대한한의진단학회지 제26권 제1호 (2022년 10월)
The Journal of the Society of Korean Medicine Diagnostics. 2022:26(1):28-35.
[원저 Original Article]

한방치료를 병행한 봉와직염 환자의 치험 1례

조나영[1*]
1. 세명대학교 한의과대학 진단학교실

Abstract

A case of oriental medical treatment for a patient with cellulitis

NaYoung Jo[1]

1 Department of Diagnostic, College of Korean Medicine, Semyung University

Cellulitis is an acute bacterial disease that mainly affects the upper and lower extremities. Symptoms include fever, swelling, pain, chills, and headache. In this disease, antibiotics and anti-inflammatory drugs are usually continuously administered, but there are cases in which the treatment is prolonged or the effect is weak. This study is a case of improvement by oriental medicine treatment of a patient who showed poor improvement despite drug treatment for two months.

The patient was administered herbal medicine (Bangpungtongsung-san) three times a day and Daehwangchijah-byung, pharmacopuncture, and acupuncture treatments were administered. All of them are oriental medicine treatments that have the effect of reducing heat, swelling, and pain. At the time of the patient's first visit, they complained of severe pain to the extent that it was difficult to sleep at night and they found it difficult to move their hand. After nine days of treatment, the patient's edema, heat, and pain had decreased, so he had better sleep and smoother movement. Heat and red skin disappeared; therefore, this study can be used as a basic study on the oriental medical approach to cellulitis.

Key words

Cellulitis, Daehwangchijah-byung, pharmacopuncture, Bangpungtongsung-san, Erysipelas

* 교신저자 : NaYoung Jo / 66, Semyeong-ro, Jecheon-si, Chungcheongbuk-do, Republic of Korea
Tel: +82-043-649-1904, Fax: +82-043-649-1904, E-mail: cswcny2@hanmail.net
• 원고접수일 : 2022. 07.15 / 심사완료일 : 2022. 07.28 / 게재결정일 : 2022. 08.15

I. Introduction

Cellulitis is an acute bacterial disease of the dermis and subcutaneous tissue. Most cellulitis is caused by Staphylococcus aureus and Streptococcus and its main symptoms are edema, pain, fever, chills, headache, and loss of appetite. When the causative bacteria invade, the toxin acts as an antigen, releasing TNF-α and IL-1. Neutrophils and macrophages phagocytose the invading bacteria; cytokines also liberate inflammatory mediators, causing erythema, swelling, and pain. After the prodromal symptoms, a rash occurs, there is a feeling of heat at the lesion site, and the boundary of the lesion is unclear . Vesicles, suppuration, and necrosis may occur in the lesions and painful red lines may be observed when lesions occur along the lymphatic vessels1).

Cellulitis mainly affects the upper and lower extremities; lesions may extend to the skin, muscles, or tendons and the causative organism is often difficult to determine. In addition, this disease has a high recurrence rate, so long-term antibiotic administration is often required. Therefore, there areproblems such as extending the treatment period due to the increase of resistant strains caused by long-term antibiotic administration2).

Cellulitis belongs to Erysipelas in Korean medicine. Both have almost the same causative bacteria and the same treatment. Erysipelas is accompanied by symptoms such as edema, erythema, fever, pain, and chills, similar to cellulitis. For the oriental medical treatment of cellulitis, there are reports of cases Yeonkyopaedok-san3), and Sunbangwhalmyung-Eum4) were administered, and there are reports suchas Choi who administered Gamisunbangwhalmyung-Eum5). However, there are very few case reports of using herbal extracts, applying patches, and using medicinal pharmacopuncture. Therefore, we would like to report results obtained by administering oriental medicine treatment to a patient whose symptoms did not improve despite the use of antibiotics.

II. Case Report

1. Patient: Park OO, male, 65 years old

2. Chief complaints: Right-hand pain, swelling, numbness, traction pain, heating, redness, chilling

3. Onset date: 2018.04.28.

4. History of present illness:

2018.04.28: Onset of symptoms, Right-hand pain, swelling, and heating

2018.05.03: Local Neurosurgery visit. No fracture findings on X-ray examination. Western medication prescription. Taking medication but no improvement.

2018.06.05: Admitted to the university hospital. Hospitalized for 10 days after being diagnosed with cellulitis. Discharged from the hospital with mild

symptom improvement. Western medication prescription. Taking medication and home care.

2018.06.19: Worsening of symptoms. Orthopedic hospital outpatient visit. Western medication prescription. Taking medication but no improvement.

2018. 06. 29: Hospitalization of semyung university Korean Medicine Hospital

5. Treatment period: 2018.06.29. - 2018.07.07

6. Family history: None

7. Past history: hypertension (po-med(+))

8. Korean medical examination

Appetite: Normal

Digestion : Normal

Sleep: Normal

Urine: 7 - 8 times/day

Stool: One time/day, constipation

Abdominal condition : abdominal distension

Thirst: Prefer cold water

Tongue Diagnosis: Tongue color is light white and tongue coating is white.

Pulse Diagnosis: Thin and deep

Korean Medicine Diagnostic Classification: Pungyeolsa

2. Treatment method

1) Herbal medicine

The Bangpungtongsung-san (hankooksinyak)6) was administered three times a day, one strip after meals.

Herbal medicine	Compositional medicine	Capacity (g)
Bangpungtongsung-san	Glycyrrhizae Radix	0.67
	Platycodonis Radix	0.67
	Angelicae Gigantis Radix	0.4
	Rhei Radix et Rhizoma	0.5
	Ephedrae Herba	0.4
	Cynanchi Radix	0.5
	Menthae Herba	0.4
	Saposhnikoviae Radix	0.4
	Atractylodes Rhizome White	0.67
	Zingiberis Rhizoma Crudus	0.4
	Gypsum	1.0
	Forsythiae Fructus	0.4
	Paeoniae Radix	0.4
	Cnidii Rhizoma	0.4
	Gardeniae Fructus	0.4
	Schizonepetae Spica	0.4
	Talcum	1.67
	Scutellariae Radi	0.67
	Total weight	5.0(g)

Table 1. Composition and content of medicinal materials of Bangpungtongsung-san

2. 소제목

2) Daehwangchijah-byung

The Daehwangchijah-byung consists of Rhei Radix et Rhizoma powder 30 g, Gardeniae Fructus powder 30 g, and flour 50 g. This material is kneaded with soju (alcohol 30%) and made into a flat shape7). The drug was wrapped in gauze, attached to the back of the right hand, and fixed with a bandage. Daehwangchijah-byung were changed every eight hours.

3) Pharmacopuncture

Pharmacopuncture was based on acupuncture textbooks8), Hapkok (LI4), Joksamni (ST36), Umnungchon (SP9), and Sameumgyo (SP6) acupuncture points were determined and 0.6 cc Soyeom Pharmacopuncture was injected twice/day. A disposable syringe (1 mL, 31G×8 mm syringe, BD, Korea) was used for the procedure. Acupuncture treatment was performed by a Korean medical doctor with more than two years of clinical experience after obtaining a license as a Korean medical doctor.

4) Acupuncture

Acupuncture was based on acupuncture textbooks, Kokji (LI11), Baekwhe (GV20), Pungmun (BL12), Hamkok (ST43), and Naegwan (PC6) acupuncture points were determined, and acupuncture wasapplied twice/day9).

5) West-med

The patient was taking medication prescribed on 2018.06.19 by an orthopedic at the time of admission to our hospital. The contents of the prescription were as follows.

Exoperin Tab. (Hanmi Pharm.), 3T#3 tid pc muscle relaxant (eperisone hydrochloride 50 mg),

Cymbalta Cap. 30 mg (Eli Lilly and Company), and 1C qd pc amitriptyline hydrochloride (duloxetine hydrochloride 33.7 mg (30 mg as duloxetine)).

Paramacet Tab. (Dong-A ST) 3T#3 tid pc analgesic, and (Acetaminophen 325 mg tramadol hyrochloride 37.5 mg).

Stillen Tab. (Dong-A ST) 3T#3 tid pc antiulcerants (artemisia asiatica 95% ethanol extract 60 mg),

Lotan plus Tab (Reyon Pharmaceutical CO), and 1T qd pc 기타 antihypertensive (Hydrochlorothiazide 12.5 mg Losartan potassium 50 mtg).

These drugs were to be taken continuously during the hospitalization period.

3. Treatment evaluation

Right-hand pain was evaluated using NumericRatingScale(NRS). Pain at the first visit was set to 10 and the absence of symptoms was set to 0 so that the patient could express their pain accurately.

4. Treatment course

1) Progress record

During hospitalization, the patient's complaints were recorded. Pain and swelling continued to decrease(Table 2, Figure 1). The patient's symptom indicators were checked daily. The results are shown in Table 3.

Date	Clinical Progress
6/29	Complaining of severe pain in the back of the right hand and fingers. Skin heat and swelling of the hands were observed. Pain NRS 10; pain that makes it difficult to sleep at night. Complaining of difficulty in extension and flexion. Sluggish finger movements. Increased pain when moving the fingers.
6/30	Pain and swelling persist. Pain NRS 10. Skin heat and swelling Complaints of difficulty sleeping at night. Difficulty in finger flexion extension. Sluggish finger movements.
7/1	Pain NRS 9. Reduced edema by about 10%. Skin heat and redness. Difficulty sleeping at night due to pain.
7/2	Pain NRS 6. Reduced edema by about 30%. Reduced skin heat and redness. Difficulty sleeping at night due to pain.
7/3	Pain NRS 5. Reduced edema by about 30%. Reduced skin heat and redness.
7/4	Pain NRS 4. Better sleep at night Wrinkles of the knuckles observed and movement improvement
7/5	Pain NRS 3. skin heat and redness disappearance Better sleep at night
7/6	Pain NRS 2. No sleep disturbance Reduced edema by about 60%.
7/7	Pain NRS 2. No sleep disturbance Reduced edema by about 80% and better extension and flexion.

Table 2. Patient's symptoms during hospitalization

	Pain (NRS)	Edema	Dullness	Dragging pain	Skin heat	Redness
6/29	10	++	+	+	++	++
6/30	10	++	+	+	++	++
7/1	9	++	+	+	+	+
7/2	6	+	+	+	+	+
7/3	5	+	+-	+	-	-
7/4	4	+	+-	-	-	-
7/5	3	+	-	-	-	-
7/6	2	+-	-	-	-	-
7/7	2	+-	-	-	-	-

Table 3. Changes in symptom indicators during hospitalization

06/29	07/03	07/07

Figure 1. Edema change in the patient. Hospitalized (6/29), discharged (7/7)

III. Discussion

Cellulitis is generally thought to result from bacterial penetration and proliferation through the damaged skin barrier. However, the causative organism is not well detected. In addition, although the inflammatory reaction is initiated by bacterial invasion, there are many views that the reaction's continuation was due to the immunological reaction generated by various cytokines secreted by immune-related cells of the skin including keratinocytes1).

In an animal experiment in which cellulitis was artificially induced, it was observed that the detection rate of causative bacteria was significantly reduced after the first 12 hours post-inoculation. This phenomenon was explained as the result of reducing the number of bacteria in the infected tissue by promoting the infiltration of macrophages and neutrophils by the lymphokine and cytokine secreted after the lymphatic system cells present in the skin were activated. Sachs et al. reported that although cellulitis initiates an inflammatory response by bacteria or endotoxin, the inflammatory response is maintained by various cells in the skin even after the bacteria or toxins disappear10).

Cellulitis typicallyoccurs in the lower extremities and feet; it is next most common in the hands. In addition, swelling, warmth, erythema, and pain are observed in almost all patients.

Treatment in Western medicine is the use of antibiotics and pain relievers. When first-generation cephalosporin antibiotics were used alone, the average treatment period was 7.6 days and the duration of treatment for combination therapy with other antibiotics was 6.7. There was no significant difference in treatment duration between monotherapy and combination therapy. The average fever duration was 2.2 days2).

Cellulitis must be approached in a complex way from animmunologicalperspective . In other words, although cellulitis is primarily a result of pathogen infiltration, there are many views that it is an inflammatory disease caused by an immunological reaction, so the administration of corticosteroids is considered as an adjuvant therapy. However, there have not yet been any papers mentioning its effectiveness. Cellulitis damages the lymphatic system to some extent each time it recurs, resulting in persistent swelling and impaired lymphatic circulation; this makes it more likely to recur. In other words, if there is a primary or secondary lymphatic circulation disorder, cellulitis will recur continuously10).

Cellulitis belongs to Erysipelas in Korean medicine. Both have almost the same causative bacteria and the same treatment. Erysipelas is accompanied by symptoms such as edema, erythema, fever, pain, and chills, similar to cellulitis. However , Erysipelas differs from cellulitis in that the boundaries are clear11).

In this case, the patient developed cellulitis in their right hand. The patient was treated with antibiotics and anti-inflammatory drugs for two months but their symptoms did not disappear. The patient had difficulty sleeping at night due to painandsohadcome to the Korean medicine hospital for Korean medicine treatment.

Bangpungtongsung-san treats paralysis and fever. Stroke is used to treat muffled speech or loss of voice, muscle spasms, and numbness; it also treats hot, itchy, and rash skin. Therefore, this recipe can be used for skin diseases that are hot, itchy, and painful6). In this case, the patient was prescribed Bangpungtongsung-san three times a day.

Daehwangchijah-byung is used to relieve fever in acute-stage inflammation. In oriental medicine, it is mainly used to reduce skin heat and pain. Rhei Radix et Rhizoma and Gardeniae Fructus reduce swelling and heat and promote circulation. Therefore, these are used for swelling, erosion, purulent dermatitis, constipation, and fever. There are records of using it on bronze statues in Donguibogam. In this case as well, it was used toreduce heat, swelling, and pain7).

Pharmacopuncture is a treatment method in Korean medicine of injecting purified herbal extracts into acupuncture points; it combines the therapeutic effects of acupuncture and herbal medicine. Soyeom Pharmacopuncture has an anti-inflammatory effect, so it is effective at reducing swelling, heat, and pain; it is used extensively for the dermato-vaginal tract, medical disorders, and musculoskeletal disorders8). In this case, it was also used to reduce inflammatory responses such as pain, swelling, and heat.

This case is a case of a 65-year-old male patient who was prescribed antibiotics and other medications for

cellulitis in his right hand, but the swelling and pain persisted for two months. As a result of a combination of various oriental medicine treatments, pain, swelling, and heat were reduced and movement became smoother. Gross findings showed that the edema of the affected area was reduced and the pain improved from VAS 10 to VAS 2. The feeling of heat and the skin redness also disappeared.

This study is meaningful in that it is an oriental medical treatment for cellulitis patients whose improvement was weak despite continuous treatment. However, the limitation of this study is that there is only one example and the contribution was not clearly known due to the simultaneous use of several treatments. Future research is needed to supplement the limitations.

IV. Conclusion

Herbal medicine, Daehwangchijah-byung, pharmacopuncture, and acupuncture were administered in parallel to a patient hospitalized at OO University Oriental Hospital for cellulitis, resulting in symptom improvement. The patient's improvement was weak even after two months of administration of antibiotics, analgesics, and anti-inflammatory drugs but his symptoms showed clear improvement after oriental medicine treatment. Therefore, this case suggests the possibility that oriental medicine treatment will be effective for patients whose improvement is weak despite continuous treatment. It is considered that a multifaceted approach and research are needed to obtain effective treatment effects for cellulitis with oriental medicine.

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