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Case Report

세포교정영양요법(OCNT)을 이용한 간기능 개선 사례

서명수 약사
경상남도 거제시 서문로 72 이화온누리약국

A Case Study on Liver Function Improvement Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: A case report of liver function recovery through corrective Ortho-Cellular Nutrition Therapy (OCNT).

Methods: OCNT was applied to a Korean man in his 40s who suffered from hangovers, halitosis due to diabetes, and fatigue.

Results: After starting OCNT, the patient did not suffer from hangovers after drinking alcohol, and diabetes symptoms improved while fatigue decreased.

Conclusion: For diabetic patients who frequently feel fatigued and have habitual alcohol consumption, OCNT can help alleviate symptoms.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), diabetes, diabetes halitosis, hangover, fatigue

INTRODUCTION

The liver is a major metabolic organ found only in vertebrates and performs important biological functions such as detoxification, digestion, and synthesis of proteins and biochemicals necessary for growth. In humans, the liver is crucial for maintaining normal biological functions, including carbohydrate metabolism, hormone production, conversion and storage of nutrients such as glucose and glycogen, and the decomposition of red blood cells.

If liver function is impaired, dark urine, jaundice, itching, edema, hepatitis, and pain may occur. Among them, fatigue is the most common symptom in liver disease patients and has a significant impact on the quality of life. Fatigue is a complex symptom that includes various symptoms such as lethargy, malaise, drowsiness, and exhaustion.[1]

From the perspective of modern medicine, fatigue is divided into two types: central fatigue and peripheral fatigue. Peripheral fatigue is related to neuromuscular dysfunction, while central fatigue occurs within the central nervous system and is characterized by difficulty in performing physical activities.[2,3] This type of fatigue does not apply to patients without cirrhosis or liver dysfunction, and it is generally believed that fatigue appears due to poor decomposition of fatigue-inducing substances as liver function declines. To date, the relationship between liver function and fatigue has been confirmed in numerous studies. However, the fundamental pathogenesis and treatment methods for the relationship between them have not been defined. Above all, the interaction between liver function decline and fatigue is very complex and involves various factors, leading to a lack of understanding in how to address it.

The patient in this case was a man with a slim body, who had diabetes and was feeling fatigued in his daily life. Additionally, the patient complained of discomfort due to worsening symptoms of halitosis caused by hangover and diabetes. Accordingly, he decided to visit the pharmacy to have a prescription for Ortho-Cellular Nutrition Therapy (OCNT) along with liver function-improving drugs and to report on the progress.

CASE REPORT

1. Target

One case of a patient with impaired liver function was studied.
1) Name: OOO (M/42 years old)
2) Diagnosis: None.
3) Date of onset: November 2023
4) Treatment duration: November 2023 to present.
5) Main symptoms: Hangover, halitosis due to diabetes, fatigue
6) Past medical history: None.
7) Social history: None.

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8) Family history: None.
9) Current medical history and medications: Diabetes (not taking medication), dietary sulfur, ursodeoxycholic acid 100 mg

2. Methods
Cyaplex F Capsule (101, twice a day, one capsule per dose)
Haepo Booster F (101, twice a day, one sachet per dose)
OCNT was administered in this manner, and exercise was also recommended to manage blood sugar levels.

RESULTS

The patient in this case had diabetes but was not managing blood sugar levels through medication or exercise. In addition, frequent drinking environments would have further worsened the patient's health. Therefore, we assisted the patient with integrating OCNT and exercise for the restoration of damaged liver function. After, we compared the degree of symptoms experienced by patient. After OCNT was implemented, the patient's hangover symptoms the day after drinking alcohol were reduced, and upon waking, he did not feel lethargic but felt energized. Additionally, his lethargy decreased enough to allow him to exercise concurrently, so he gradually started exercising. This made it easier for the patient to control blood sugar levels, and consequently, both diabetic halitosis and fatigue symptom scores decreased (Table 1).

DISCUSSION

The liver regulates numerous biochemical reactions in the body, including the synthesis and decomposition of small, complex organic molecules, which are important for maintaining normal biological functions. Estimates of the total number of liver functions vary, but the number is generally believed to be around five hundered.[4] Therefore, abnormalities in liver function can cause various issues.

Our intestines produce about 4 g of ammonia per day. The produced ammonia is transported to the liver through blood vessels, converted to urea, and then excreted in urine. However, if the liver is damaged and cannot properly process the ammonia in the blood, it becomes toxic to the body. When ammonia levels become excessively high, the production of an energy molecule called ATP is inhibited, which causes fatigue. In addition, ammonia generates nitrogen-based reactive oxygen species that damage our bodies, causing oxidative stress. Several articles reported that taurine contained in Haepo Booster F helps improve exercise capacity by removing ammonia from the blood and protects liver cells from inflammation and fibrosis by suppressing the activation of the Cytochrome P4502E1 (CYP2E1) enzyme.[5] Therefore, the intake of taurine can help relieve the fatigue felt by patients, increase vitality, and protect damaged liver cells.

Halitosis due to diabetes can be caused by poor oral health, improper dental care, tooth decay, or periodontitis. Diabetic patients are prone to halitosis.[6] According to a study conducted in 2015, 23.3% of diabetes study subjects suffered from halitosis.[7] Diabetes and liver disease often occur simultaneously, but research on their causes and clinical significance is still insufficient.[8-10] There are various methods to treat diabetes, including insulin supplementation and stimulation of insulin secretion. Among these, one alternative is to improve liver function to improve insulin resistance.[11] Aronia extract has been reported to lower blood sugar levels and significantly reduce blood insulin levels by regulating the activities of glucose metabolism-related enzymes such as glucokinase, pyruvate kinase, phosphoenolpyruvate carboxykinase, and glucose-6-phosphatase.[12] In addition, Aronia extract was confirmed to improve insulin resistance by activating the signaling pathway that promotes glycogen synthesis in liver cells.[12] From this perspective, the consumption of Cyaplex containing Aronia extract can improve liver function in patients suffering from halitosis due to diabetes, thereby alleviating halitosis symptoms and helping control blood sugar.

Symptoms of a hangover after drinking alcohol include drowsiness, headache, poor concentration, dry mouth, dizziness, gastrointestinal disorder, fatigue, sweating, nausea, anxiety, and general discomfort that may last longer.[13] There are many causes for these symptoms, but among them, acetaldehyde is a by-product generated when metabolizing ethanol in the liver. It is 10 to 30 times more toxic than alcohol and is reported to cause a hangover.[14] If acetaldehyde accumulates at high concentrations in the body, hangover symptoms may appear; however, there is currently no effective way to reduce these symptoms.[15] The taurine component of Haepo Booster F increased the aldehyde dehydrogenase (ALDH) enzyme that decomposes acetaldehyde and inhibits the production of CYP2E1.[16] In addition, the Aronia extract contained in Cyaplex has been reported to protect the liver damaged by alcohol from free radicals, improve indicators of AST/ALT levels, and blood lipid concentration in animal experiments, helping to alleviate hangover symptoms experienced by patients after drinking.[17]

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

Symptoms/month	1 month	2 months	3 months	4-6 months	After 7 months	Note
Hangover	2	0	0	0	0	Take 1 Cyaplex capsule before drinking and 2 capsules while drinking.
halitosis	3	2	1.5	1	1	Concurrent Exercise
fatigue	2	1	1	1	1	Administered concurrently with Gongjindan

0: No symptoms, 1: Symptoms are mild and have little effect on daily life, 2: Symptoms are more pronounced, and some adaptation to daily life is required, 3: Symptoms significantly affect daily life, making it difficult to perform some activities, 4: Having a great difficulty performing activities of daily living, 5: Feel uncomfortable in my daily life and the resulting stress is severe

This case study has limitations in generalization because it targets a single patient. Additionally, since it was conducted using the patient's subjective measure of symptoms, more research is needed to prove the causal relationship. However, OCNT was found to reduce the patient's symptoms of halitosis caused by diabetes, and the patient's fatigue also decreased. These results may have a positive impact on improving the health of diabetic patients, and in particular, it is believed that they suggest a new approach to hangover management. This report was made with the patient's consent.

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