OCNT Ortho-Cellular Nutrition Therapy

Case Report

세포교정영양요법(OCNT)을 이용한 안와상부 통증 개선 사례

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A Case of Improvement in Supraorbital Pain Using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Supraorbital pain is a symptom commonly encountered in primary care and can arise from various causes. However, because different disorders may cause pain in similar areas, identifying the exact cause can be difficult. Anatomically, multiple tissue structures are closely packed within the supraorbital region, such that even minor changes in the local environment can readily lead to pain. As the pain worsens, the characteristics of the surrounding tissues may contribute to a cycle of pain development and exacerbation. Various therapeutic approaches have therefore been employed to manage this condition.

Case Report: The patient in this case was a Korean woman who complained of severe supraorbital pain accompanied by mild edema. Accordingly, Ortho-Cellular Nutrition Therapy (OCNT), consisting of supplementation with magnesium, calcium, and vitamin D, was administered. Approximately 2 weeks later, the patient reported that the edema had decreased and the supraorbital pain had improved.

Conclusion: This case involved an individualized treatment regimen for a single patient with supraorbital pain and therefore has limited generalizability to patients presenting with similar symptoms. However, given the marked improvement in the patient's symptoms within a short period, this case is considered clinically significant and is therefore reported.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), Supraorbital region, Edema, Magnesium, Calcium, Vitamin D

Introduction

Supraorbital pain, particularly pain around the eyebrow, is a symptom commonly encountered in primary care. It can arise from various causes, including supraorbital neuralgia, tension-type headache, sinus disorders, myofascial pain syndrome, and ophthalmologic disorders. However, because different disorders may cause pain in similar areas, determining the exact cause can be difficult.[1]

The supraorbital region is anatomically complex, with bony structures, muscles, connective tissues, nerves, and blood vessels densely concentrated within a confined area. More specifically, the supraorbital nerve, which provides sensory innervation to this region, is a branch of the ophthalmic division of the trigeminal nerve and passes through the supraorbital notch or foramen to innervate the forehead and frontal scalp. Along its course, it is closely associated with the surrounding muscles, connective tissues, and vascular structures. The concentration of multiple structures within this confined space may make the region particularly susceptible to physical compression. Therefore, compression or even minor local changes in the surrounding tissues may readily provoke pain.[2]

Persistent local compression or muscle tension may impair local tissue microcirculation, leading to ischemia and inflammation. If these conditions persist, increased myofibroblast activation and extracellular matrix accumulation may lead to tissue fibrosis and stiffness. In addition, edema resulting from inflammation and impaired circulation may increase local tissue pressure. Consequently, these changes may further impair local blood flow and nerve function, potentially establishing a vicious cycle that perpetuates pain.[3]

Accordingly, conservative management, such as analgesic therapy, is typically used as initial treatment. However, if these measures do not provide sufficient improvement, additional

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therapeutic interventions may be required. In particular, persistent or recurrent pain may require consideration of alternative treatment approaches together with a differential diagnosis of various possible underlying causes.[1]

This case report describes a patient with persistent supraorbital pain and discomfort that did not improve despite medical evaluation and treatment and who subsequently received Ortho-Cellular Nutrition Therapy (OCNT). Following OCNT, the patient experienced marked improvement in supraorbital pain and associated discomfort. Given the clinical significance of this improvement, the case is reported with the patient's informed consent.

Case Study

1. Subject

A single patient presenting with pain around the eyebrow was included in this case report.

1) Name: O OO (estimated to be in her late 30s to early 40s / F)
2) Diagnosis: Supraorbital pain
3) Date of onset: Approximately March 2026
4) Treatment period: March 2026 – April 2026
5) Chief complaints: Supraorbital pain, swelling
6) Past medical history: None
7) Social history: None
8) Family history: None
9) Present illness and current medications: None

2. Methods

The following OCNT regimen was prescribed.

- Macalplex Granules 101 (twice daily, 1 sachet per dose)
- Diverol Capsules 101 (twice daily, 1 capsule per dose)

Results

Approximately 2 weeks after initiating OCNT, the patient reported a marked reduction in pain. When pain severity was assessed on a 0–5 scale, the score decreased from 5 before OCNT to 1 after treatment. After an additional 3 weeks of OCNT, the patient reported that the pain score had decreased to nearly 0. Swelling around the eyebrow also decreased substantially and became barely visible on visual inspection.

Discussion

The patient in this case was a Korean woman estimated to be in her late 30s to early 40s. At the time of consultation, she appeared to have an overweight body habitus and complained of severe supraorbital pain accompanied by mild edema. Further questioning revealed that she frequently experienced severe fatigue and that the pain worsened during physically demanding activities, such as lifting heavy objects. Based on these symptoms, persistent muscle tension and the resulting impairment of local blood flow were considered potential contributors to the pain. Accordingly, an OCNT-based regimen was administered to alleviate muscle tension and improve local circulation.

Macalplex Granules prescribed to the patient are rich in magnesium. Magnesium is an essential mineral involved in a wide range of physiological processes and plays an important role in regulating neurotransmission and neuromuscular function. In particular, magnesium may influence pain transmission by modulating N-methyl-D-aspartate (NMDA) receptor activity and neuronal excitability, and magnesium deficiency has been reported to be associated with neuronal hyperexcitability and the development of headaches. Magnesium supplementation may also help improve symptoms in some patients with headaches.[4] Therefore, in this case, magnesium was prescribed to regulate neural and neuromuscular function and alleviate supraorbital pain.

Macalplex Granules also contain calcium in addition to magnesium. Calcium is an essential mineral involved in neurotransmitter release and the regulation of cell membrane excitability and plays an important role in maintaining normal neural and muscular function. In particular, calcium ions are known to participate in both nociceptive and antinociceptive processes, and reduced calcium levels may be associated with neuromuscular hyperexcitability. Furthermore, a study reported that adults with orbital and frontal headaches had significantly lower calcium levels than controls.[5] In this case, calcium was prescribed to regulate neuromuscular function and excitability and alleviate pain in the supraorbital and eyebrow regions.

Finally, the Diverol Capsules prescribed to the patient are rich in vitamin D. Vitamin D is a fat-soluble vitamin involved not only in maintaining calcium homeostasis and bone metabolism but also in regulating the functions of the nervous and immune systems. Studies examining the relationship between vitamin D and headaches have reported that vitamin D deficiency may be associated with an increased frequency of migraine attacks and that vitamin D supplementation may help reduce the number of headache days and the frequency of migraine attacks in patients with migraine.[6] Therefore, in this case, vitamin D was prescribed to support normal physiological function and help alleviate pain in the supraorbital and eyebrow regions.

In this case, the patient underwent OCNT for approximately 2 weeks and reported that the supraorbital pain had almost completely resolved and that the swelling around the eyebrow had also improved. As this is a single case, the findings have limited generalizability to patients with supraorbital pain. However, the case was considered clinically significant because the patient's symptoms improved markedly within a relatively short period and her quality of life improved. Therefore, this case is reported with the patient's informed consent.

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