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Case Report

세포교정영양요법(OCNT)을 이용한 난임 개선 사례 연구

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A Case Study on the Improvement in Infertility Patient using Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT
Objective: A study on the improvement of infertility using Ortho-Cellular Nutrition Therapy.
Methods: OCNT was administered to a 36-year-old Korean woman experiencing infertility symptoms.
Results: After administering OCNT, infertility symptoms improved, and the patient successfully conceived through in vitro fertilization.
Conclusion: The application of OCNT can assist patients experiencing infertility symptoms.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), infertility, ovarian function decline, in vitro fertilization

INTRODUCTION

A woman's ovaries, located on both sides of the uterus, produce eggs and supply female hormones such as estrogen and progesterone. The ovaries become active during puberty and play a crucial role in successful conception during the reproductive years, but their function declines after the late 30s.

Infertility is defined as the inability to conceive after one year of regular, unprotected intercourse during the fertile phase of the menstrual cycle.[1] Direct causes include tubal dysfunction, ovulatory dysfunction due to decreased ovarian function (premature menopause), endometrial dysfunction, cervical dysfunction, and uterine fibroids, among others.[2]

Decreased ovarian function means a reduction in the number of remaining pre-egg cells in the ovaries and can result from genetic defects, chemotherapy or radiation treatment, surgery, etc.[3] Since ovarian function is challenging to restore once it declines, evaluating and managing ovarian function is crucial for conception. This evaluation requires blood tests and ultrasound examinations.

Blood tests measure hormone levels, including follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E_2), and anti-Müllerian hormone (AMH), which are necessary to assess ovarian function. Among these, AMH plays a crucial role in measuring the quantity of eggs.[4] Ultrasound examinations are critical indicators for evaluating functional ovarian reserves by measuring the number of follicles in the ovaries, and a combined total of seven or fewer eggs in both ovaries may indicate decreased ovarian function.[5] Mild decreased ovarian function may increase natural pregnancy rates through ovulation induction agents, while severe cases or advanced age may require artificial insemination or in vitro fertilization (IVF) to induce pregnancy.

In vitro fertilization-embryo transfer (IVF-ET) is a type of assisted reproductive technology that involves fertilizing sperm and eggs outside the body, culturing them in a test tube for 2-5 days, and then implanting them into the uterus. This procedure is performed for various reasons, such as blocked or damaged fallopian tubes, uterine issues like endometriosis or fibroids, multiple causes of ovarian failure, failed artificial insemination attempts, and unexplained infertility. The IVF-ET process includes ovulation induction through hormone medication, egg and sperm retrieval using micro-needles, in vitro fertilization and embryo culture, embryo transfer, endometrial support, and blood tests to confirm pregnancy.[6]

This case report presents a patient who successfully conceived after receiving OCNT for infertility, with the patient's consent.

CASE STUDY

1. Subject
This study focused on one infertility patient.
1) Name: Ahn ○○ (F/36 years old)
2) Diagnosis: Infertility
3) Date of Onset: July 2021
4) Treatment Duration: April 2022 ~ March 2023
5) Primary Symptoms: Infertility, anxiety, insomnia, fatigue
6) Medical History: Multiple failed infertility treatments

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7) Social History: None
8) Family History: None
9) Medications and Treatments Applied: Haloxin, Solondo, antirheumatic drug injections (for rheumatoid arthritis in the fingers), Synthroid 0.1mg (for hypothyroidism)

2. Methods

Table 1 shows the OCNT prescribed to the patient and her husband, along with the details of their intake. The prescribed OCNT was maintained until delivery, and a strict diet excluding flour and dairy products was followed during the intake period.

RESULTS

One month after applying OCNT, the previously black menstrual blood returned to a normal color. Two months later, two healthy eggs were successfully harvested and frozen after five days of incubation. Three months later, the endometrium reached 9mm, and an implantation attempt was made in the fourth month. Subsequently, an HCG hormone level of 430mlU/ml, which is indicative of 4-5 weeks of pregnancy, was confirmed, and the successful establishment of the gestational sac was observed shortly after.

After confirming the pregnancy, the patient discontinued antirheumatic drug injections for rheumatoid arthritis in the fingers and gradually reduced the dosage of oral medications. Additionally, symptoms such as fatigue, insomnia, and anxiety, which had arisen due to infertility, gradually improved with the continuation of OCNT. These measurements are shown in Table 2.

DISCUSSION

The subject of this case study is a 36-year-old woman in her third year of marriage who received treatments at a Korean medicine clinic and an obstetrics and gynecology clinic to address her infertility. Despite these efforts, she continued to struggle with conception, and starting in July 2021, she underwent three rounds of in vitro fertilization at an infertility clinic, all of which failed due to poor quality of both eggs and sperm, leading her to experience anxiety and restlessness. Her husband also recognized the poor quality of his sperm, prompting both partners to undertake infertility OCNT together.

In the process of conception and pregnancy, which marks the beginning of new life, the maturity of sperm and eggs and the quality of the gestational sac are crucial. The role of follicles is significant in producing mature eggs. Thus, various OCNTs were applied to create an intrauterine environment conducive to generating sperm, eggs, and a healthy gestational sac.

To create a healthy pregnancy environment, it is essential to reduce oxidative stress that induces cell proliferation inhibition or increased apoptosis, lower infertility risks, and supplement nutrients that positively affect fertility.[7] Anthocyanins, supplied through Cyaplex X, play an excellent role in reducing oxidative stress[8]. Additionally, the heme iron in Hemoplex is known to decrease infertility risks, while vitamins B and folic acid significantly affect fertility.[9,10] Chlorella, which is excellent for enhancing and regulating immune capacity,[11] and Angelan, an extract of Angelica,[12] were supplied through Nutaplex and Angelan F, respectively, along with probiotics and prebiotics through Bioplex to establish a healthy intrauterine environment.[13] Lastly, in the husband's case, zinc supplied through Tmplex helped improve male fertility, laying the foundation for obtaining high-quality sperm.[14] These OCNTs enabled the case study patient and her husband to obtain healthy,

Table 1. OCNT Prescription Details for Nutrition Therapy

Type / Month	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month
Patient OCNT							
Cyaplex X granule	101	101	101	101	101	101	101
Eufaplex alpha stick	101	101	101	101	101	101	101
Tmplex granule	101	101	101	101	101	101	101
Nutaplex granule	101	101	-				
Bioplex F granule	101	101	101	101	101	101	101
Angelan F granule	101	101	101	101	101	101	-
Hemoplex capsule	-		202	202	202	202	202
Diverol capsule	-		101	101	101	101	101
Sulfoplex PK tablet	-				202	202	202
Husband OCNT							
Cyaplex X granule	101	101	101	101	-		
Eufaplex alpha capsule	303	303	303	303	-		
Tmplex capsule	101	101	101	101	-		
Bioplex F granule	101	101	101	101	-		

* 101: Take 1 capsule/packet twice daily. 202: Take 2 capsules/packets twice daily. 303: Take 3 capsules/packets twice daily.

Table 2. Degree of Symptoms Felt by the Patient During OCNT.

Symptom / Month	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month
Fatigue	4	2	2	1	1	1	1
Insomnia	3	2	1	1	1	1	0
Anxiety/Nervousness	3	2	1	1	0	0	0
Remarks			Secured 2 healthy eggs	9mm endometrium secured	HCG 430 and pregnancy confirmed	Successful IVF	

0: No symptoms, 1: Mild symptoms, daily life is possible, 2: Slight discomfort in daily life, 3: Symptoms significantly affect daily life, some activities are uncomfortable, 4: Difficulty performing activities in daily life, 5: Severe discomfort, unable to perform daily activities.

high-quality eggs and sperm.

The patient was psychologically anxious due to concerns about late pregnancy and was receiving injection and drug therapy for rheumatoid arthritis and hypothyroidism. Despite counseling aimed at inducing natural pregnancy, she desired an IVF due to her health status. Additionally, due to concerns about miscarriage and the inability to stop her medications, she wished to continue OCNT after pregnancy.

Numerous studies reports that individuals who consume omega-6, linoleic acid, and vitamin D have higher success rates with IVF.[15,16] Therefore, it is believed that these nutrients supplied through Eufaplex alpha and Diverol contributed to the success of the IVF process and alleviated the patient's anxiety.

Selenium and iodine in Tmplex are essential trace nutrients for increasing thyroid hormone production[17,18] and Methylsulfonylmethane (MSM), one of the main components of Sulfoplex, can significantly improve pain related to arthritis and help protect cartilage.[19] It is assumed that these OCNTs made it possible to reduce the treatments and medications the patient was receiving for osteoarthritis and hypothyroidism.

This case study is limited to a single patient, and therefore cannot be generalized to all infertility patients. However, it is meaningful to report with the patient's consent that appropriate application of OCNT improved her infertility and led to a successful pregnancy.

REFERENCES

1. Gnoth C, Godehardt E, Frank-Herrmann P, Friol K, Tigges J, Freundl G. Definition and prevalence of subfertility and infertility. *Hum Reprod*. May 2005;20(5):1144-7. doi:10.1093/humrep/deh870
2. Abrao MS, Muzii L, Marana R. Anatomical causes of female infertility and their management. *International Journal of Gynecology & Obstetrics*. 2013;123:S18-S24.
3. De Vos M, Devroey P, Fauser BC. Primary ovarian insufficiency. *The Lancet*. 2010;376(9744):911-921.
4. Dayal M, Sagar S, Chaurasia A, Singh U. Anti-mullerian hormone: a new marker of ovarian function. *The Journal of Obstetrics and Gynecology of India*. 2014;64:130-133.
5. Coelho Neto MA, Ludwin A, Borrell A, et al. Counting ovarian antral follicles by ultrasound: a practical guide. *Ultrasound in Obstetrics & Gynecology*. 2018;51(1):10-20.
6. Professional CCMCCM. IVF (In Vitro Fertilization). Accessed May 13, 2024.
7. Hussain T, Murtaza G, Metwally E, et al. The Role of Oxidative Stress and Antioxidant Balance in Pregnancy. *Mediators Inflamm*. 2021;2021:9962860.
8. Mattioli R, Francioso A, Mosca L, Silva P. Anthocyanins: A Comprehensive Review of Their Chemical Properties and Health Effects on Cardiovascular and Neurodegenerative Diseases. *Molecules*. Aug 21 2020;25(17)
9. Chavarro JE, Rich-Edwards JW, Rosner BA, Willett WC. Iron intake and risk of ovulatory infertility. *Obstet Gynecol*. Nov 2006;108(5):1145-52.
10. Skoracka K, Ratajczak AE, Rychter AM, Dobrowolska A, Krela-Kaźmierczak I. Female Fertility and the Nutritional Approach: The Most Essential Aspects. *Adv Nutr*. Dec 1 2021;12(6):2372-2386.
11. Bito T, Okumura E, Fujishima M, Watanabe F. Potential of Chlorella as a Dietary Supplement to Promote Human Health. *Nutrients*. Aug 20 2020;12(9)
12. Han SB, Kim YH, Lee CW, et al. Characteristic immunostimulation by angelan isolated from Angelica gigas Nakai. *Immunopharmacology*. Jul 1998;40(1):39-48.
13. Sheyholislami H, Connor KL. Are Probiotics and Prebiotics Safe for Use during Pregnancy and Lactation? A Systematic Review and Meta-Analysis. *Nutrients*. Jul 13 2021;13(7)
14. Kerns K, Zigo M, Sutovsky P. Zinc: A Necessary Ion for Mammalian Sperm Fertilization Competency. *Int J Mol Sci*. Dec 18 2018;19(12)
15. Moran LJ, Tsagareli V, Noakes M, Norman R. Altered preconception fatty acid intake is associated with improved pregnancy rates in overweight and obese women undertaking in vitro fertilisation. *Nutrients*. 2016;8(1):10.
16. Várbíró S, Takács I, Tűű L, et al. Effects of Vitamin D on Fertility, Pregnancy and Polycystic Ovary Syndrome-A Review. *Nutrients*. Apr 15 2022;14(8)

17. Liontiris MI, Mazokopakis EE. A concise review of Hashimoto thyroiditis (HT) and the importance of iodine, selenium, vitamin D and gluten on the autoimmunity and dietary management of HT patients.Points that need more investigation. *Hell J Nucl Med*. Jan-Apr 2017;20(1):51-56.

18. Rayman MP. The importance of selenium to human health. *Lancet*. Jul 15 2000;356(9225):233-41.

19. Butawan M, Benjamin RL, Bloomer RJ. Methylsulfonylmethane: applications and safety of a novel dietary supplement. *Nutrients*. 2017;9(3):290.