

Case Report

## Case Report of Chronic Fatigue Syndrome Treated with Salt-Indirect Moxibustion

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**Objectives:** To describe a clinical case of a patient with chronic fatigue syndrome (CFS) who was cured using indirect moxibustion.

**Methods:** A male patient with severe CFS was treated with mainly indirect moxibustion (KI1, CV4 and CV8). The clinical outcome was observed by self-reporting, both visual analogue scale (VAS) and numerical rating scale (NRS).

**Results:** The patient's symptoms matched the criteria for CFS diagnosis. His symptom differentiation was the "Yang deficiency of spleen and kidney". The fatigue feeling and related-symptoms were radically reduced by 14-day treatment. The VAS and NRS score changed from 8.5 and 70 to 3.5 and 35, respectively.

**Conclusions:** This case report provides information on the potential of moxibustion therapy and its application for CFS and fatigue-associated disorders.

**Key Words :** Moxibustion, chronic fatigue syndrome, Korean medicine

### Introduction

Fatigue is a common symptom experienced by the general population. Acute fatigue can be relieved by rest, while chronic fatigue lasting more than 6 months is an agonizing illness impairing quality of life. In particular, medically unexplained chronic fatigue such as chronic fatigue syndrome (CFS) or idiopathic chronic fatigue (ICF) are important medical issues due to their unknown etiology and the lack of effective therapies<sup>1,2</sup>. CFS is the most severe condition of unexplained chronic fatigue, and its patients are faced with a serious pathogenic status regarding physical, social and occupational wellbeing<sup>3</sup>. In order to arouse attention regarding the

serious problem of CFS and to encourage research, it is frequently called "myalgic encephalomyelitis"<sup>4</sup>.

People suffering from CFS often rely on Oriental medicine or complementary and alternative medicine because of the absence of therapeutics in aspect of conventional medicine<sup>5</sup>. Traditional moxibustion treatment has been believed to be effective for chronic fatigue. Kim reported the antifatigue effect and antioxidant properties of indirect moxibustion using a randomized and controlled clinical trial for patients with ICF<sup>6</sup>. Oxidative stress is well known to be linked to the pathogenesis of various diseases including especially CFS<sup>7</sup>.

This report is of a patient who was dramatically

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Fig. 1. Pictures for moxibustion at KD1, CV4 and CV8

cured from his serious CFS-associated symptom by Korean medicine, in particular indirect moxibustion on acupoints (KI1, CV4 and CV8).

### Report of the case

#### 1. Characteristics of the patient and medical history

A 53-year-old man visited an Oriental hospital with chronic and severe fatigue. He had been suffering from the CFS-related symptoms including ophthalmocopia, difficulty with memory, concentration and deep sleep, frequent headache, malaise after exertion, and lowered libido. The symptoms had begun five years ago without any specific known cause. He didn't have any physical or psychological problem including hypertension, diabetes mellitus, fatty liver or hyperlipidemia.

The patient had taken the medical examinations several times in conventional hospitals and various treatments including herbal medicines in Oriental clinics. He was not satisfied with the results from medical checks and treatments. The patient heard news about the therapeutic effect of moxibustion on CFS from public media and decided to try treating his fatigue with moxibustion therapy. The patient hadn't used alcohol or tobacco, and had no specific family or past history. His occupation was officer and presently retired, and he had not been under psychological stress or overweight.

#### 2. Diagnosis and treatments

The patient had been diagnosed with CFS because his symptoms matched to the criteria for CFS diagnosis according to the guideline of Centers for Disease Control and Prevention (CDC)<sup>8)</sup>. He complained of susceptibility to digestive disorders such as indigestion, anorexia, cold hands and feet and easily feeling cold since a young age. His symptom differentiation was the “Yang deficiency of spleen and kidney (脾腎陽虛)”, and his Sasang constitutional classification was placed in Soumin using QSCCII.

The patient was cared for as an outpatient every day for 14 days. The patient was treated with indirect moxibustion on three acupoints, KD1, CV4 and CV8, for 30 minutes daily. The moxa cone consisted of 3.5 g of wormwood fiber on the top of a salt basement inside bamboo; diameter: 30mm, length: 40mm (KyeGoo Inc., Incheon, South Korea, Fig. 1). In addition, the patient was given acupuncture treatment (mainly at HT7, LI4, SP3) and a herbal drug (Myelophil, twice per day).

#### 3. Course of symptom

After six visiting days, the patient subjectively presented a notable reduction of fatigue symptoms. Moreover, other physical and mental activities improved. His fatigue feeling and related-symptoms were radically reduced after the

**Table 1.** Changes of NRS and VAS score and questions

Questions	Treat-day & NRS score		
	Day 1	Day 7	Day 14
1. How tired do you feel?	7	4	3
2. How strongly do you currently feel the need to rest?	7	4	2
3. How sleepy or drowsy do you feel?	6	4	3
4. Do you have problems starting things?	7	5	4
5. Do you lack energy?	7	6	3
6. Do you have less muscle strength?	5	4	3
7. Do you feel weak?	7	7	4
8. Do you have difficulty concentrating?	8	6	3
9. Do you have problems thinking clearly?	3	3	3
10. Do you make slips of the tongue when speaking?	5	4	2
11. How impaired is your memory?	8	6	5
Total NRS score	70	53	35

Please draw a line showing your feeling on this 10cm line.

		VAS score (cm)		
	0 cm	8.5	6.1	3.3
	10 cm			

14-day treatment. His VAS and NRS score changed from 8.5 and 70 to 3.5 and 35 respectively (Table 1).

For VAS score assessment, the patient was asked to indicate his fatigued feeling by drawing a vertical line on a 10-cm line. NRS score was measured using the Korean-translated Chalder fatigue severity questionnaire consisted of seven health-related physical questions and four mental health-related questions<sup>9</sup>). Each item was given a score by the patient on a 10-point scale (0 = not at all to 9 = unbearably severe condition).

## Discussion and Conclusion

In general, the worldwide prevalence of chronic fatigue and CFS are about 10% and 1% respectively<sup>10,11</sup>). Three Korean studies estimated the prevalence of CFS from 0.6% to 2% using subjects who visited hospitals for medical examination<sup>12-14</sup>). Untreated CFS reduces the workforce productivity by 54% of afflicted individuals leading to 9.1 billion dollars of total productivity loss in the US<sup>15</sup>). Despite this high morbidity and economic loss, no curing

therapeutics exist in conventional medicine<sup>16</sup>).

Traditional Korean medicine considers CFS to be the unbalanced status of inter-organ functions or a deficient vital energy, and herbal drugs have traditionally been a major treatment for CFS or chronic fatigue-related disorders<sup>17</sup>). In addition, moxibustion has been a potential therapy for chronic pathological conditions associated with weakness, deficiency, and coldness<sup>18</sup>). In this study, the patient had a typical case of CFS, and was complaining of central fatigue such as difficulty in memory, concentration and deep sleep, and lowered libido. Brain-activity defect is a characteristic of CFS patients, moreover its pattern is prominent in Korean patients<sup>19</sup>). These symptoms with feelings of fatigue were notably improved after one week of moxibustion, and the patient reported the minimum level of fatigue after two weeks' treatment. The NRS and VAS scores (70 and 8.5 point) were drastically decreased over the one-week treatment period, and they became the levels of almost healthy subjects after two weeks' treatment (35 and 3.3 points). One study pegged the fatigue severity of Korean ICF patients with healthy subjects as  $53.0 \pm 15.1$  vs.  $24.9 \pm$

14.2 for NRS score and  $7.4 \pm 1.6$  vs.  $2.7 \pm 1.4$  for VAS score, respectively<sup>20</sup>).

This rapid reduction of fatigue symptoms was not expected at all, because CFS is a very stubborn illness even when treated by Korean medicines. The traditional symptom-differentiation diagnosed the patient with a status of “Yang deficiency of spleen and kidney (脾腎陽虛)”. He was classified as Soumin according to the Sasang constitution typology. He has been under lower energy, weakness and coldness of the digestive system from his young age by the judgment of the patient himself. Moxibustion treatment was very suitable for this patient, because moxibustion provides warm energy, expels cold-damp stagnation, and enhances immunity<sup>21</sup>. Treatment effects can differ according to method, strength, duration, or location of moxibustion. In this study, the patient was treated with salt-based indirect moxibustion at KI1, CV4 and CV8 for 30 min. These points are traditionally believed to aid immune function, and have been frequently chosen for diverse fatigue-associated disorders, primary dysmenorrhea of cold-damp type, or immune-modulating purpose<sup>22-24</sup>). The acupuncture at HT7, LI4, and SP3 aimed to balance the spleen and kidney according to the Sasang medicine theory.

In addition, the patient took an herbal medicine, Myelophil, composed of extract of a mix of Astragali Radix and Salviae Radix, which is reported to have an anti-fatigue effect<sup>25</sup>). Therefore, this outcome could be linked to a combination of effects of moxibustion and the drug. The patient had experienced taking this drug but with no notable benefit one year prior. Even though clinical evidence proposed the antioxidant property as an underlying mechanism of moxibustion-derived anti-fatigue effect<sup>6</sup>), this case study didn't measure the biomarkers for oxidative stress and antioxidants.

In summary, this report may provide impressive information of the possible therapeutics against CFS using moxibustion. Further study needs to verify the therapeutic effects of moxibustion on CFS and its mechanisms using more subjects.

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