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Case Report

세포교정영양요법(OCNT)을 이용한 고지혈증 개선 사례

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A Case Report on the Improvement of Hyperlipidemia Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Hyperlipidemia refers to a condition in which the concentration of high-density lipoprotein cholesterol (HDL-C) decreases, while low-density lipoprotein cholesterol (LDL-C) and triglyceride (TG) levels rise above the reference range. Hyperlipidemia can be influenced by various factors, including age, diet, lifestyle, and genetic factors, and is typically managed through medication, such as statins, or lifestyle modifications.

Case Report: The patient in this case study was a Korean woman in her fifties. During a routine hospital check-up, her total cholesterol and LDL-C levels were found to be above the reference range, and she was advised to take statins; however, she declined. Therefore, Ortho-Cellular Nutrition Therapy (OCNT), using red yeast rice, anthocyanins, omega-3, and vitamin D, was applied. As a result, her total cholesterol and LDL-C levels decreased to values approaching the reference range.

Conclusion: While this case involves a single patient and therefore limits the general application of OCNT to other hyperlipidemia patients, appropriate OCNT may help regulate cholesterol in the body and improve hyperlipidemia.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), hyperlipidemia, cholesterol, statins

Introduction

Hyperlipidemia refers to a condition in which the concentration of high-density lipoprotein cholesterol (HDL-C) decreases, while lipid components such as triglycerides (TG) and low-density lipoprotein cholesterol (LDL-C) increase above the reference range. Cholesterol is an essential nutrient involved in cell membrane structure, hormone production, and bile acid secretion, while lipoproteins bind to cholesterol and transport it from the liver to tissues and from tissues back to the liver. However, when the overall cholesterol level or LDL-C level in the blood is elevated, hyperlipidemia can be diagnosed. This condition is a major risk factor for complications in other organs, including cardiovascular and cerebrovascular diseases such as coronary artery disease and stroke.[1]

Various factors—including age, excessive intake of saturated fatty acids and trans fatty acids (TFAs), insufficient physical activity, smoking, obesity, chronic diseases, and medications—can influence blood levels of TG and cholesterol. In addition, recent studies have indicated that genetic factors may also contribute to hyperlipidemia. Hyperlipidemia can be classified based on plasma concentrations of total cholesterol, TG, HDL-C, and LDL-C into hypercholesterolemia, hypertriglyceridemia, mixed hyperlipidemia, and atherogenic dyslipidemia.[2, 3] Hyperlipidemia remains prevalent worldwide, with rates increasing particularly in Asian regions experiencing rapid urbanization and dietary changes. In the Americas and Europe, the prevalence of hyperlipidemia and other dyslipidemias has declined slightly over time, although the level of decrease is not significant.[4]

The diagnosis of hyperlipidemia is established through blood tests, with additional factors such as xanthomas or family history also taken into account. Once diagnosed, treatment is initiated, primarily aiming to restore TG and LDL-C levels to the reference range. Various approaches can be employed, with statin therapy generally used as the first-line treatment. In

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combination, dietary and lifestyle modifications are recommended, and if these measures prove insufficient, additional interventions may be considered. These include the use of PCSK9 inhibitors, which inhibit LDL-C degradation by reducing LDL receptor breakdown, or apheresis to directly remove TG and cholesterol from the blood.[5]

This case study involved a patient diagnosed with hyperlipidemia through blood tests and who was recommended pharmacological treatment. Ortho-Cellular Nutrition Therapy (OCNT) was applied to this patient, and changes in blood TG and cholesterol levels were monitored. Therefore, this report is presented with the patient's consent.

Case Study

1. Subject

This case involved a single patient with hyperlipidemia.

1) Name: Ahn ○○ (52 years old, F)
2) Diagnosis: Hyperlipidemia
3) Date of onset: December 3, 2024
4) Treatment period: December 2024 – present
5) Chief complaint: Hyperlipidemia
6) Medical history: Lumbar disc surgery
7) Social history: None
8) Family history: Cerebral disease (maternal side)
9) Current illness and medications: None

2. Methods

• December 2024 – February 2025
Cyaplex X Capsule (202, twice daily, two capsules per dose)
Monacol Capsule (202, twice daily, two capsules per dose)
Diverol F Capsule (001, once daily, one capsule per dose)
Vivarol Capsule (101, twice daily, one capsule per dose)

• March 2025 – May 2025
Monacol Capsule (101, twice daily, one capsule per dose)

• June 2025 – present
Cyaplex X Capsule (202, twice daily, two capsules per dose)
Monacol Capsule (202, twice daily, two capsules per dose)

Results

Blood tests were conducted before and after OCNT. Comparison of the results showed that previously elevated total cholesterol and LDL-C levels approached the reference range following OCNT. Selected changes in the patient's blood test results are shown in Fig. 1.

Discussion

The patient in this case study was a woman in her fifties who underwent a routine health check-up at a hospital, where some blood test results showed abnormalities, and she was advised to take statins. However, she declined this recommendation and visited a pharmacy instead. Review of her blood test results revealed that her total cholesterol (TC) and LDL-C levels were elevated to a high-risk range. In addition, patient history indicated a family history of cerebral disease on the maternal side, highlighting the importance of improving and managing her elevated cholesterol levels.

Statins are the most widely used medications for treating hyperlipidemia. However, they may cause muscle-related side effects, including myalgia, rhabdomyolysis, and, in severe cases, immune-mediated necrotizing myopathy. Although these effects often improve upon discontinuation, many patients refuse statin therapy due to concerns about potential adverse effects.[6] Therefore, OCNT was applied in this case to attempt improvement.

Monacol Capsule was first prescribed to improve the patient's cholesterol levels. Its main ingredient, red yeast rice, is obtained by fermenting red rice with yeast. During fermentation, monacolin is produced, a compound structurally identical to the lovastatin, which is a type of statin-class drugs. Clinical studies have shown that monacolin lowers LDL-C levels comparable to moderate-intensity statins, such as 40 mg pravastatin or 20 mg lovastatin, and also contributes to TG reduction and HDL-C increase. Unlike statins, red yeast rice has not been shown to increase the risk of muscle-related side effects.[7]

Elevated cholesterol levels can lead to vascular complications such as atherosclerosis, angina, and myocardial infarction, resulting from effects on vascular endothelial tissue and immune cells.[8] Cholesterol can induce excessive production of reactive oxygen species in the vasculature, highlighting the need for regulation. Anthocyanins, a type of polyphenol primarily derived from berries, are known to protect endothelial cell function and inhibit oxidative damage through their antioxidant activity. In an experiment where cells were treated with anthocyanins and exposed to LDL-C–induced damage, the anthocyanin-treated group exhibited less cellular damage than the control group, suggesting that anthocyanins protect endothelial cells by suppressing reactive oxygen species production.[9]

OCNT was also prescribed to improve blood circulation. Omega-3 fatty acids can reduce cardiovascular risk factors, such as plasma triglyceride levels, and promote vasodilation, thereby supporting smoother blood flow. They have also been shown to enhance endothelial cell function. Notably, consistent intake of an appropriate dose of omega-3 is associated with greater improvements in populations with existing cardiovascular disease.[10] Therefore, Vivarol was prescribed to

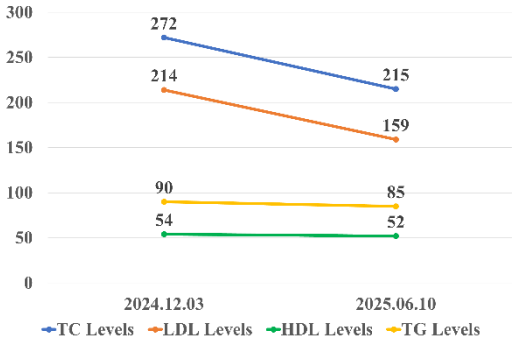

Fig. 1. Changes in the patient's cholesterol levels before and after OCNT

* TC: total cholesterol; LDL: LDL-cholesterol; HDL: HDL-cholesterol; TG: triglycerides

** Reference ranges (adults, mg/dL) : TC < 200; TG < 150; HDL: men ≥ 40, women ≥ 50; LDL < 100 (< 140 may be acceptable for some patients).

support the effect described above.

Vitamin D is also known to influence blood lipid levels positively. Although primarily recognized for supporting bone health, recent studies have linked low vitamin D levels to increased risks of hyperlipidemia, hypertension, and cardiovascular disease. Several studies examining vitamin D supplementation have reported significant reductions in total cholesterol and LDL-C levels.[11] Based on this evidence, Diverol F, containing vitamin D, was prescribed to help improve the patient's cholesterol levels.

Through the above OCNT regimen, the patient was able to bring previously elevated total cholesterol and LDL-C levels closer to the reference range. The patient continues OCNT and plans to maintain ongoing follow-up and management. As this case study involves a single patient, the same OCNT approach may not be generalizable to all individuals with hyperlipidemia. Nevertheless, the improvement in blood cholesterol levels without additional medications is noteworthy, and this report is presented with the patient's consent.

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