

세포교정영양요법(OCNT)을 이용한 장상피화생 환자 개선 사례 연구

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Case Study of an Atrophic Gastritis Patient Undergoing Ortho-Cellular Nutrition Therapy (OCNT)

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ABSTRACT

Objective: Case report on the improvement of intestinal metaplasia through ortho-cellular nutrition therapy.

Methods: A Korean woman in her 50s who is suffering from bloating, abdominal distension and frequent eructation after meals.

Results: Symptoms improved one year after the introduction of nutrition therapy, and patient was diagnosed as fully recovered from reflux esophagitis, atrophic gastritis, and intestinal metaplasia through gastroscopy.

Conclusion: In patients with complex gastrointestinal problems, the application of nutrition therapy may help improve and treat symptoms.

Keywords Ortho-Cellular Nutrition Therapy (OCNT), intestinal metaplasia, reflux esophagitis, atrophic gastritis

Introduction

There are several common conditions that can occur in the stomach, including acute gastritis, chronic gastritis, erosive gastritis, ulcerative atrophic gastritis, intestinal

metaplasia and stomach cancer as typical examples. Among these, intestinal metaplasia is a condition wherein the surface of the stomach wall (mucosa) change to resemble the surface of the small intestine wall. Whereas the cause is not yet fully understood, atrophic gastritis (thinning of the gastric mucosa) which is a type of chronic gastritis typically develops into intestinal metaplasia, and accordingly prolonged exposure of the stomach wall to inflammation is suspected to be one of the main causes.¹ That is, it is speculated that inflammatory agents intervene in the regenerative processes wherein stomach mucosa cells

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are replaced and regenerated due to inflammation or injury, accelerating the phenomenon in which the gastric mucosa changes to resemble the intestinal mucosa.² To date, there is no clear method of treatment to completely cure intestinal metaplasia from a modern medical point of view. Intestinal metaplasia cells are considered precancerous cells as they can develop into stomach cancer through dysplasia. Intestinal metaplasia is diagnosed by observation only if clearly distinguished during endoscopy, and by biopsy when it is difficult to make a judgment based on observation alone. If there is a family history of stomach cancer or the appearance of the intestinal metaplasia cells is abnormal, endoscopic observation is recommended every 6 months. In the case of moderate intestinal metaplasia, endoscopic observation is recommended once a year, and endoscopic observation is recommended once every 2 years for the early stages. Once intestinal metaplasia has been diagnosed through endoscopic observation, hospitals recommend regular endoscopic observation. The only possible response of modern medicine is early surgical intervention if development of intestinal metaplasia into stomach cancer is found through regular observation. A patient diagnosed with intestinal metaplasia may feel anxious, as the condition may turn into cancer at any time. Patients with normally good digestion often suffer from indigestion due to such anxiety after being diagnosed with intestinal metaplasia. Several studies have shown that intestinal metaplasia patients have a stomach cancer morbidity 11 times higher than healthy persons.¹ Whereas intestinal metaplasia has a probability of around 2% to develop into stomach cancer in Europe, in Korean cancer morbidity statistics, stomach cancer was ranked first in 2018 and has consistently been ranked third to fourth thereafter. In addition, because intestinal metaplasia morbidity increases with age, Koreans must be especially cautious of intestinal metaplasia.

The patient in the case at hand is a female of age 55 diagnosed with reflux esophagitis, atrophic gastritis, and intestinal metaplasia in March 2022. She suffers from various problems in everyday life and eating due to her complex stomach problems. The results of applying nutritional therapy to the above patient are reported below.

Case

1. Subject(s)

The subject was 1 intestinal metaplasia patient.

- 1) Name: O O O (F/55 yrs)
- 2) Name of diagnosis: Reflux esophagitis, atrophic gastritis, intestinal epithelial metaplasia
- 3) Date of onset: March 16, 2022
- 4) Duration of treatment: June 15, 2022 to June 20, 2023 (about one year)
- 5) Chief complaint(s): Indigestion of flour-based foods, eructation, abdominal distension
- 6) History: Hypothyroidism, ovarian cysts, chronic rhinitis
- 7) Social history: None
- 8) Family history: None
- 9) Drugs taken: Synthroid

2. Methods

Nutrition therapy was applied as follows.

Herbal granules to help digestion

Cyaplex X (101, one sachet twice a day),

Eufaplex Stick (101, one sachet twice a day),

Gastron (101, one sachet twice a day)

Aqua SAC Pure (101, one sachet twice a day)

Cyaplex Mineral Bamboo Salt (0.5 0 0.5, half sachet twice a day)

Collaplex (101, one sachet twice a day)

Administered for a total of 12 months and 5 days.

3. Dietary guidance

- * Avoid alcohol, flour-based foods (especially instant noodles and bread), fried food, coffee, and heavily spiced food.
- * Excessive sugar toxins in fruit cause inflammation; eat in moderation only.
- * Avoid cold water, Cola, Sprite, processed juice, yogurt with added sugar, etc.
- * Avoid foods prepared using cooking oil if possible, as oxidation of cooking oil due to heat supplies fatty acids to the cell membrane and causes inflammation.
- * Always eat warm food to maintain an appropriate temperature of 38 degrees Celsius in the stomach.
- * Blanched cruciferous vegetables like cabbage and broccoli can improve gastrointestinal health.
- * Avoid fried or grilled food; blanch or boil instead.
- * No dairy products including milk.

4. Dietetics

Three meals a day. Based on a regular diet of appropriate portions of Korean food.

1. Mixed grain rice, white rice if trouble digesting. Diet built around blanched greens, vegetables, seaweed, fish and fermented pastes and sauces (fermented soybean paste (*cheonggukjang* / *dwenjang*), soy sauce)
2. Consume the following vegetables: beans, carrots, zucchini, garlic, onion and mountain herbs. Consume the following seaweeds: kelp, sea mustard and laver.
3. Use only bay salt as seasoning.

Diet was managed concurrently as above with nutrition therapy.

Results

The patient in the case at hand was a 55-year-old female suffering bloating and frequent eructation after meals. The patient visited the clinic on March 16, 2022 and received a gastroscopy. The patient was diagnosed with reflux esophagitis, atrophic gastritis, and intestinal metaplasia. To reduce discomfort of the patient suffering from complex stomach dysfunction in everyday life, nutrition therapy was applied. Approximately 2 months into therapy, the patient reported reduced stomach discomfort after meals. The patient underwent surgery and took anti-inflammatory drugs for about three weeks due to an ankle fracture around 6 months into nutrition therapy, but OCNT was adhered to concurrently. After seven months, the patient no longer suffered from digestive problems, and has continued to adhere to nutrition therapy thereafter. 12 months and 5 days into OCNT, the patient visited the clinic for a gastroscopy, and was found to be completely cured of reflux esophagitis, atrophic gastritis, and intestinal metaplasia. First, in the case of reflux esophagitis, comparing the pre- and post- therapy images, the boundary between the stomach and esophagus has disappeared and returned to normal (**Fig. 1**).

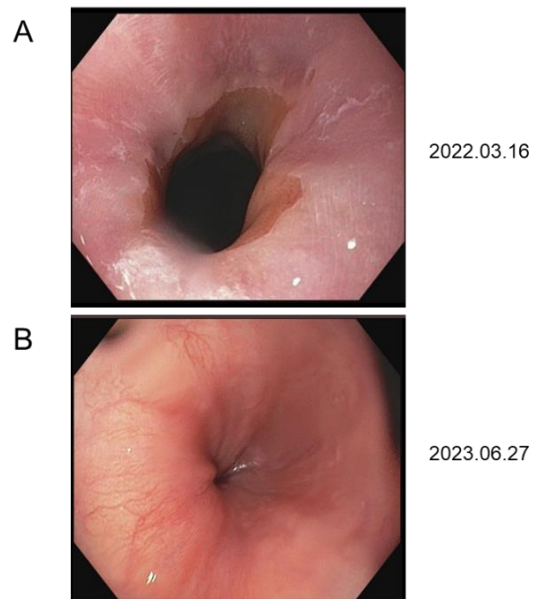


Fig. 1. Reflux esophagitis in patient before and after nutrition therapy. (A) Gastroscopy image of patient at initial diagnosis of reflux esophagitis. (B) Image after patient was diagnosed as fully cured of reflux esophagitis.

For atrophic gastritis, the layers of the gastric mucosa were found to have become very thin due to chronic inflammation, and blood vessels passing under the mucosa were visible prior to nutrition therapy (**Fig. 2A**). After nutrition therapy was administered, most of the mucosa was restored to normal (**Fig 2B**)

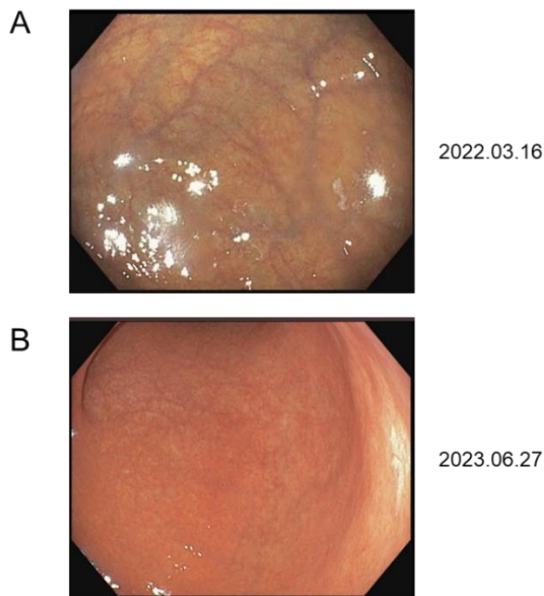


Fig. 2. Atrophic gastritis in patient before and after nutritional therapy. (A) Gastroscopy image of patient at initial diagnosis of atrophic gastritis. (B) Image after patient was diagnosed as fully cured of atrophic gastritis.

For intestinal metaplasia, abnormal gastric mucosa cells were no longer observed (**Fig.3**).

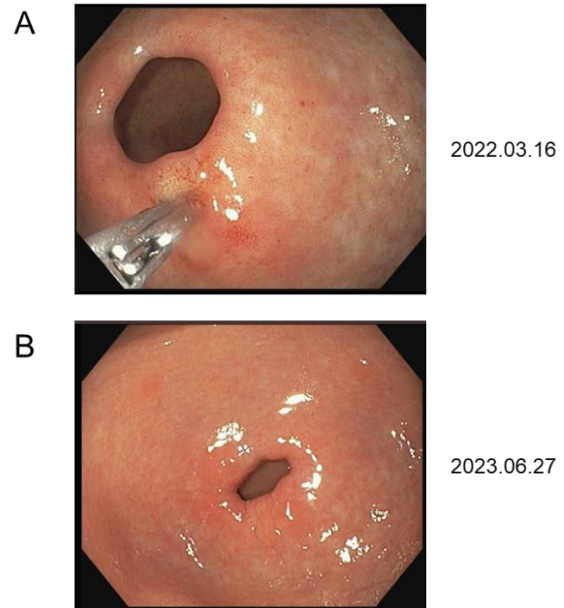


Fig. 3. Intestinal metaplasia in patient before and after nutrition therapy. (A) Gastroscopy image of patient during tissue biopsy at initial diagnosis of intestinal metaplasia. (B) Image after patient was diagnosed as fully cured of intestinal metaplasia.

Discussion

The patient in the case at hand was suffering discomfort due to gastrointestinal function, and was enduring the symptoms by taking PPI antacids, prokinetics and digestive aids. It is thought that symptoms in the case at hand were aggravated due to failure to address the underlying cause. First, the patient's gastric mucosa was expected to be very sensitive due to inflammation caused by acid reflux and various external stresses. Therefore, in order to protect the gastric mucosa cells from free radicals, anthocyanins were prescribed. Anthocyanins, the most potent antioxidant of plant flavonoids, have been reported to have anti-oxidant and anti-inflammatory properties, and *in vitro* experiments have shown them to be involved in the growth inhibition response of tumor cells.^{3,4} The

patient had thinning of the gastric mucosa due to chronic inflammation, with the blood vessels passing under the mucosa clearly visible. Accordingly natural collagen was administered through Collaplex for regeneration of the mucosa. Collagen is reported to decrease by 1% each year with age,⁵ therefore a steady intake of collagen can help maintain the skin and mucous membranes. Gastron contains natural mucin polysaccharides, which contribute to not only the protection of the gastric mucosa but also to the improvement of the cell membrane receptors to some extent. This may protect the stomach wall from reflux esophagitis and help cell membrane protein signaling to maintain normal gastric function.^{6,7} In cases such as hypochlorhydria where the stomach is not able to produce enough stomach acid, insufficient proteolytic breakdown may cause indigestion and abdominal bloating. The secretion of gastric acid is controlled by cells called parietal cells in the gastric mucosa, and it has been shown that Ca^{2+} is involved in gastric acid secretion.⁸ *In vitro* experiments have shown that gastric acid secretion is reduced when the Ca^{2+} ions of the parietal cells are precipitated and normal function is restricted.⁹ Therefore, minerals such as calcium, magnesium, zinc, iron, potassium, manganese, phosphorus, and copper contained in Cyaplex Mineral Bamboo Salt can help improve patients with hypochlorhydria. The precise cause of intestinal metaplasia has not yet been reported, but some view intestinal metaplasia as being caused by decreased oxygen saturation due to cell membrane degeneration and oxidation, and the regulation of epigenetic gene expression. Experiments by Nobel laureate Dr. Otto Heinrich Warburg of Germany report that cells die or differentiate into cancer cells when oxygen saturation falls below 65%.¹⁰ Therefore, the cause of intestinal metaplasia, which is recognized as precancerous stage in modern medicine, may be related to oxygen saturation. In this respect, Eufaplex contains unoxidized essential fatty acids which can help supply the fatty acids required for cell

membrane synthesis, and the unsaturated fatty acid linoleic acid produces GLA (all-CIS-6,9,12-octade catalytic acid, C18:3, n-6) through D-6-desaturase, GLA and its metabolites being important in selective inhibition of tumor cells by playing a crucial role in regulation of cell death.^{11,12} Thus, Eufaplex may help prevent the differentiation of abnormal gastric mucosal cells such as intestinal metaplasia cells. Using the above OCNT method, the patient no longer experienced problems with gastrointestinal function and was diagnosed as fully cured of reflux esophagitis, atrophic gastritis, and intestinal metaplasia. Whereas the case at hand is a single case, it is reported with the consent of the patient as it is possible that it may have helped improve and treat symptoms in a patient suffering poor quality of life due to complex gastrointestinal function issues.

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