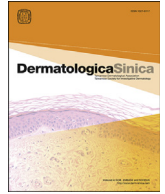


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ORIGINAL ARTICLE

Cutaneous findings in fibromyalgia syndrome and their effect on quality of life



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ABSTRACT

Background/Objective: Fibromyalgia syndrome (FMS) is a chronic, generalized pain condition characterized with widespread soft-tissue pain, fatigue, sleep disturbances, and tender points on physical examination. Although, there are numerous articles about the frequency of FMS in dermatologic diseases such as psoriasis and chronic urticaria, few studies have been reported concerning skin findings in FMS. Our objective was to evaluate the skin findings and skin-related symptoms in FMS patients and determine the quality of life in FMS patients with dermatologic diseases.

Methods: A total 105 female patients ages between 18 years and 65 years and diagnosed with FMS were included in the study. A total of 105 healthy volunteers were age and sex matched in the control group. **Results:** Skin related symptoms such as pruritus, burning, tingling, and increased sweating were more common in FMS patients than in the control group. Xerosis, dermatographism, lichen simplex chronicus, neurotic excoriations, tinea pedis, and seborrheic dermatitis were more frequent in FMS patients and the differences were statistically significant. Presence of dermatologic disease or skin-related symptoms in FMS patients did not affect the quality life of the FMS patients.

Conclusion: Genetic and pathophysiological studies to clarify the relationship between FMS and dermatologic disorders will provide more information on the association and common treatment of these disorders.

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Introduction

Fibromyalgia syndrome (FMS) is a chronic pain syndrome characterized by widespread pain, fatigue, sleep and cognitive function disorders.^{1,2}

The disorder affects 2% of the population and is seven times more common in females.³ A study from our country has reported the FMS incidence in women aged 20–65 years as 3.6%.⁴

Conflicts of interest: The authors declare that they have no financial or non-financial conflicts of interest related to the subject matter or materials discussed in this article.

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The etiopathogenesis is not clear but abnormalities in the central pain mechanisms are thought to play a central role.² The role of peripheral nerves and neurogenic inflammation in FMS pathogenesis has also attracted interest recently.^{5,6} FMS can also accompany many disorders with a common pathogenetic mechanism such as irritable bowel syndrome, chronic fatigue syndrome, anxiety, and depression.⁷ Pathologic examination of FMS patients' skin has revealed various changes such as oxidative stress and increased numbers of cytokines and mast cells.^{8–10}

Although there are studies that have investigated the FMS incidence in dermatologic disorders such as psoriasis,¹¹ chronic urticarial,^{12–15} and Behçet's disease,^{16,17} there are only a few studies on skin findings in FMS patients.^{18,19} The aim of our study was to determine the possible accompanying skin findings in FMS patients, the incidence of cutaneous symptoms, and the quality of life in FMS patients with dermatological disease.

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Methods

The study included a total of 105 female patients aged 18–65 years who had been diagnosed with FMS by a Physical Therapy and Rehabilitation specialist using the 2010 American College of Rheumatology (ACR) FMS diagnostic criteria at the Physical Therapy and Rehabilitation Department of our hospital. The new diagnostic criteria specified by the ACR in 2010 do not include tender points examination, require exclusion of other causes of pain, include symptoms other than pain, and evaluate the symptom severity.²⁰ The control group consisted of 105 age-matched female patients with no systemic and rheumatoid disorder who had presented to the Ophthalmology Department of our hospital. Patients with congestive heart failure, pulmonary failure, coronary heart disease, neurological disorder, inflammatory rheumatologic disease, hypothyroidism, hyperparathyroidism, diabetes mellitus, those who had started psychotropic or antihistaminic treatment within the past month, and pregnant or breastfeeding patients were excluded.

We obtained Erciyes University Ethics Committee (Kayseri/Turkey) approval and written patient consent stating that they had been informed about the study. The sociodemographic features, cutaneous symptoms such as pruritus, burning, increased sweating, numbing and tingling; personal history, and the family history of FMS were queried. A detailed dermatologic examination was performed by a dermatologist. The quality of life scale short form-36 (SF-36) was administered to the FMS patients.

SPSS version 22.0 package software (SPSS Inc., Chicago, IL, USA) was used to analyze the data. We used the Kolmogorov Smirnov test to evaluate the distribution of the variables. The Mann–Whitney *U* test and the independent samples *t* test were used for the analysis of quantitative data. The Chi-square test was used for qualitative data and the Fischer's test was used when the Chi-square test conditions were not met. A *p* value < 0.05 was considered statistically significant.

Results

The mean age was 45.5 ± 8.7 years in the study group and 46.6 ± 9.7 years in the control group. There was no significant difference between the patient and control groups regarding age, occupation, marital status, accompanying disorder, smoking, and alcohol use. Stress ($p = 0.019$), accompanying psychiatric disorder ($p = 0.009$), and family history of FMS ($p < 0.001$) were significantly more common in the patient group (Table 1).

Table 1 Demographic and clinical data of FMS patients and the control group.^a

	FMS group	Control group	<i>p</i>
Age (y)	45.5 ± 8.7/45.0	46.6 ± 9.7/48.0	0.381
Occupation	Working	14 (13.3)	13 (12.4)
	House-wife	91 (86.7)	92 (87.6)
Marital status	Single	5 (4.8)	9 (8.6)
	Married	100 (95.2)	96 (91.4)
Family history of FMS	25 (23.8)	0 (0)	<0.001
Stress	25 (23.8)	12 (11.4)	0.019
Smoking	22 (21.0)	21 (20.0)	0.864
Alcohol usage	1 (1.0)	1 (1.0)	1.000
Accompanying disorder ^b	74 (70.5)	65 (61.9)	0.189
Accompanying psychiatric disorder ^c	Present	18 (17)	6 (6)
	Absent	87 (83)	99 (94)

Data are presented as *n* (%) or mean ± standard deviation/median.

^a Independent samples *t* test/Chi-square test

^b Accompanying disorders were asthma, hypertension, anemia, hepatosteatosi, coronary artery disease, heart valve disease, gastroesophageal reflux, nephrolithiasis, and cyst hydatid

^c Accompanying psychiatric disorders were depression, panic attack, and panic disorder.

The percentage of at least one cutaneous symptom was 92.4% in FMS patients and 42.9% in the control group ($p < 0.001$). The rates of other cutaneous symptoms such as pruritus at 69.5% ($p < 0.001$), burning at 49.5% ($p < 0.001$), hyperhidrosis at 67.6% ($p < 0.001$), and numbness and tingling at 34.3% were more common in the FMS group than in the control group ($p < 0.001$; Table 2).

At least one dermatologic disorder was found in 78.1% of FMS patients and in 46.7% of the control group. This difference was statistically significant ($p < 0.001$). The most common dermatologic disorders in the FMS patients were xerosis (44.7%), lichen simplex chronicus (15.2%), acne (10.4%), contact dermatitis (8.5%), neurotic excoriation (6.6%), tinea pedis (6.6%), melasma (4.7%), and seborrheic dermatitis (3.8%). Dermographism was present in 30.5% of the FMS patients and 8% of the control group ($p < 0.001$; Table 3).

Comparison of common disorders between the two groups showed that xerosis ($p = 0.002$), lichen simplex chronicus ($p = 0.011$), neurotic excoriation ($p = 0.031$), tinea pedis ($p = 0.007$), and seborrheic dermatitis ($p = 0.043$) were more common in the FMS group than the control group (Table 3).

We found that the presence of a dermatologic disorder or cutaneous symptoms in FMS patients did not create a significant difference in the SF-36 physical function, physical role, pain, general health, vitality, social function, emotional role, and mental health scores.

Discussion

FMS is frequently accompanied by some medical, organic, and psychiatric disorders and this concurrence has been named the "central sensitization syndrome".⁷ Some disorders that can accompany FMS are obsessive-compulsive disorder, major depression, dysthymia, panic disorder, generalized anxiety disorder, irritable bowel syndrome, migraine, and temporomandibular joint disorders.^{21–24} We found a statistically significantly higher percentage of stress and accompanying psychiatric disorder in FMS

Table 2 Comparison of cutaneous symptoms between FMS and control groups.^a

	FMS group	Control group	<i>p</i>
Cutaneous symptom	97 (92.4)	45 (42.9)	<0.001
Pruritus	73 (69.5)	26 (24.8)	<0.001
Burning	52 (49.5)	6 (5.7)	<0.001
Hyperhidrosis	71 (67.6)	35 (33.3)	<0.001
Others	36 (34.3)	0 (0)	<0.001

Data are presented as *n* (%).

^a Mann–Whitney *U* test.

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