CellMed
Cellmed Orthocellular Medicine and Pharmaceutical Association

Case Report-A learning from clinical experiential history

세포교정영양요법(OCNT)을 이용한 췌장암 개선 사례 연구

황해연 약사

서울특별시 강남구 테헤란로 4길 46, B 140호 이로운 약국

Study on the cases of improvement in pancreatic cancer using Ortho-Cellular Nutrition Therapy (OCNT)

Pharmacist, Hae yeon Hwang

Iroun pharmacy, 46, Teheran-ro 4-gil, Gangnam-gu, Seoul, Republic of Korea

ABSTRACT

Objective: Report cases of improvement in pancreatic cancer through Ortho-Cellular Nutrition Therapy.

Methods: Korean males in their 70's were suffering from pancreatic cancer following full recovery from prostate cancer.

Results: There was the improvement in pancreatic cancer following implementation of OCNT.

Conclusion: Application of OCNT to pancreatic cancer can be helpful in alleviating symptoms.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), pancreatic cancer

Introduction

The death rate of patients with pancreatic cancer is also increasing as the annual number of new pancreatic cancer is increasing in Korea.[1] Pancreatic cancer has become the fourth leading cause of cancer death globally by displaying a devastating prognosis. Moreover, Korean adult diabetic patients have a higher risk of pancreatic cancer manifestation in comparison to non-diabetic patients.[2]

Risk factors include smoking, alcohol consumption, chronic pancreatitis, obesity, dietary habits and infectious diseases, and modification of such risky habits alone can reduce the probability of manifestation of pancreatic cancer.[3]

Although it is very difficult to diagnose pancreatic cancer, cancer antigen 19-9 (CA 19-9) is the only marker approved by the FDA of USA for use in the routine management of pancreatic cancer.[3]

*Correspondence: Hae yeon Hwang
E-mail: novica74@naver.com
Received Sep 27, 2023; **Accepted** Sep 27, 2023; **Published** Sep 27, 2023
doi: http://dx.doi.org/10.5667/CellMed.spc.046

† This report has been translated and edited by the CellMed editor-in-chief, Prof. Beom-Jin Lee.

CA 19-9 is a sialylated Lewis[ab] blood group antigen that is synthesized by epithelial cells not only in the normal pancreatic parenchyma and biliary tract, but also in the gastric, crystalline and uterine mucosa. Although it is the most extensively used biomarker for pancreatic ductal adenocarcinoma (PDAC), it appears to be elevated in other malignancies such as gastric, colorectal, lung and thyroid cancers as well. As such, it is used to monitor the responses of patients to treatments and to determine if there is the recurrence of cancer, rather than as an indicator of cancer itself. The reference value is 37 U/mL.

Carcinoembryonic antigen is a glycoprotein involved in cell adhesion that is normally generated during the process of fetal development. However, CEA is not generally generated prior to birth. Accordingly, if it is found in adults, it is also observed in other malignant tumors including pancreatic, gastric, hepatobiliary and lung cancers. pancreatic cancer, It should be <2.5 ng/mL for non-smokers and <5 ng/mL for smokers.[3]

The patient in this case report has a history of full recovery from prostate cancer and pancreatic cancer was detected earlier this year after having suffered diabetes for many years. The patient felt the need for adjuvant anticancer therapy before proceeding with anticancer therapy, and decided to undergo OCNT. The levels of carcer-antigen 19-9 and carcinoembryonic antigen decreased following the implementation n of OCNT. As such, case report is being made on this patient after having acquired the patient's consent.

Case

1. Subject

One case of a patient with pancreatic cancer was studied.

1) Name: OOO (75/M)

2) Name of diagnosis: Pancreatic cancer

3) Date of manifestation: Early 2023

4) Treatment period: Early 2023 ~ present

5) Main symptoms and complaints: Pancreatic cancer and diabetes

6) Past medical history: Prostate cancer and diabetes

7) Social history: None

8) Family history: None

9) Medications administered: Currently undergoing anticancer therapy

2. Method

The OCNT was performed in accordance with the following method.

Cyaplex F (101, two times a day, one packet each time)

Betaplex (101, two times a day, one packet each time)

Eufaplex (101, two times a day, one packet each time)

Enzaplex (101, two times a day, one packet each time)

Bioplex (101, two times a day, one packet each time)

Notoplex (101, two times a day, one packet each time)

Aqua SAC, (101, two times a day, one packet each time)

Heartberry Black (101, two times a day, one packet each time)

Cyaplex Mineral Bamboo Salt (101, two times a day, one packet each time)

Amiplex (101, two times a day, one packet each time)
Curcuplex (101, two times a day, one packet each time)
Hemoplex (202, two times a day, two tablets each time)
Selenaise Cap. (202, two times a day, two tablets each time)
Foods that are helpful with known anti-cancer actions including anti-cancer tomato-garlic rice and abalone-octopus rice were recommended as a part of dietary therapy. The recipes are as follows.

<**Anti-cancer Tomato-Garlic Rice**>
10 cherry tomatoes, 1/4 broccoli, 10 garlic cloves, 1 cup brown rice, soy sauce, whole sesame seeds, vinegar, red pepper powder, Non-Oxidized Essential Unsaturated Fatty Acid (NOEUFA) sesame oil, Aqua Pure, Heartberry Black, Sugar fiber, Cyaplex Bamboo Salt

1. Cut the tomatoes into halves and the broccoli into bite-sizes. Slice the garlic cloves in halves and set them aside for a short while.
2. Add the prepared tomatoes, broccoli and garlic to the brown rice soaked in water, along with 1/2 scoop of Acua Pure, Cyaplex Bamboo Salt and 1 sachet of Heartberry Black.
3. Make the marinade by combining 1 sachet of NOEUFA Sesame Oil, vinegar, soy sauce, whole sesame seed, red pepper powder and 1/2 sachet of Sugar Fiber.
4. Bring mixture to a boil over medium heat for about 5 minutes before reducing the heat to low. When the bubbling stops, let it stand for about 15 to 20 minutes to complete cooking.
5. Toss the rice with the marinade and wrap it in dried laver nori for an enhanced absorption rate.

<**Abalone-Octopus Rice**>
Ingredients: 1/8 sweet pumpkin, 50g radish, 50g carrot, 2 servings of sprouted brown rice or non-glutinous rice, 5 small abalones, some Undaria pinnatifida Sporophyll (head portion of seaweed), 1 three-legged octopus, 1 sachet of Curcuplex, chives or stem of garlic, bamboo salt and NOEUFA

1. Soak rice in water in advance.
2. Cut the sweet pumpkin, radish and carrot into pieces with a diameter of 0.8 cm.
3. Add water to pre-soaked rice at 1:1 ratio and cook over medium heat.
4. Add the sliced vegetables and soaked Undaria pinnatifida Sporophyll to the rice being cooked, and stir in a sachet of Curcuplex and continue to cook.
5. Trim the octopus and abalone, cut into bite sizes and add to the rice being cooked.
6. Lower the heat and let it stand.
7. Slit the remaining abalone in crisscross pattern and lightly grill with NOEUFA.
8. When the rice is fully cooked, add the grilled abalone and chives or stems of garlic, cover and turn off the heat.
9. Make the marinade and serve with the rice.

Results

This patient is a 75-year-old male with the past history of having developed prostate cancer several years ago and was fully recovered thereafter. Earlier this year, pancreatic cancer was detected and, since

he also has a long-standing history of diabetes, the patient's daughter-in-law recognized the need for adjuvant anti-cancer therapy and conducted an OCNT consultation on his behalf.

Anti-cancer therapy and OCNT were implemented concurrently, and his blood levels remained stable during the 4th round of anticancer therapy (Fig. 1). In addition, although the levels of carcinoembryonic antigen and anticancer antigen 19-9 were high before OCNT, these levels dropped significantly following OCNT (Fig. 2).

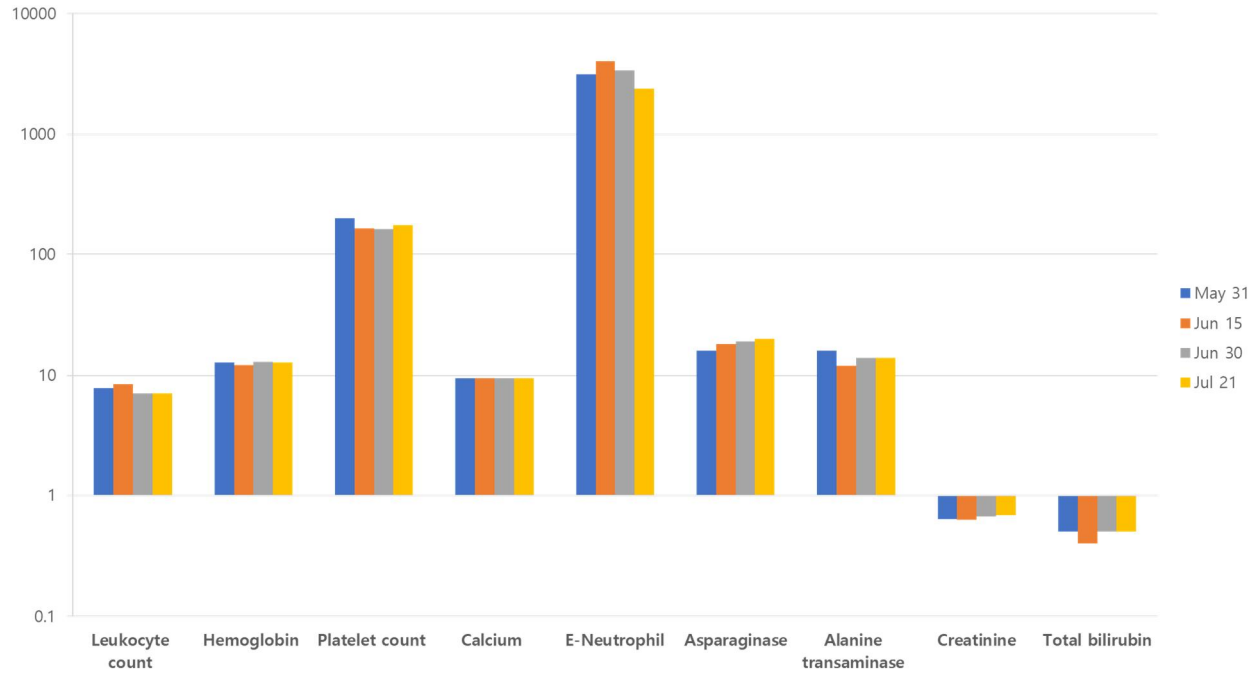

Fig. 1. Blood test levels during chemotherapy. Blood test results, which is an indicator of successful anticancer therapy, remained stable.

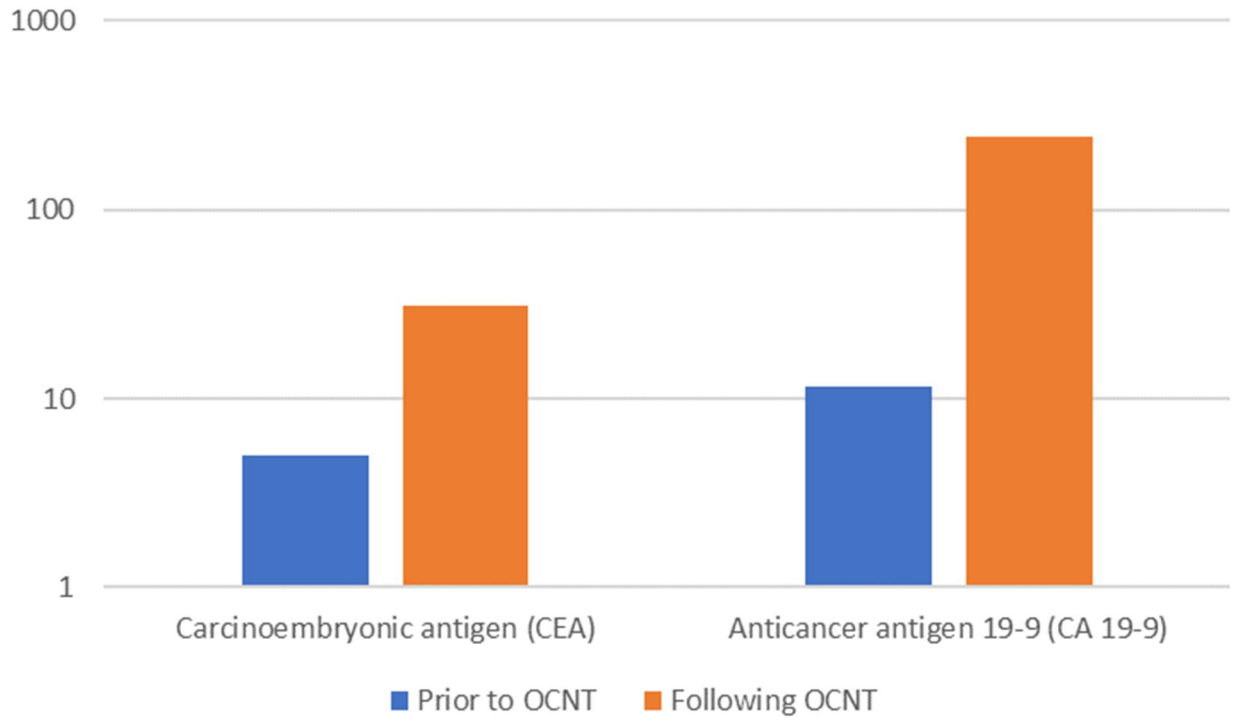

Fig. 2. Levels before and after OCNT: Levels of carcinoembryonic antigen (CEA) and anticancer antigen 19-9 (CA 19-9) dropped significantly.

Considerations

This pancreatic cancer patient has past history of prostate cancer and, since he also has a long-standing history of diabetes, began to undergo OCNT upon the recommendation of his family who were concerned about his wellbeing. The anthocyanin-fucoidan complex present in Cyaplex F, Betaplex and Enzaplex is chemically stable, thereby resulting in 3.24 times higher bioavailability than anthocyanins.[4] Anthocyanins inhibit pancreatic cancer cell migration to prevent migration and metastasis,[5,6] while fucoidan plays an antitumor role by stopping cancer cell progression, inducing apoptosis, inhibiting angiogenesis and reducing metastasis[7,8]. In addition, beta-glucan in Betaplex is a cancer-fighting immunostimulants that fortifies antitumor defense.[9] Oleic acid in Eufaplex enhances immunity[10,11] and linolenic acid plays antitumor role by inducing apoptosis.[12] Pancreatin present in Enzaplex is a pancreatic digestive enzyme and was added to OCNT to reduce the burden on the pancreas and to improve digestion of the patient. Bioplex was also added to OCNT to assist with harmonious digestion and bowel movements of the patient. Ginsenoside present in Notoplex has anti-cancer effect[13] and inhibits tumor angiogenesis and metastasis[14], and scutellaria extract powder also has anti-cancer effect.[15] Quercetin, a polyphenol found in Heartberry Black and Amiplex, displays anticancer effect by targeting pancreatic cancer stem cells.[16] Bamboo salt in Cyaplex Mineral [Bamboo Salt] has anti-cancer and anti-metastatic effects.[17] Curcumin in

the Curcuplex inhibits tumor growth in pancreatic cancer cell strains in a time- and dose-dependent manner by inhibiting the nuclear transcription factor, kappa B (NF-κB).[18] Lastly, tumor cells evade being eliminated by NK cells in the format of being surrounded by a coating that masks specific tumor antigens. Sodium selenite in Selenaise Cap. prevents this coating, thereby enabling the elimination of cancer cells. Moreover, it directly activates NK cells and inhibits angiogenesis.[19]

Although this is a report on a single case of pancreatic cancer and cannot be universally applied to all pancreatic cancer patients, it is being reported after having acquired the patient's consent because it is believed that OCNT was helpful in improving the symptoms of the patient.

References

1 Kang, M. J., Yun, E. H., Jung, K.-W. & Park, S.-J. Incidence, mortality and survival of gallbladder, extrahepatic bile duct, and pancreatic cancer using Korea central cancer registry database: 1999-2019. *Annals of Hepato-Biliary-Pancreatic Surgery* **26**, 220-228 (2022).

2 Lee, D. Y. *et al.* The influence of diabetes and antidiabetic medications on the risk of pancreatic cancer: a nationwide population-based study in Korea. *Scientific reports* **8**, 9719 (2018).

3 McGuigan, A. *et al.* Pancreatic cancer: A review of clinical diagnosis, epidemiology, treatment and outcomes. *World J Gastroenterol* **24**, 4846-4861 (2018).

4 Lee, J. Y. *et al.* Anthocyanin-fucoidan nanocomplex for preventing carcinogen induced cancer: Enhanced absorption and stability. *International Journal of Pharmaceutics* **586**, 119597 (2020).

5 Kuntz, S., Kunz, C. & Rudloff, S. Inhibition of pancreatic cancer cell migration by plasma anthocyanins isolated from healthy volunteers receiving an anthocyanin-rich berry juice. *European Journal of Nutrition* **56**, 203-214 (2017).

6 Mostafa, H. *et al.* Plasma anthocyanins and their metabolites reduce in vitro migration of pancreatic cancer cells, PANC-1, in a FAK- and NF-kB dependent manner: Results from the ATTACH-study a randomized, controlled, crossover trial in healthy subjects. *Biomedicine & Pharmacotherapy* **158**, 114076 (2023).

7 Atashrazm, F., Lowenthal, R. M., Woods, G. M., Holloway, A. F. & Dickinson, J. L. Fucoidan and Cancer: A Multifunctional Molecule with Anti-Tumor Potential. *Marine Drugs* **13**, 2327-2346 (2015).

8 Lin, Y. *et al.* The anti-cancer effects of fucoidan: a review of both in vivo and in vitro investigations. *Cancer Cell International* **20**, 154 (2020).

9 Wu, L., Zhao, J., Zhang, X., Liu, S. & Zhao, C. Antitumor effect of soluble β-glucan as an immune stimulant. *International Journal of Biological Macromolecules* **179**, 116-124 (2021).

10 Carrillo Pérez, C., Cavia Camarero, M. d. M. & Alonso de la Torre, S. Role of oleic acid in immune system; mechanism of

action; a review. *Nutrición Hospitalaria, 2012, v. 27, n. 4 (julio-agosto), p. 978-990* (2012).

11 Sales-Campos, H., Reis de Souza, P., Crema Peghini, B., Santana da Silva, J. & Ribeiro Cardoso, C. An overview of the modulatory effects of oleic acid in health and disease. *Mini reviews in medicinal chemistry* **13**, 201-210 (2013).

12 Serini, S., Piccioni, E., Merendino, N. & Calviello, G. Dietary polyunsaturated fatty acids as inducers of apoptosis: implications for cancer. *Apoptosis* **14**, 135-152 (2009).

13 Sun, M. *et al.* Anticancer effects of ginsenoside Rg3. *International journal of molecular medicine* **39**, 507-518 (2017).

14 Sato, K. *et al.* Inhibition of tumor angiogenesis and metastasis by a saponin of Panax ginseng, ginsenoside-Rb2. *Biological and Pharmaceutical Bulletin* **17**, 635-639 (1994).

15 Ye, F., Xui, L., Yi, J., Zhang, W. & Zhang, D. Y. Anticancer activity of Scutellaria baicalensis and its potential mechanism. *The Journal of Alternative & Complementary Medicine* **8**, 567-572 (2002).

16 Zhou, W. *et al.* Dietary polyphenol quercetin targets pancreatic cancer stem cells. *Int J Oncol* **37**, 551-561 (2010).

17 Park, K.-Y. & Zhao, X. (Wiley Online Library, 2012).

18 Li, L., Aggarwal, B. B., Shishodia, S., Abbruzzese, J. & Kurzrock, R. Nuclear factor-kappaB and IkappaB kinase are constitutively active in human pancreatic cells, and their down-regulation by curcumin (diferuloylmethane) is associated with the suppression of proliferation and the induction of apoptosis. *Cancer* **101**, 2351-2362 (2004).

19 Lipinski, B. Rationale for the treatment of cancer with sodium selenite. *Medical hypotheses* **64**, 806-810 (2005).