RESEARCH ARTICLE

Demographic characteristics, clinical findings and functional status in patients with fibromyalgia syndrome

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Abstract

Objective: To explore the demographic features, clinical findings and functional status in patients presenting with fibromyalgia syndrome.

Methods: The cross-sectional study was conducted between May 1 and August 1, 2017, and comprised fibromyalgia syndrome patients who were followed up at the Physical Medicine and Rehabilitation Polyclinic of Bingöl State Hospital, Bingöl, Turkey. Data collection was done using a predesigned questionnaire. It consisted of two parts. In the first part, patients were asked questions including their socio-demographic characteristics. In the second part, visual analogue scale and fibromyalgia impact questionnaire were applied for evaluating pain intensity and function.

Results: Of the 136 patients, 101(74.3%) had no sleeping pattern and 88(64.7%) were restricted in activities of daily living. Pain complaints were lasting for a mean period of 5.0±5.1 years and the diagnosis version was 3.8±3.2 years. The mean score of the fibromyalgia impact questionnaire was 53.3±15.3 and 125(91.9%) patients had a mild level. The mean score of visual analogue scale was 5.1±3.0 and 50(36.8%) patients had severe pain. Fibromyalgia impact questionnaire score of illiterate individuals was significantly higher than others ($p<0.05$), and the score of low-income individuals was higher than the others ($p<0.05$). Individuals with high income had the lowest score ($p<0.05$).

Conclusion: Patients with fibromyalgia had a better course of illness when their education and socio-economic status were in good condition, and the complications of pain and illness were further reduced.

Keywords: Fibromyalgia, Demographic factors, Pain. (JPMA 68: 1043; 2018)

Introduction

Fibromyalgia syndrome (FMS) is a chronic pain syndrome characterised by common body pain and fatigue.[1] Patients have complaints of weakness, fatigue, reluctance, sleep disorder, waking up tired in the morning i.e. non-restorative sleep and stiffness as well as common body pains.[2] Its prevalence has been reported to be 3.4% in women and 0.5% in men in the world.[3]

According to the classification criteria of American Rheumatism Association (ARA) in 1990, FMS is diagnosed with widespread pain lasting longer than 3 months in both right and left sides of the body and also in lower and upper parts of the waist, axial skeleton along with presence of hypersensitivity in minimum 11 of 18 tender points. Hyperaemia and skin colour change can be determined in regions including tender points of patients with FMS.[4-6] Risk factors for FMS can be listed as follows; gender, middle age, low educational level, low family income, separation from partner and being disabled.[7]

Even though there is no absolute treatment for FMS today, it is very important to inform and educate patient in the treatment as in every disease.[8] Clinical studies indicate that low doses of antidepressants are effective in treatment and also the methods supporting the treatment are exercise, psychological therapy and educational programmes.[9]

The current study was planned to explore the demographic features, clinical findings and functional status in a group of patients presenting with FMS.

Patients and Methods

The cross-sectional study was conducted between May 1 and August 1, 2017, and comprised fibromyalgia syndrome patients who were followed up at the Physical Medicine and Rehabilitation Polyclinic of Bingöl State Hospital, Bingöl, Turkey. The sample comprised FMS patients who were followed up, who could communicate, and who volunteered to participate in the study. Those with existence of physical diseases or cognitive insufficiency at a level that hinders the completion of the questionnaires and those who were undergoing treatment due to a psychiatric disease were excluded. The study protocol was approved by the University of Bingöl ethics committee. Written informed consent was obtained from all participants.

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The predesigned questionnaire consisted of three parts. The first part had a set of questions about the sociodemographic characteristics and the second part comprised the visual analogue scale (VAS). The third part comprised the fibromyalgia impact questionnaire (FIQ). Pain intensity was assessed using VAS. Patients were asked to mark their pain levels on a 10cm line; 0-3 points were mild, 4-6 were moderate and 7-10 points were considered severe.[10] FIQ was developed to measure functional condition of patients with fibromyalgia syndrome. It measures 10 different characteristics, including physical functioning, well-being, missed days of work, job difficulty, pain, fatigue, morning tiredness, stiffness, anxiety and depression. Except for the well-being, low scores indicate recovery or being less affected by disorder. FIQ is filled by the patient and the maximum score is 100. While an average fibromyalgia patient gets 50 scores, a heavily affected patient generally gets a score higher than 70.[11] Data was evaluated using SPSS statistical package 21 for windows programme. Mean values were given together with standard deviation and $p<0.05$ was set as the significance level. Frequency was utilised for illustration of the indicative data, and student t test and one-way analysis of variance (ANOVA) were conducted for the evaluation of statistical significance of other data.

Results

Of the 136 patients, 65(47.8%) were male and 71(52.2%) were female. The mean age of individuals was 42.3±16.7 years and the mean body mass index (BMI±SD) was 26.2±4.7kg/m2. Besides, 36(26.5%) patients had primary school degree; 104(76.5%) had middle income level, and 55(40.4%) had never smoked.

In terms of health condition and sleep habits, all patients had experienced at least one bad event and generally this was observed to be the disease in 28(20.6%) cases and other causes were experienced in 32(23.5%) cases. Overall, 101(74.3%) patients had no sleeping pattern and 88(64.7%) were restricted in activities of daily living. When the patients were evaluated in terms of the presence of any chronic disease, 82(60.3%) of them did not have a chronic disorder and 22(40.7%) of those with chronic diseases had cardiac disease. Only 4(2.9%) patients had psychological disorder of depression. When they were asked about family history, 55(40.4%) had another patient in their family and these patients were observed to be mainly partners which were 10(17.6%) and mothers were 9(16.2%). It was found that pain complaints of patients were lasting approximately for a mean period of 5.0±5.1 years and the duration of diagnosis was 3.8±3.2 years.

Table-1: Characteristics regarding health condition of the patients.

		n=136 n (%)
Experiencing an event affecting life		
No		0 (0.0)
Yes		136 (100.0)
	Death	22 (16.1)
	Accident	10 (7.4)
	Disease	28 (20.6)
	Economic difficulty	11 (8.1)
	Other	32 (23.5)
	Disease, economic difficulty	8 (5.9)
	Death, accident	8 (5.9)
	Accident, economic difficulty	3 (2.2)
	Death, economic difficulty	5 (3.7)
	Death, accident, disease	5 (3.7)
	Death, disease	4 (2.9)
Sleep habit		
Sleeping regularly (going to bed and waking up at the same hours)		18 (13.2)
Regular sleep besides sleeping only few hours at some nights		17 (12.5)
No regular sleep pattern (different sleep hour every day)		101 (74.3)
Restriction in activities of daily living due to pain		
	No	8 (5.9)
	Partially	40 (29.4)
	Yes	88 (64.7)
Having a chronic disease		
	No	82 (60.3)
	Yes	54 (39.7)
The name of chronic disease		
	Cardiac disease	22 (40.7)
	Diabetes	4 (7.4)
	Kidney disease	3 (5.6)
	Low back, neck, joint, muscle disease diseasehastal???	6 (11.1)
	Cardiac disease and diabetes	8 (14.8)
	Digestive tract disorder	4 (7.4)
	Respiratory tract disorder	5 (9.3)
	Celiac	2 (3.7)
Psychological disorder		
	No	132 (97.1)
	Yes	4 (2.9)
Name of psychological disorder n(%)	Depression	4 (2.9)
The presence of another fibromyalgia patient in the family		
	No	81(59.6)
	Yes	55 (40.4)
Other fibromyalgia patient (patients) in the family		
	Mother	22 (16.2)
	Father	2 (1.5)
	Partner	24 (17.6)
	Mother and father	2 (1.5)
	Mother, father, and siblings	5 (3.7)
Diagnosed with Fibromyalgia syndrome (Mean period in years)		3.8±3.2
Mean duration of complaints (years)		5.0±5.1

Mean ± SD: mean ± standard deviation.

Table-2: Clinical evaluation of fibromyalgia patients.

FIQ (Mean±SD)		53.3±15.3
	Mild	125 (91.9)
	Severe	11 (8.1)
Pain VAS (Mean±SD)		5.1±3.0
	Mild	42 (30.9)
	Moderate	44 (32.4)
	Severe	50 (36.8)

Mean ± SD: mean ± Standard deviation; FIQ: Fibromyalgia impact questionnaire, VAS: Visual Analogue Scale (0-3 points: mild, 4-6 points: moderate, 7-10 points: severe)

Table-3: Comparison of Socio-Demographic Characteristics and FIQ Scores of the patients

Socio-demog. characteristics	n	%	FIQ (Mean±SD)	P value
Gender n(%)				P1: 0.085
Male	65	47.8	50.3±17.0	
Female	71	52.2	56.0±13.1	
Educational level n(%)				P2: 0.001*
Illiterate	35	25.7	60.9±17.4a	
Primary school	36	26.5	51.1±15.8b	
Secondary school	20	14.7	58.3±7.9b	
High school	15	11.0	48.4±6.7c	
University	30	22.1	46.2±14.6c	
Economic condition n(%)				P2: 0.02*
Low	26	19.1	61.6±10.2a	
Middle	104	76.5	51.9±15.9b	
High	6	4.4	41.5±5.8c	
Profession n(%)				P2: 0.02*
Housewife	54	39.7	56.8±14.3a	
Worker	4	2.9	55.1±20.0	
Civil servant	15	11.0	38.3±18.4b	
Student	12	8.9	48.5±8.6	
Retired	9	6.6	57.4±21.4	
Self-employed	15	11.0	56.4±9.3	
Other	27	19.9	53.3±13.2	
Smoking n(%)				P2: 0.201
Never smoked	55	40.4	55.3±14.0	
Sometimes	46	33.8	50.3±17.7	
Addict	35	25.7	54.5±13.6	

Mean ± SD: mean ± Standard deviation; FIQ: Fibromyalgia impact questionnaire, P1: Student T Test; P2: one way analysis of variance. Letters a, b, c denote the groups.

The mean FIQ score was 53.3±15.3 and 125(91.9%) patients had a mild level. The mean VAS score was 5.1±3.0 and 50(36.8%) patients had severe pain (Table 2). The difference between FIQ scores was significant in terms of educational level, economic condition and professional characteristics ($p<0.05$), but it was not significant in terms of gender and smoking ($p>0.05$). FIQ score of illiterate individuals was significantly higher than others ($p<0.05$). FIQ score of individuals with low income was higher than the others ($p<0.05$), and individuals with high income had the lowest FIQ score ($p<0.05$). When there was a significant difference in FIQ scores between housewives and civil servants, ($p<0.05$), housewives had the maximum FIQ score, civil servants had the minimum FIQ score ($p<0.05$) (Table-3).

Discussion

FMS is a clinical picture characterised by common musculoskeletal system pains, stiffness and extremely tender points.[3] In the present study, clinical characteristics, pain levels, and functional status of fibromyalgia cases were investigated. Although previous studies do not present an exact result about aetiology of FMS, they show that important events influencing the patient had an impact on neuroendocrine metabolism and thus FMS developed. Factors affecting stress and stress response systems such as death, accident, disease, economic difficulty were also reported to trigger the disease.[12,13] The present study revealed that the factors affecting in FMS were arising from serious events that have an effect on the person himself. Death of a loved one, accident, disease, and economic difficulties took place on top among these factors.

The causal relationship between fibromyalgia and pain, sleep, mood disorders and their relationship with each other are not very clear; however, there are evidences indicating the existence of triggering neuroendocrine and genetic factors.[14] Most of fibromyalgia patients from 75 to 90% complain of sleep disorder in which sleep is not deep and is not relaxing. In the deepest phase of sleep in fibromyalgia patients, the presence of alpha waves that should not be seen as normal in the delta wave sleep leads to unreserved sleep.[15] Out of all the participants in this research 101(74.3%) patients were found to have no sleeping pattern.

Various possibilities have been suggested about comorbidity of fibromyalgia and depression. These opinions are as follows; depression is a reactive condition developing secondary to after chronic pain and disability; fibromyalgia decreased depression threshold, and finally fibromyalgia and depression might be the disorders of the same affective spectrum revealing numerous peripheral and central symptoms.[16] Only 4(2.9%) of the participants had psychological disorder of depression in the present study. Compared to the results of literature, the prevalence of depression in fibromyalgia patients who were our patient group in the present study was determined to be lower.[17,18] The fact that the number of patients is limited in this outpatient clinic might have an effect on significant results.

Common musculoskeletal system pain is the major symptom of fibromyalgia.[19,20] Evaluation of pain intensity is important for identifying and monitoring severity of the disease. Various studies showed that neurotransmitters that have function in modulation of pain were low and several peptides of endogen opioid system fell short to modulate the pain in fibromyalgia.[19,20] In the present study, mean score of VAS was as low as 5.1±3.0 and a reasonable number of 50(36.8%) of the total patients had severe pain level. This value was observed to be compatible with the previous studies.

In recent years, FIQ has become the most commonly used scale for patients with fibromyalgia because it is short, easy to apply and score and is sensitive.[21] A study with the help of FIQ determined that severity of pain was high in patients with FMS and this affected quality of life.[22] When FIQ scores of patients in our study were evaluated, the mean score was 53.3±15.3 and 125(91.9%) of patients were in the mild category. In case another study conducted to analyse that the pain affected quality of life of FMS patients.[23] In the present study, FIQ scores and socio-demographic characteristics was investigated. While the difference between FIQ scores was found to be significant in terms of educational level and economic condition ($p<0.05$); it was not significant in terms of gender and smoking ($p>0.05$). In terms of educational level, FIQ score of illiterate individuals was significantly higher than others ($p<0.05$). In terms of economic condition it was determined that FIQ score of individuals with low income was higher than others ($p<0.05$), individuals with high income had the lowest FIQ score ($p<0.05$). When FIQ scores were evaluated in terms of professions, there was a significant difference between housewives and civil servants ($p<0.05$). While the housewives had the highest FIQ score, civil servants had the lowest FIQ score. The literature of different studies also explained that educational level and economic condition of patients effected FIQ scores.[23,24]

According to the results of the study, we can say that patients with fibromyalgia have a better course of illness when their education and socio-economic status are in good condition, and the complications of pain and illness are further reduced. In this context, it may be possible to improve the clinical course and pain conditions of the disease by increasing the standards of education and quality life of fibromyalgia patients. These clinical characteristics and function disorders situation of FMS may affect other diseases. This situation has appeared as a matter that will require physicians dealing with these patients to pay attention. There are studies conducted about the pain, function and clinical characteristics but unfortunately there are limited and insufficient studies about any curing technique of FMS patients except medicine in Turkey. Since it is substantially important to know clinical characteristics and the pain and function of these patients for treatment approach, further studies will allow us to strengthen our current knowledge and have a better understanding about these diseases.

Conclusion

Patients with fibromyalgia had a better course of illness when their education and socio-economic status were in good condition, and the complications of pain and illness were further reduced.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

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