

## Study of Characteristics of Patients with Chronic Fatigue

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**Objective:** This study aimed to produce a description of features of chronic fatigue patients visiting an Oriental Hospital.

**Methods:** 121 patients (75 male and 46 female) who visited a fatigue-care center were enrolled in this study, and the main complaints besides fatigue feeling, symptom differentiation, and health-related factors were analyzed.

**Results:** On a visual analogue scale (VAS), average severity of fatigue was 7.0 (male 6.77 and female 7.4; 0 indicates no fatigue vs. 10 indicates intolerable fatigue), and the main complaints included headache (male and female) and dyspepsia (female). Patients generally slept about 7 hrs and caught a cold 2.4 times per year (same in both male and female). 54.6 % of patients used functional supplements, and red ginseng, vitamin and herbal medicine were chosen in that order.

**Conclusions:** Chronic fatigue is a main target of traditional Korean medicine (TKM). This study can be helpful to design TKM-based treatment for chronic fatigue-related symptoms.

**Key Words :** Chronic fatigue, herbal medicine, traditional Korean medicine.

### Introduction

Chronic fatigue is a subjective feeling of exhaustion or lethargy lasting for longer than 6 months. The acute fatigue can be generally relieved by taking a rest; however, chronic fatigue disturbs daily life and affects quality of life<sup>1)</sup>. Fatigue symptoms are very prevalent, in nearly 10 % of the general population worldwide<sup>2,3)</sup>. Poor understanding of its etiology and lack of effective therapies are a fact in conventional medicine<sup>4)</sup>. Chronic fatigue untreated for long periods leads to pathogenic status regarding physical, social, and occupational well-being<sup>5)</sup>.

On the other hand, a comprehensive approach of diagnosis and treatment for subjective symptoms including chronic fatigue, is a strength of traditional

Korean medicine (TKM), so many patients with chronic fatigue visit Oriental doctors<sup>6,7)</sup>. TKM or Oriental medicine explains chronic fatigue as an unbalanced state of inter-functions of internal major organs as well as vital elements such as *Chi* and blood<sup>8)</sup>. The anti-fatigue effects of herbal medicine and acupuncture treatment have been partially demonstrated by clinical studies<sup>9,10)</sup>.

Nevertheless, there is lack of study of TKM-based epidemiology and pathophysiology on chronic fatigue-associated disorders. In addition, standardized diagnosis, classification and quantitative measurement of severity of chronic fatigue are essentially required in the TKM field<sup>7)</sup>. As part of an effort to address this, this study reports features of chronic fatigue patients visiting an Oriental fatigue-care center.

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## Method

### Subjects and study design

This study was designed as a pilot study to characterize patients with chronic fatigue. 121 patients (74 male and 47 female, median age 39.5 years, range 13 to 72) who visited the fatigue-care center of Daejeon University Hospital were involved. All patients had suffered from chronic fatigue lasting over six months, and had no abnormality in laboratory or radiologic examination. No control group was enrolled. Using []

### Data collection and statistical analysis

All patients were requested to indicate their feeling of severity of fatigue by drawing a vertical line on a 10-cm visual analogue scale (VAS). The starting point (0cm) indicates “no symptom” while the terminal point (10cm) represents “the most severe feeling of fatigue”. In addition, other fatigue-related factors such as sleeping, exercise, dietary patterns, stress, physical problems, and taking of food supplements were collected using a questionnaire. Data comparisons between males and females were analyzed by t-test or  $\chi^2$ -test (chi-square test) using PASW Statistics 17 program.

## Results

### Severity of chronic fatigue and main complaints

The average fatigue severity of total patients was  $7.03 \pm 2.03$ . The male’s score was  $6.77 \pm 2.05$  while the severity score of female patients was  $7.38 \pm 1.96$ . A statistically significant difference between males and females was not observed ( $p = 0.126$ ).

Besides chronic fatigue, the main complaints of men included headache, muscle pain, catching cold, dyspepsia, and back pain in while women patients presented headache, muscle pain, dyspepsia, catching cold, back pain, diarrhea, and depression in order (Fig. 1). Multiple responses were allowed in this survey. Statistically significant difference between male and female patients was not observed for any symptom ( $p > 0.05$ ).

### Sleeping, exercise, stress and frequency of catching cold

Patients generally slept about  $7.3 \pm 2.0$  hrs (male  $7.3 \pm 1.9$  and female  $7.4 \pm 2.2$ ) daily. The frequency of exercise over 30 min within one week was  $2.6 \pm 2.1$  times (male  $2.8 \pm 2.0$  and female  $2.1 \pm 2.0$ ). For the question of how strongly they felt stress, 5.2 %

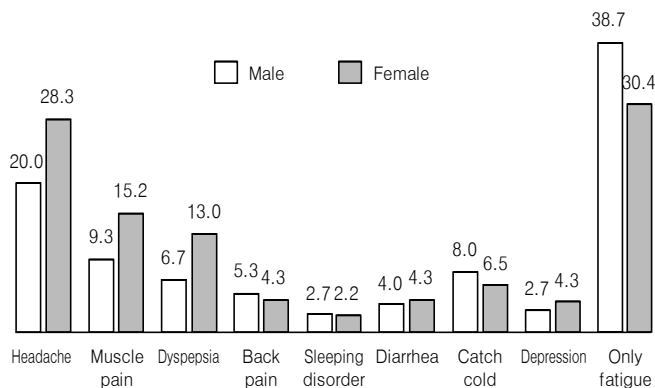


Fig. 1. Main complaints and their frequency (%) in patients with chronic fatigue

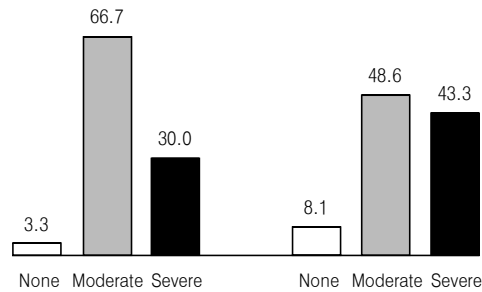


Fig. 2. Stress status of male (left) and female (right) patients with chronic fatigue (%)

of patients answered no stress while 59.7 % and 35.1 % of patients reported moderate and severe stress, respectively (Fig. 2). Patients had caught a cold  $2.4 \pm 2.0$  times per year, similarly in both males ( $2.4 \pm 3.1$ ) and females ( $2.3 \pm 3.3$ ). No factors showed any statistical significance between males and females ( $p > 0.05$ ).

#### Functional supplements taken by patients

54.6 % of patients took functional supplements for their fatigue symptoms. The consumption rate was slightly higher in females, at 63.1 %, than 49.3 % in male patients. The most popular supplement used by fatigue patients was red ginseng (20.0 % of male and 26.1% of female patients). Vitamins and herbal drugs were second and third ranked, respectively (Fig. 3). Multiple responses were allowed in this survey. There was no statistical difference according to sex ( $p > 0.05$ ).

#### Discussion and conclusion

American Centers for Disease Control and Prevention define chronic fatigue as fatigue extended for over six months. In particular, two subclasses of medically unexplained chronic fatigue, idiopathic chronic fatigue and chronic fatigue syndrome, are considered to be medical problems<sup>11</sup>. One study reported that 8.4 % of 1,648 visitors to eight Korean primary family clinics complained of chronic fatigue. 20 % of them had no explained medical causes, and 0.6 % of patients met criteria for chronic fatigue syndrome<sup>12</sup>. However, there is a lack of epidemiologic data and clinical study on chronic fatigue-associated disorders, especially in the field of TKM.

This study shows features of chronic fatigue patients visiting a fatigue-care center in an Oriental Hospital. A total of 121 patients complaining of chronic fatigue without any abnormality in objective examinations were surveyed. The average fatigue-

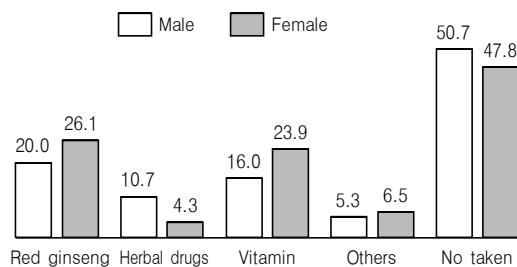


Fig. 3. Functional supplements taken by patients with chronic fatigue (%)

severity of patients was around 7.0 when the maximum level 10 indicates the worst feeling condition: “cannot to do anything due to fatigue”. The quantitative measurement of fatigue severity is very important for management of patients with chronic fatigue, however to assess fatigue level is difficult because fatigue is a subjective feeling<sup>7)</sup>. This result represents the status of fatigue severity at time of visiting the Oriental clinic. The females’ severity was slight higher than males’ symptom at 7.4 vs. 6.8, respectively. This might result from a gender-dependent different pattern of response to symptoms such as pain or fatigue<sup>13)</sup>.

This result was in accordance with the rate of complaints besides chronic fatigue. About 70 % of female patients had at least one symptomatic disorder besides chronic fatigue, while male patients were about 61 % (Fig. 1). Headache, muscle pain, dyspepsia and depression were the main disorders, more frequently in female than male patients. Headache, muscle pain, and depression are well known as accompanying symptoms or possibly causative diseases of idiopathic chronic fatigue or chronic fatigue syndrome<sup>14,15)</sup>. Stress and immunity are other important factors in fatigue-related disorder<sup>16-18)</sup>. 30.0 % and 43.2 % of male and female patients respectively reported that they have been in severe stress conditions (Fig. 2). Both male and female patients had caught a cold about 2.4 times per year. However, it was impossible to do comparative analysis with healthy subjects because of no reference data from normal people. It was supposed that fatigue patients had similar life patterns with healthy people regarding sleeping and exercise.

For their health improvement, 49.3 % of male and 63.1 % of female patients have used one or more functional supplements. Red ginseng was the most favorite, followed by vitamins and herbal drugs as second and third choices (Fig. 3). Chronic fatigue greatly affects quality of life; however no curing conventional therapeutics exist for patients with

medically unexplained chronic fatigue symptoms. Therefore, chronic fatigue patients traditionally have used herbal treatments, especially in, Asia including Korea. These results indicate that traditional Korean medicine has a high potency to be a main therapeutic for chronic fatigue-related symptoms. TKM has developed many therapeutics associated with chronic fatigue, such as herbal formulae. However, recently the rate of use of herbal medicine by patients is decreasing. One study reported that high-school students use vitamins, ginseng and herbal medicine in order as functional supplements<sup>19)</sup>. Based on the above statistic, a new strategy for patients with chronic fatigue might be needed in the field of TKM. We need more systematic and scientific studies on remedy development for chronic fatigue.

The current report has a limitation due to being just one hospital-based investigation; however this study did create a description of features of chronic fatigue patients. This result can be a useful baseline, and much further data from multiple Oriental clinics should be made and added to this finding. In conclusion, the author hopes that this result may contribute to study of TKM-derived therapeutic developments against chronic fatigue disorders in the future.

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