of Administration				Diet Management (Regularly)
	03-27-2021	05-06-2021	07-04-2021	09-10-2021	
Cyaplex F	2-0-2	1-0-1 (▼)	1-0-1		1. Fruit and Vegetable Juice 1-1. Juice with naturally grown ingredients: Tomatoes, beets (cooked) + banana, kiwi, pineapple (raw) + grind a little salt (for breakfast, dinner) 1-2. Vegetable juice: Water parsley, green onion, kelp, radish, king oyster mushroom, shiitake mushroom, carrot, cabbage → For lunch 2. Regular Eating Habits 2-1. Seaweed soup, water kimchi, soybean soup, etc. 2-2. Recommended consumption of raw perilla seed powder 2-3. Recommended consumption of salt tea fluid
Cyaplex A				1-0-1	
Eufaplex Sachet	1-0-1	1-0-1	1-0-1	1-0-1	
Enzaplex	1-0-1	1-0-1	1-0-1	1-0-1	
Betaplex	2-0-2	2-0-2	2-0-2	1-0-1 (▼)	
Chloplex				1-0-1	
Collaplex				1-0-1	
Stemplex	1-0-1	1-0-1	1-0-1		
Notoplex	1-0-0	1-0-0	1-0-0		
Aqua Sac (bottle, ml)	5-0-5	10-0-10 (▲)	10-0-10	10-0-10	
Medicinal carbon (charcoal formulation)	0-0-0-1				
Active folic acid		0-0-1	0-0-1		
Viva Circu		0-1-1	0-1-1		
Viva Kan		0-1-0	0-1-0		
Heartberry LEMON		1-0-1	1-0-1		
Curcuplex				0-0-1	
Sulfoplex PK				5-0-5	
Macalplex				2-0-2	
Selenase				1-0-1	
Thyroplex				1-0-1	
Parasiticides (albendazole)	0-0-0-1 (10 days)				

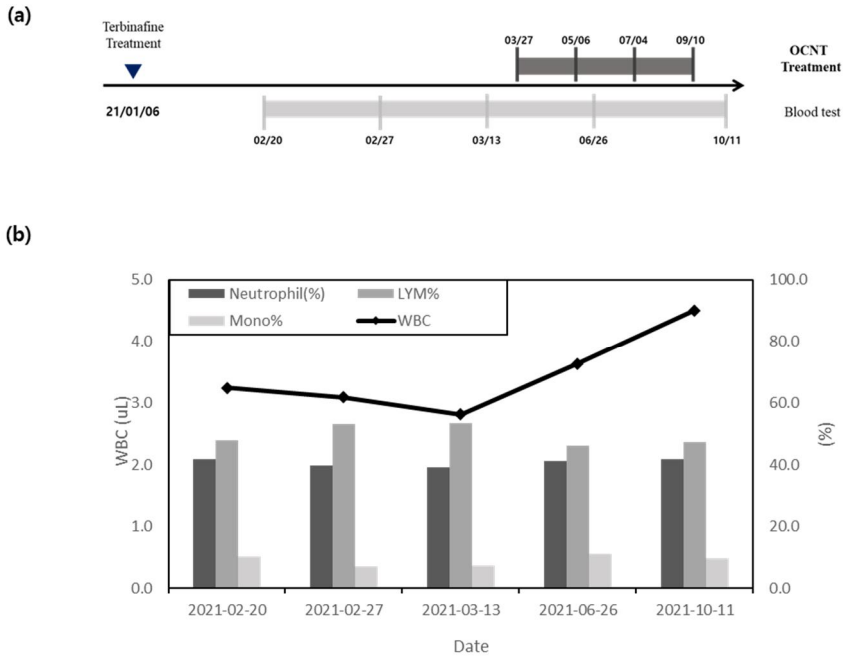

Figure 1. Results of leukocyte-related counts during and after prescription of OCNT treatment. (a) Started administration of the OCNT on Mar. 27 after the white blood cell count dropped sharply. (b) During a blood test, the number of whole blood cells (WBC) and the percentage (%) of Neutrophil, Monocytes, and Lymphocytes, which can determine the response to infection, are identified.

Result

Prior to performing the OCNT, the patient took antifungal medications from the beginning of Jan. 2021. In February of the following month, a liver function test showed that the white blood cell count was 3.2 uL on Feb. 20, 2021, followed by 3.09 uL on Feb. 27, and rapidly decreased to 2.81 uL on Mar. 13, and as a result, OCNT was initiated. On Jun 10, 2021, which is about 3 months after undergoing OCNT, the white blood cell count increased to 3.63 uL, followed by 3.8 uL on Sep. 10, 2021, and recovered to normal on Oct. 11, 2021 at 4.61 uL. There was no significant change in Neutrophil, Lymphocyte, and Monocytes, which show the infection status, but since the overall amount of WBC increased, it is expected that the cells fighting against the relevant infection also increased **(Figure 1)**.

Consideration

The patient of this case was diagnosed with leukopenia and had a very low white blood cell count of 2.81uL. It is known that the white blood cell count is related to immunity, and in the case of the current patient, it can be assumed that the body's immunity is already extremely low as the patient experiences symptoms such as toenail onychomycosis and tiredness. Therefore, it was determined that raising the natural immunity of the body and lowering the inflammation are most important.

As shown in **Table 1,** Ortho-Cellular Nutrition Therapy (OCNT) was applied accordingly to activate the inflammation and immune function of the patient, improve blood circulation, or enhance hematopoiesis. OCNT was applied according to the condition of the patient's body over a total of 4 sessions, and it focused on inhibiting the malignant transformation of normal cells and oncogene activities by activating the immune system function in the first session. In particular, administration of OCNTs containing minerals such as zinc and selenium can help supplement the anemia and iron deficiency, which is expected to have a positive effect on leukopenia.[7,8,9,21,22]

In particular, placental peptides extracted from the placenta of horses and pigs and saponin contained in the

root of ginseng root can help regenerate new cells and improve blood circulation by affecting clots or walls of the blood vessels.[18,19,20]

In addition, toenail onychomycosis has also occurred due to the rapid increase in wastes in the body due to chronic inflammation. However, terbinafine HCl acted as a poison in this state, and it was recommended that wastes and toxic substances be tested for liver function as they are drugs that strain the liver in a state of detoxification.[3] As a detoxification organ, the liver is involved in the metabolism of various drugs. The weakening of liver function refers to the loss of detoxification function for the body. Also, the defense ability of the body may be lowered due to leukopenia, leading to potential adverse reactions when exposed to viruses or bacteria. Therefore, it can be considered that taking Silymarin[27], which protects liver cells by removing active oxygen, and beta-glucan[13,14], which helps activate immune function in the intestine or mucous membrane, will help improve the condition of the patient by increasing the defense function in the body.

It is possible that each natural derivative may have been helpful in leukopenia by increasing the defense function against inflammation as well as detoxification of the body as well and applying substances that can particularly help with hematopoiesis. As this is a single case study, the findings may not be universally applicable to all patients as there are limitations in interpreting the results due to the short application period. However, the complex administration of OCNTs is considered to have had a positive effect on improving the physical condition of the patient.

This report has been made with the patient's consent as this nutritional therapy is considered to be another alternative for patients with complex diseases whose quality of life has completely deteriorated.

Table 2. Components and efficacy of OCNT used in this case.

Product of Administration	Components	Details	Ref.
Cyaplex	Zinc, Selenium	Plays a role in the detoxification of oxidized cells and functions of the immune system (prevention of malignant transformation of normal cells and oncogene activities)	(7), (8), (9)
Eufaplex Sachet	Omega 3,6,9	As a non-oxidized essential fatty acid, it can help produce prostaglandins 1, 2, and 3 to eliminate inflammation and help kill blood clots and cancer cells. In addition, as other adrenal cortical hormones, cell membrane regeneration, vitamin D synthesis, steroid hormones, and maternal fatty acids that serve as the raw material of bile, they activate the inflammatory control system.	(10), (11)
Enzaplex	Postzyme	Decomposition of inflammatory substances that cause inflammation due to poor decomposition from oxidation	(12)
Betaplex	Beta glucan	Enhances immune function against viruses, bacteria, and foreign substances by raising immune function in the intestines or mucous membranes	(13), (14)
Chloplex	Chlorophyll	Helps with cell nucleus regeneration and enhances hematopoiesis	(15), (16)
Collaplex	Collagen	It can reinforce and protect muscles and joints.	(17)
Stemplex	Placenta peptide	It is a horse/pork placenta preparation that generates stem cells and helps the regeneration of new cells.	(18), (19)
Notoplex	Tienchi seng roots	Enhances blood circulation by breaking through lumpy blood clots or clogged blood vessels by regenerating the blood vessel walls	(20)
AQUA-SAC (bottle, ml)	SAC, marine minerals included	SAC calcium can help prevent and enhance bone density and osteoporosis, and water containing various minerals can help with hepatobiliary disease, digestive disease, tooth decay, anemia, and iron deficiency.	(21), (22)
Medicinal carbon (charcoal formulation)	Charcoal powder	Edible charcoal that purifies the intestines, removes harmful bacteria, and creates an environment where beneficial bacteria can live in the intestines	(23)
Active folic acid	Folic acid	An important factor in making blood, and is also called Vitamin B9	(24)
Viva Circu	Ginkgo biloba extract	The ginkgo biloba extract (GBE) contains flavonoid glycoside that can help with blood circulation.	(25), (26)
Viva Kan	Silymarin	Silymarin protects liver cells with its detoxifying effect by removing active oxygen.	(27)
Heartberry LEMON	Vitamin C, anthocyanin	It can improve the condition of one's body by resolving hypoxia and decomposing the inflammatory substances in the body.	(28), (29)
Curcuplex	Curcumin	It may reduce the inflammation caused by metabolic syndrome by weakening various aspects of the metabolic syndrome, such as the improvement of insulin sensitivity.	(30)
Sulfoplex PK Tab.	Dimethylsulfone (MSM)	Plant-based MSM is capable of treating inflammation, joint/muscle pain, oxidative stress, and antioxidant power.	(31)
Macalplex Capsule	Magnesium	Makes muscles flexible, and helps with sleep and calming	(32), (33)
Selenplex	Selenium, MSM	Detoxifies the body using its antioxidant powers by calming the inflammatory response	(7), (31)
Thyroplex	Iodine	As it contains natural iodine, it serves to regulate the thyroid hormone and catalyzes the production of acetic acid or high-molecular polymers.	(34)

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