

Integrating Kampo and Evidence-Based Medicine (8)

The Efficacy of Daiobotanpito against Colon Diverticulitis

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Professor Keiko Ogawa of Kanagawa University Hospital is a pediatric surgeon, but she treats a wide range of diseases as a specialist of Kampo medicine today, and is now an indispensable presence to the hospital. She is a precious friend of mine, and we often mutually share our experiences.

In a seminar held in 2016, she presented an extremely interesting case¹⁾. It was a case in which colon diverticulitis was treated with a decoction of the Kampo drug daiobotanpito, in addition to an antimicrobial. The case is introduced below.

Case report

Case: 35-year-old woman

Past medical history, family history: None in particular

History of present illness: After giving birth, the woman experienced no abnormal progress in particular, but a condition of poor bowel movement continued. Around three weeks after giving birth, her poor bowel movement worsened, and her entire stomach felt heavy. It did not improve even when she took a Tokakujokito extract. From a little past noon, she began to feel sudden pain in the right lower quadrant. The pain intensified, and became exacerbated when she walked.

Present condition: Height 166cm, weight 54kg, blood pressure 110/60mmHg, body temperature 38.7°C

Pulse pattern: Moderately floating and sinking but excessive, somewhat rapid, string-like, somewhat smooth

Tongue pattern: Red, covered with a slight white coating

Abdominal pattern: Intermediate abdominal strength, strong tenderness from the right side of the ileocecal area to the right lower quadrant,

tenderness also in the paraumbilical area. No suspicion of peritonitis, such as rebound tenderness or muscular defense.

Non-contrast abdominal CT: There is marked thickening and fecal calculus in the ascending colon wall and an inflammatory change in the surrounding tissue. The appendix can be seen away from the center of the inflammation.



Photo 1

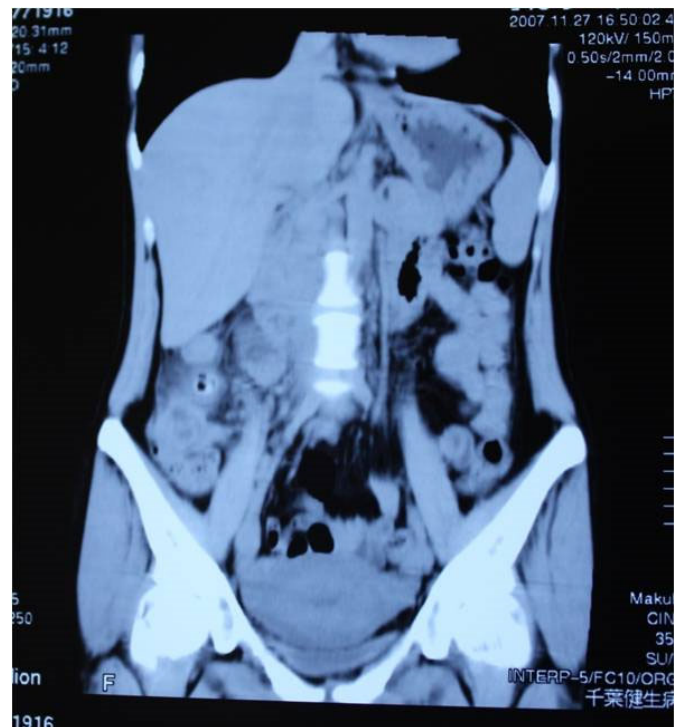


Photo 2

Diagnosis: Colon diverticulitis

Treatment:

1st day: Immediately after diagnosis, a decoction of daiobotanpito was prepared (Botanpi (Cortex Moutan) 4.0g, Tonin (Semen Persicae) 4.0g, Togashi (Semen Benincasae) 4.0g, Boshu (Natrii Sulfas) 4.0g, Daio (Radix et Rhizoma Rhei) 2.0g).

At 8 p.m., the patient took a dose of the daiobotanpito decoction.

Around 11 p.m., she passed a large amount of stool that she had not passed during the past several days. Body temperature of 37.3°C.

The pain in the right lower quadrant decreased in frequency and intensity, such that she rated it a 4/10 on the Numeric Rating Scale (NRS).

2nd day: The patient underwent abdominal echo and CT inspections. Her appendix was 6.5mm and was slightly swollen, but the layer structure was maintained. Body temperature of 37.3°C. WBC 9700, neutrophil 76%. CRP 5.6.

A 1g intravenous drip of the antimicrobial CEZ was begun. Daio was increased to 3g/day.

3rd day: Daio was increased to 4g/day. Two bowel movements. Regular stool.

4th day: Daio was increased to 6g/day. Three bowel movements. Slightly loose stool.

The jarring pain that accompanied movement disappeared, but there was a slight tenderness in the right lower quadrant.

The antimicrobial was terminated.

6th day: Body temperature of 36.0°C, three bowel movements, loose stool.

Only an extremely slight tenderness remained in the right lower quadrant. The patient resumed breastfeeding.

7th day: Three bowel movements, diarrheal stool. Daio was decreased to 5g/day, and the abdominal tenderness disappeared.

8th day: The drug was terminated, and treatment was completed.

The bold treatment surprised the audience who listened to this report. The standard treatment for colon diverticulitis, which presents acute symptoms such as abdominal pain and fever, is through fasting or intravenous antimicrobial therapy, and requires hospitalization in most cases. It therefore drifted through the minds of the audience that treatment that relies on Kampo may be dangerous.

Seeing everyone's reactions, Dr. Ogawa smiled and said as follows: "Actually, the subject of this case is me." She had used her own body to monitor the efficacy of Kampo medicine. As an outstanding surgeon, Dr. Ogawa had monitored her own clinical condition with conviction, but to those of us in the audience, it was a surprising case presentation.

The case is highly instructive.

First, Dr. Ogawa received an intravenous drip infusion of an antimicrobial, the standard treatment, but without being hospitalized. There was no need for her to be hospitalized. As a result, her treatment period was able to be shortened compared to the average length of treatment, and she was able to resume breastfeeding quickly. This was possible because Dr. Ogawa was thoroughly familiar with the disease, and she knew fully the efficacy of standard treatment and the potentials of Kampo medicine.

After the above experience, Dr. Ogawa thought that using daiobotanpito for colon diverticulitis would be useful to many patients, and thus carried out a clinical study with her surgeon colleagues at the Japanese Red Cross Kanazawa Hospital. The study was published in e-CAM under the title, "Effectiveness of Traditional Japanese Herbal (Kampo) Medicine, daiobotanpito, in Combination with Antibiotic Therapy in the Treatment of Acute Diverticulitis: A Preliminary Study"²⁾.

Let me introduce the paper below.

The study by Dr. Ogawa et al.

Dr. Ogawa et al. visited the Japanese Red Cross Kanazawa Hospital from January 2010 to March 2012, and studied 34 patients who were diagnosed with acute colon diverticulitis. The patients were an average age of 45.1 years (ages 22 to 79), and consisted of 28 men and 6 women. 28 patients suffered colon diverticulitis in their right quadrant, and 6 in their left quadrant.

Diagnosis was based on physical findings and computed tomography (CT) images. CT findings of colon diverticulitis would show a diverticulum-like structure in the region affected by abdominal pain and tenderness, as well as a thickening of the intestinal wall, an increase in the concentration of panniculitis, an exteriorization of fascia, and accumulation of exudate. The standard treatment for acute simple diverticulitis consists of bowel rest (fasting), rehydration, and intravenous administration of an antibiotic.

The patients who were selected as subjects of the study were administered an antibiotic until their CRP level reached a normal level. Of the 34 patients, 10 were administered three days' worth of daiobotanpito 7.5g/day^{Note 2}. The other 24 composed a non-administration group.

Of these patients, one patient who was administered daiobotanpito had to undergo surgery (11 days of conservative treatment failed to improve the patient's symptoms, and the patient had intestinal stenosis), and three patients in the non-administration group also had to undergo surgery (one patient's symptoms worsened after five days of conservation treatment, another patient's symptoms failed to improve after 18 days of conservation treatment and the patient had stenosis and abscess, and the other patient's symptoms failed to improve after 7 days of conservation treatment and the patient had abscess).

An examination of the progress of treatment among cases in which conservative treatment was successful showed that the number of days until the patient's fever subsided was 2.3 days in the daiobotanpito administration group and significantly shorter than the 3.4 days in the non-administration group. The number of days until the patient's abdominal pain and tenderness disappeared was 4.8 days in the administration group and significantly shorter than the 5.8 days in the non-administration group. The number of days until the patient was able to commence meals was 5.1 days in the administration group and tended to be shorter compared to the 6.1 days in the non-administration group. The number of days until the patient was discharged from the hospital was 7.6 days in the administration group and tended to be shorter compared to the 9.0 days in the non-administration group.

The result of the preliminary study was as presented above. As the number of subjects was small, it is difficult to say with certainty, but it appears that combining daiobotanpito with standard treatment has a favorable effect on mitigating symptoms and shortening treatment periods.

Daiobotanpito and its indications

daiobotanpito is a prescription that is mentioned in Chapter 18 of *Kinkyoryaku* (Essential Prescriptions from the Golden Cabinet), a Chinese classic written some 1800 years ago, and intestinal welling abscess is purulent inflammation in the abdominal cavity. As this is an ancient concept of the disease, it is difficult to identify the modern disease it corresponds to. However, appendicitis was likely the main lesion.

The prescription has been used in Japan frequently since 300 years ago, when the studies of *Shokanron* (Treatise on Cold Damage Disorders) and the above-mentioned *Kinkyoryaku* became popular.

These medical texts contain diverse case reports, including not only intra-abdominal inflammation, but also rectovaginal fistula, perianal abscess, hemorrhoid, anal prolapse, and renal calculus.

Dr. Keisetsu Otsuka, a pioneer in the renaissance of Kampo medicine, states that daiobotanpito needed to be administered to many appendicitis patients in the 1930s, but thereafter, the number of appendicitis cases to which the prescription applied decreased. Eventually, the incidence itself of appendicitis declined. As a result, the prescription applies more to colon diverticulitis today.

It must be noted, however, that the prescription contains Rhubarb and Magnesium sulfate, which are purgative, so patients may experience diarrhea. Nevertheless, as seen in Dr. Ogawa's personal case, mostly regular stool is passed initially after taking the prescription, and frequently turns to diarrhea after the inflammation subsides^{Note3}). In the above preliminary study as well, hardly any patients experienced diarrhea.

Conclusion

Dr. Ogawa's personal case report, as presented earlier, and the above study revealed that standard treatment for colon diverticulitis progresses favorably in many cases in combination with the administration of daiobotanpito, and there have been many replication studies of this result. New clinical studies are also being planned³), so in a few years' time, the applicability of this prescription for colon diverticulitis is expected to become even clearer.

With respect to my classification, this case falls under Type 2.

Note 1) daiobotanpito (Da Huang Mu Dan Pi Tang)

The nominate is daiobotanto (Da Huang Mu Dan Tang). It is a prescription mentioned in *Kinkyoryaku*, a medical classic written some 1800 years ago.

Intestinal welling-abscess manifests with swelling and glomus in the lesser abdomen that is Painful when pressed as with strangury, regular urination, frequent heat effusion, spontaneous sweating, and aversion to cold. With slow and tight pulses, pus has not yet formed and purgation can be applied. There should be blood in the stool. With surging and rapid pulses, pus has been formed and purgation is prohibited. Daiobotanpito (Da Huang Mu Dan Tang, Rhubarb and Moutan Decoction) is indicated.

Da huang (Radix et Rhizoma Rhei) 4 liang

Mu dan pi (Cortex Moutan) 1 liang

Tao ren (Semen Persicae) 50 Pcs

Dong gua zi (Semen Benincasae) 1/2 sheng

Mang xiao (Magnesii Sulfas) 3 ge

Decoct all ingredients except mang xiao (Natrii Sulfas) in 6 sheng water until 1 sheng remains.

Discard the dregs, add mang xiao (Natrii Sulfas) and bring to a boil.

Take warm as one dose.

If pus is present, it will be purged; if there is no pus, blood will be purged.

Note 2) The quantities of each drug contained in Tsumura daiobotanpito were as follows in the preliminary study:

Radix et Rhizoma Rhei 2.0g

Cortex Moutan 4.0g

Semen Persicae 4.0g

Semen Benincasae 6.0g

Magnesii Sulfas 1.8g

Note 3) Diarrhea experienced after taking daiobotanpito

Dr. Kunio Matsuda, who studied under Dr. Otsuka, wrote about his experience in using daiobotanpito to treat his wife's appendicitis, and noted that his wife experienced no diarrhea in the beginning despite the prescription containing Magnesium sulfate 10g and Rhubarb 10g. However, she began passing severe diarrhea after her pain and fever subsided⁴). This should be taken into consideration from a clinical perspective.

Cited References

1. Keiko Ogawa: “The Effectiveness of daiobotanpito in the Treatment of Colon Diverticulitis,” *Kampo Medicine Seminar for Medical Students*, 2016 (in Japanese).
2. Keiko Ogawa, Koji Nishijima, Fumino Futagami, Takashi Nakamura and Genichi Nishimura: Effectiveness of Traditional Japanese Herbal (Kampo) Medicine, Daiobotanpito, in Combination with Antibiotic Therapy in the Treatment of Acute Diverticulitis: A Preliminary Study, *Evidence-Based Complementary and Alternative Medicine* Volume 2013
3. Hiroshi Koike et al.: “Examination of the Effectiveness of daiobotanpito against Colon Diverticulitis: Research Plan for an Open-Label Randomized Controlled Trial,” *Kampo Medicine* Vol. 67, Collection of Summaries of Presentations Given at the 67th General Academic Meeting of the Japan Society for Oriental Medicine, p. 308, 2016 (in Japanese).
4. Kunio Matsuda: *Case Studies of the Reality of Kampo Treatment*, p. 261, Sogensha, 1992 (in Japanese).