



Case Report

Functional abdominal pain syndrome treated with Korean medication

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ABSTRACT

A 37-year-old female patient with chronic and stubborn abdominal pain had been hospitalized five times in three Western hospitals, but no effects were observed. No abnormalities were found in blood tests, gastrointestinal endoscopy, sonogram, and computed tomography of the abdomen, except mild paralytic ileus. The patient decided to rely on Korean medicine as an inpatient. She was diagnosed with functional abdominal pain syndrome, and her symptom differentiation was the “Yang deficiency of spleen and kidney.” A herbal drug, *Hwangikyeji-tang*, along with moxibustion and acupuncture, was given to the patient. Abdominal pain and related symptoms were reduced radically within 16 days of treatment. This report shows a therapeutic potential of Korean medicine-based treatment for functional abdominal pain syndrome.

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1. Introduction

Abdominal pain, either mild or severe, is a common symptom that everyone experiences. Most cases are benign and self-limiting, but more serious cases may require urgent intervention.¹ Abdominal pain can be acute or occur over months in a chronic pattern. Ten percent of school-going children and adolescents experience chronic abdominal pain, which is prevalent in children and women.² Abdominal pain can have numerous causes; therefore, diagnosing the cause can be difficult. In particular for chronic abdominal pain cases, doctors find it difficult to yield a diagnosis based on patients' medical histories, physical examinations, and laboratory tests.³

Some cases of chronic abdominal pain involve physiologic illnesses, where the remaining cases are related to functional disorders. In particular, functional abdominal pain syndrome (FAPS) represents chronic abdominal pain with features that differentiate it from other painful functional gastrointestinal disorders, such as irritable bowel syndrome and functional dyspepsia, by the lack of a symptom relationship to food intake or defecation.^{4,5} The prevalence of FAPS has been estimated to be 0.5–2.0%; it is more common in women.⁶ A wide range of therapeutics including antidepressants, anticonvulsants, psychotherapy relaxation techniques, and complementary therapies are being used; however, FAPS frequently raises serious medical problems and economic burden.⁷

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Table 1 – Diagnostic Criteria for Functional Abdominal Pain Syndrome.

Must have all the following symptoms for the past 3 months, with symptom onset being at least 6 months prior to diagnosis:

1. Continuous or nearly continuous abdominal pain
2. No or only occasional relationship between pain and physiological events (e.g., eating, defecation, or menses)
3. Some loss of daily functioning
4. No feigned pain (e.g., malingering)
5. Insufficient symptoms to meet criteria for another functional gastrointestinal disorder that would explain the pain

From a Korean medicine (KM) point of view, chronic abdominal pain including FAPS belongs to the category of cold-associated pains. Accordingly, the main treatment strategy for FAPS is to expel the coldness.⁸ In order to promote the development of therapeutics for FAPS, this study reports a case of a refractory FAPS patient who was cured by KM-based therapeutics, including *Hwangikyegi-tang*, in an oriental hospital.

2. Case report

2.1. Characteristics of the patient and medical history

A 37-year-old woman having chronic abdominal pain visited an oriental hospital; the complications included weight loss (3.0 kg in the past 1 year) and serious fatigue. The patient had been suffering complex discomforts of the gastrointestinal tract such as bearable pain in the whole abdomen, feeling of flatulence, severe dyspepsia, belch, occasional burning sensation, and cold sweat. The symptoms had been continuing for 1 year, and the pain pattern was not related to defecation or eating. She was usually susceptible to stress and had to quit her job because of untreated abdominal pain.

The patient had been hospitalized five times (during April 2011–May 2012) in three Western hospitals, but no abnormality or improvement of abdominal pain was observed. Immediately after the last discharge from a Western hospital, she decided to visit an oriental hospital (May 2012). The patient had no previous history of alcohol or drug abuse, or smoking, and had no specific family and past history. Her husband had passed away suddenly, and no other causes for her symptoms were detected.

2.2. Diagnosis, treatment, and course of symptom

The patient had been examined thoroughly in previous Western hospitals and an oriental hospital. The gastroendoscopy, abdominal computed tomography, biochemistry, complete blood counts, and urinalysis revealed no significant abnormality. Simple abdomen X-ray showed a mild pattern of paralytic ileus as a slight accumulation of gas in the gastrointestinal tract. The patient was diagnosed with FAPS according to the diagnostic criteria for FAPS (Table 1).⁷ Physical features of the patient included a thin body type (body mass index 17.5, height 155 cm, and body weight 42 kg), cold hands and feet, anorexia, dyspepsia, nausea, mild headache, dizziness, and lassitude. Her tongue had a mild white-colored coating, and pulsation

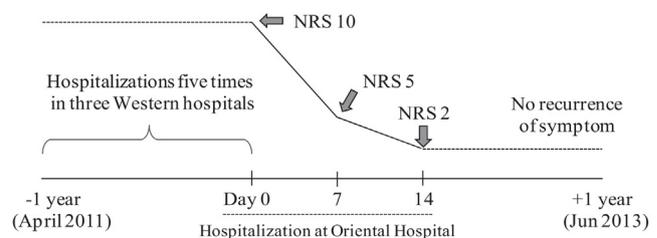
Table 2 – Composition of *Hwangikyegi-tang*.

Scientific name	Herbal name	Dose (g)*
<i>Cinnamomum cassia</i> Blume	Ramulus	22.5
<i>Paeonia japonica</i> (Makino) Miyabe and Takeda	Radix	15
<i>Astragalus</i> <i>membranaceus</i> Bunge	Radix	15
<i>Cynanchum wilfordii</i> Hemsley	Radix	7.5
<i>Angelica gigas</i> Nakai	Radix	7.5
<i>Glycyrrhiza uralensis</i> Fischer	Radix	7.5
<i>Zingiber officinale</i>	Rhizoma	7.5
<i>Zizyphus jujuba</i>	Fructus	7.5

* The indicated dose is weight of each herb to be taken by an adult in a day.

was weak and rapid. Accordingly, the symptom differentiation was diagnosed as “Yang deficiency of spleen and kidney.” Using the Sasang Constitution Classification II this diagnosis belonged to the Soeumin classification type.

As an inpatient, the patient was administered a herbal drug, *Hwangikyegi-tang* (Table 2), three times a day. In addition, acupuncture treatment (mainly at CV12, HT7, LI4, and SP3 twice daily for 20 minutes with 0.25 mm × 30 mm needles purchased from DongBang Co., Seoul, Korea), indirect moxibustion (at KD1, CV4, and CV8 for 30 minutes daily with 3.5 g of wormwood fiber on the top of a salt basement inside a bamboo; diameter: 30 mm, length: 40 mm, purchased from KyeGoo Inc., Incheon, Korea), and Miso-pack (application of 150 g of soybean paste on the middle abdomen for 20 minutes every day) were given to the patients. From the 3rd day in hospital, abdominal pain started to decrease notably. Moreover, other related symptoms including anorexia, dyspepsia, nausea, headache, and dizziness were improved moderately. Her abdominal pain disappeared completely within 16 days of treatment; the scores on a self-reporting numerical rating scale (0 means no pain, whereas 10 implies the worst severity) were 5 on Hospitalization Day 7 and 2 on Hospitalization Day 14.⁹ In addition to almost complete disappearance of the white-colored coating on the tongue and improvement of pulsation, she had gained about 1 kg of body weight during hospitalization. It was confirmed that FAPS did not recur for 1 year when the patient was interviewed via telephone (Fig. 1).

**Fig. 1 – Summary of clinical outcome and treatment course.**

3. Discussion

This report presents a case of FAPS. FAPS, also called “chronic idiopathic abdominal pain” or “chronic functional abdominal pain,” is defined as chronic abdominal pain that is poorly related to gut function. FAPS is known to occur in 1.7% of people, mainly in women (female:male = 3:2) with a peak prevalence in the 4th decade of life, and is associated with significant absenteeism from work.¹⁰ These facts are in accordance with the current case, as the 37-year-old female took time off from work because of the symptoms.

An organic cause for pain should be excluded in the diagnosis of FAPS. This patient had been hospitalized in Western hospitals five times; however, no specific abnormality was found. In fact, many patients with FAPS tend to have reparative specialist referrals, diagnostic tests, and abdominal operations.¹¹ One common feature of FAPS is a close relationship with a variety of psychiatric and psychological conditions.¹² The patient of this case study showed a mild paralytic ileus pattern; however, this finding was not considered the cause of pain but a consequence of chronic abdominal pain. This patient was introverted and sensitive to stress; thus, the sudden death of her husband 3 years ago is assumed to have induced the development of this disorder. FAPS seriously impairs the quality of life of patients, who have poor social or family support.^{13,14} FAPS generally increases the risk for suicidal behaviors among patients without any previous history of comorbid depression.¹⁵

To date, no standard treatment exists for FAPS; the treatment is only empirical. Hyoscine butylbromide has been used to treat cramping abdominal pain, but clinical evidence of its use is limited.¹⁶ Functional abdominal pain is common among children and adolescents; S-adenosylmethionine, a dietary supplement, has been proved to reduce abdominal pain among children with functional abdominal pain.¹⁷ An effective patient–physician relationship and combination of treatment options should be considered in the treatment of FAPS patients.¹⁸ However, those are often overlooked, and patients experience excessive testing, unnecessary treatment including surgery, and costly management.¹⁹ Accordingly, many patients fail to recover from FAPS, following which they often choose complementary and alternative therapies, such as spinal manipulation, massage, or acupuncture.^{20,21} Only one study was reported on abdominal pain treated with KM-based therapies, in which recurrent abdominal pain in children was caused mainly by food and cold.²²

The patient of this case report showed a positive response to KM-based therapies, such as herbal drug, moxibustion, acupuncture, and Miso-pack. In traditional KM, numerous herbal drugs have been prescribed for patients with abdominal pain including FAPS. She had been prescribed with an herbal decoction, *Hwangikyeji-tang*, initially described in *Donguisusebowon*. This drug treats the symptoms related to the “early-stage depletion of Yang” of Soeumin. Even though the patient had been diagnosed to have “Yang deficiency of spleen and kidney”, it is basically of the same mode as the “early-stage depletion of Yang.” In addition, the main compositional herb, *Cinnamomum cassia*, may be effective for both “spleen-Yang deficiency” and “kidney-Yang deficiency”. The

patient was classified as Soeumin according to the Sasang constitution, with characteristics of cold hands and feet, and diaphoresis.

Acupuncture points (CV12, HT7, LI4, and SP3) were selected to maintain a proper balance between spleen and kidney according to the Sasang medicine theory. In addition, indirect moxibustion treatment (mainly at abdomen, CV4 and CV8) was given to the patient, because moxibustion provides heat energy and expels cold–damp stagnation.²³ Miso-pack was also applied on her abdomen to activate enterokinesia. After being discharged from the oriental hospital, she recovered from the abdominal pain, gained weight, and was relieved from other symptoms.

In summary, despite the present study being limited to only one case, it shows that KM-based treatment strategy may be an effective therapeutic option for FAPS. Further study is needed to verify the therapeutic effects of herbal drugs, especially *Hwangikyeji-tang*.

Conflicts of interest

The authors declare no conflicts of interest.

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