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Case Report

세포교정영양요법(OCNT)을 이용한 코로나 후유증 개선 사례

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A Case of Improvement on Post-COVID-19 Sequelae Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Coronavirus Disease 2019 (COVID-19) was first recognized in December 2019 following a cluster of pneumonia of unknown etiology in Wuhan, Hubei Province, China. In response to the pandemic, multiple COVID-19 vaccines were developed and deployed globally in 2021, and a nationwide vaccination program was also implemented in South Korea. Nevertheless, the emergence of the Delta and Omicron variants was accompanied by frequent breakthrough infections, and a subset of individuals subsequently developed post-acute sequelae.

Case Report: The patient in this case was a Korean woman in her 50s who, because of workplace requirements, received a third dose of a COVID-19 vaccine. Subsequently, she experienced persistent, progressively worsening fatigue and functional decline. She visited a pharmacy and initiated Ortho-Cellular Nutrition Therapy (OCNT) containing iodine, folate, iron, anthocyanins, and fructo-oligosaccharides. Following this intervention, she showed clinical improvement in symptoms consistent with post-COVID-19 sequelae, including fatigue, lethargy, and low body temperature.

Conclusion: Because this is a single-patient case report of post-COVID-19 sequelae, the findings have limited generalizability to the broader patient population. Nevertheless, the patient exhibited marked clinical improvement after five months of OCNT, which was considered clinically meaningful; accordingly, this case is reported.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), COVID-19, Post-COVID-19 sequelae, Iodine, Anthocyanins

Introduction

Coronavirus Disease 2019 (COVID-19) was first recognized in December 2019 after a cluster of pneumonia of unknown etiology was reported in Wuhan, Hubei Province, China. A virus was subsequently isolated by inoculating respiratory specimens from affected patients onto human airway epithelial cells. Genomic characterization confirmed a previously unrecognized coronavirus, which was later designated as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). In 2021, as part of the global response to COVID-19, multiple vaccines were developed and widely deployed, and third-dose mRNA booster vaccination was broadly implemented in Korea. Nevertheless, the emergence of the Delta and Omicron variants coincided with frequent breakthrough infections among vaccinated individuals, and a subset of these individuals experienced persistent post-acute sequelae.[1]

SARS-CoV-2 is one of seven coronaviruses known to infect humans. As of May 2020, approximately 4.8 million infections had been reported worldwide, with about 310,000 deaths. Clinical manifestations of SARS-CoV-2 infection range from mild to severe, and a substantial proportion of infected individuals may be asymptomatic carriers. Commonly reported symptoms include fever (83%), as well as cough and dyspnea. In patients with pneumonia, chest radiography may show multifocal patchy opacities, including ground-glass opacities. Gastrointestinal manifestations, including vomiting, diarrhea, and abdominal pain, have also been reported in 2% to 10% of patients with COVID-19. In some patients, diarrhea and nausea may precede fever and respiratory symptoms. The World Health Organization (WHO) has defined the condition characterized by symptoms that occur after COVID-19 infection as the post-COVID condition, and these symptoms may persist for weeks to several months or longer regardless of vaccination status. The persistence of these symptoms is presumed to be associated with dysregulated immune and inflammatory responses.[2]

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In response to the COVID-19 pandemic, China established large-scale temporary facilities for isolation and treatment, including Fangcang shelter hospitals, as part of its prevention and control strategy. As COVID-19 rapidly spread worldwide, many other countries similarly expedited the development of comparable facilities. These facilities primarily served to isolate and treat patients with mild disease or asymptomatic infection.[3]

According to WHO guidance, home-based care may be considered for patients with mild symptoms, provided that household members can ensure follow-up monitoring and support. By contrast, patients with severe disease should be admitted to a designated hospital upon initial diagnosis for treatment. However, to date, no standardized therapy for long COVID has been established, and most patients continue to receive symptom-focused supportive care. Accordingly, some clinicians and functional medicine practitioners have explored complementary approaches, including nutritional interventions, antioxidant therapy, and modalities intended to restore immune balance. Furthermore, more clinical reports and the accumulation of evidence remain warranted.[4]

This case involved a patient who received a third dose of a COVID-19 vaccine to meet occupational requirements and subsequently reported adverse effects, including generalized fatigue, lethargy, and low body temperature. Ortho-Cellular Nutrition Therapy (OCNT) was then initiated, after which the patient's overall health status improved. Accordingly, this case is reported.

Case Study

1. Subject

A single case of a patient with post-COVID-19 sequelae was evaluated.

1) Name: Kim OO (51 years/F)
2) Diagnosis: post COVID-19 condition
3) Onset: late March 2022
4) Treatment period: April 2022 to October 2022
5) Chief complaints: severe shoulder stiffness, fatigue, lethargy, dizziness, anxiety, insomnia, loose stool, dry eye symptoms, and a sensation of low body temperature
6) Past medical history: Mammotome procedure, uterine polypectomy
7) Social history: stress and tension related to sales activities
8) Family history: not available
9) Present illness and current medications: dietary supplements

2. Methods

The OCNT prescribed for the patient is described in detail in Table 1.

Table 1. OCNT prescribed for the patient.

Type \ Month	1	2	3	4	5
Cyaplex F granules	101	101	101		
Cyaplex X granules				101	101
Notoplex granules	101	101	101	101	101
Bioplex F granules	101	101	101	101	101
Enzaplex F granules	101				
Eufaplex alpha stick	101				
Eufaplex alpha capsules		303	303	303	303
Betaplex F granules		111			
Caroplex granules			101	101	
Gastron granules				101	
Hemoplex capsules				202	
Angelan F					101
Thyroplex granules					101
Sulfoplex PK tablet	404	prn, 4 tablets per dose			
Sulfoplex cream	Apply to shoulder and pain areas, 2–3 times daily.				

* 101: Twice daily, take 1 sachet/tablet per dose in the morning and evening, 202: Twice daily, take 2 sachets/tablets per dose in the morning and evening, 303: Twice daily, take 3 sachets/tablets per dose in the morning and evening, 404: Twice daily, take 4 sachets/tablets per dose in the morning and evening, 111: Three times daily, take 1 sachet/tablet per dose in the morning, at noon, and in the evening

Results

After receiving a third dose of a COVID-19 vaccine, the patient reported persistent generalized fatigue and functional decline that progressively worsened. She sought OCNT counseling at a pharmacy and developed a breakthrough COVID-19 infection within 1 month. During the subsequent 7-day isolation period, she rested and remained adherent to the prescribed supplementation regimen. Her recovery was sufficiently rapid to permit a return to work and routine daily activities. Thereafter, her symptoms fluctuated, with intermittent improvement and exacerbation, but gradually improved overall, with noticeable recovery after 3 months of supplementation. Changes in the patient's condition and the severity of subjective symptoms during OCNT are summarized in Table 2.

Discussion

The patient had not fully recovered after undergoing bilateral Mammotome procedures and a uterine polypectomy in mid-January 2022. Nevertheless, she was required to receive a third dose of a COVID-19 vaccine due to occupational requirements as the operator of a school canteen serving a large

Table 2. . Severity of symptoms reported by the patient during OCNT. Higher scores from 0 to 5 indicate greater discomfort experienced by the patient.

Symptoms \ Month	1	2	3	4	5
Fatigue	5	2	2	1	1
Lethargy	5	3	2	1	0
Shoulder pain	5	3	2	1	1
Dizziness	4	2	2	1	0
Anxiety and insomnia	4	2	2	1	1
Loose stools	4	4	3	2	1
Dry eye symptoms	4	4	2	1	1
Symptoms of low body temperature	5	3	3	2	1
Heartburn	-	-	3	1	0

0: No symptoms and no impact on daily activities; 1: Mild symptoms with minimal impact on daily activities; 2: Noticeable symptoms requiring minor adjustments in daily activities; 3: Symptoms significantly affect daily activities, making some tasks difficult; 4: Major difficulty performing tasks during daily activities; 5: Symptoms severely interfere with daily activities, causing substantial distress

number of students. Following vaccination, she experienced persistent generalized fatigue and functional decline that progressively worsened. Although she was unable to perform her work or manage routine daily activities, she reported having no feasible alternatives and facing financial constraints. Despite receiving symptomatic treatment at a hospital, her symptoms worsened over time rather than improving. This prompted her to seek OCNT counseling at a pharmacy. Accordingly, an individualized OCNT regimen was initiated with the aim of improving overall health status and enhancing immune function.

Initially, the patient in this case reported lethargy, low body temperature, and fatigue attributed to post-COVID-19 sequelae. Accordingly, Thyroplex granules were prescribed to support metabolic regulation. Thyroplex contains iodine, which is known to be an essential micronutrient for thyroid hormone (TH) synthesis. In adults, TH regulates energy metabolism and thermogenesis, and the conversion of thyroxine (T4) to the active form triiodothyronine (T3) is one of the key mechanisms underlying metabolic regulation. This process involves 5′-deiodinase type 2 (D2). D2 is expressed in the hypothalamus, white adipose tissue, brown adipose tissue, and skeletal muscle, where it plays an essential role in adaptive thermogenesis.[5] Therefore, iodine was prescribed to improve the patient's lethargy and low body temperature symptoms, with the aim of exerting a positive effect on recovery of daily functional capacity.

In addition, the patient reported severe dizziness, and Hemoplex capsules were prescribed to improve symptoms. Hemoplex capsules contain components that support hematopoiesis, including folate and iron. Given that the patient was an adult woman, iron deficiency was considered a potential contributor to dizziness. According to previous epidemiological studies, absolute iron deficiency affects approximately 2 billion people worldwide regardless of whether anemia is present and may cause symptoms such as fatigue, irritability, depression, and dizziness. Furthermore, when iron deficiency is suspected, oral iron supplementation can be considered as a first-line approach for symptom improvement. Accordingly, supplementation with iron and folate was provided with the aim of alleviating dizziness.[6]

The patient reported dry eye symptoms that developed after COVID-19 infection. Dry eye disease is a chronic ocular condition characterized by ocular discomfort. Previous clinical studies have reported that anthocyanin administration significantly improved tear film break-up time, intraocular pressure, ocular surface disease, and dry eye symptoms in patients with mild to moderate dry eye disease. The authors concluded that anthocyanin supplementation may be an option for sustained symptom improvement and improved quality of life.[7] Accordingly, in this case, anthocyanins contained in Cyaplex F granules and Cyaplex X granules were prescribed to alleviate dry eye symptoms.

Finally, the patient reported loose stools after COVID-19 infection. Loose stools refer to stools that are softer and less formed than usual, and this change may be associated with impaired bowel function or alterations in the intestinal environment. Accordingly, fructo-oligosaccharides (FOS) contained in Bioplex F granules were prescribed for symptom improvement. Fructo-oligosaccharides are prebiotics that modulate the gut microbial environment. Previous controlled trials have reported that oral intake of fructo-oligosaccharides increased bowel movement frequency, reduced pain and discomfort during defecation, and improved stool form and overall constipation-related symptoms.[8] Therefore, fructo-oligosaccharides were prescribed with the aim of exerting a positive effect on the intestinal environment.

After five months of OCNT, the patient reported improvement in fatigue, lethargy, dizziness, loose stools, and symptoms of low body temperature. Her health status recovered sufficiently to permit a return to daily activities. This improvement was considered to have an important impact on her quality of life. However, because this report describes a single patient, the findings have limited generalizability to the broader population with post-COVID-19 sequelae. Nevertheless, the marked improvement in post-COVID-19 sequelae related symptoms that had affected her social and daily functioning over a prolonged period was considered clinically meaningful, and this case is reported with the patient's consent.

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