Fibromyalgia Syndrome at Assistant Physicians Working at University Hospital

Üniversite Hastanesinde Çalışan Asistan Hekimlerde Fibromiyalji Sıklığı

Asistan Hekimlerde Fibromiyalji / Fibromyalgia Syndrome at Assistant Physicians

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Özet

Amaç: Fibromiyalji sendromu (FMS); yaygın ağrı, yorgunluk ve uyku bozukluğu ile seyreden kronik bir hastalıktır. Biz çalışmamızda üniversite ve eğitim hastanelerinde günlük pratiğin önemli bir öğesi olan asistan hekimlerde (AH) FMS sıklığını, bu sıklığın çalışılan bölüm, yaş ve asistanlık süresi ile ilişkisini saptamayı amaçladık. Gereç ve Yöntem: Afyon Kocatepe Üniversitesi Tıp Fakültesi Hastanesi'nde çalışan AH'ler çalışmaya alındı ve çalışma formunu doldurmaları istendi. FMS tanısında ACR 2010 tanı kriterleri kullanıldı. Çalışmaya 102 AH katıldı. AH'lerden cerrahi bölümde çalışanlar Grup 1'i, dahili bilimlerde çalışanlar Grup 2'yi oluşturuyordu. Bulgular: Grup 1'deki AH'lerden 5 tanesi, Grup 2'deki AH'lerden 4 tanesi FMS tanısı aldı (%8.82). FMS tanısı alan AH sayısı arasında her iki grup arasında istatistiksel olarak anlamlı bir fark yoktu (p=0,550). SSS skorunda Grup 1'de istatistiksel olarak anlamlı yükseklik tespit edildi (p=0,030). FMS tanısı ile çalışılan bölüm, yaş ve asistanlık süresi arasında bir korelasyon tespit edilmedi. Tartışma: Çalışmamıza göre AH'lerde FMS sıklığı, toplumda görülme oranının üzerinde bulunmuştur ve AH yaşı, çalışılan bölüm ve asistanlık süresi ile ilişkisi tespit edilmemiştir. Tıp fakültesi ve eğitim hastanelerinde bu durumun bilinmesi ve önlem alınması, hizmet ve eğitim kalitesini daha fazla yükseltebilir.

Anahtar Kelimeler

Asistan Hekim; Fibromiyalji Sendromu; Hastane

Abstract

Aim: Fibromyalgia syndrome (FMS) is a chronic disease accompanied by widespread pain, fatigue and sleep disorders. The aim of this study is to determine the frequency of FMS in assistant physicians (AP) and to establish the relationship between the frequency of FMS and factors such as department where physician works at, age and duration of work. Material and Method: APs working in local university hospital were included in the study and they were asked to fill out the study forms. FMS diagnosis, ACR 2010 diagnosis criteria were used for FMS diagnosis. A total of 102 AP participated in the study. AP, surgical department, employees in group 1, group 2 were the internal department employees. Results: 5 AP from Group 1 and 4 AP from Group 2 were diagnosed with FMS (the frequency is 8.82% (within the 2 groups). Group 1 had significantly higher mean score of SSS compared to Group 2. No correlation was established between FMS diagnosis and department where one works at, age and assistant period. Discussion: According to our study, FMS frequency in AP was found to be higher than the prevalence found in general population and no correlation was found between FMS and factors such as age, department where one works at and assistant period. Awareness of this fact at the schools of medicine and taking precautions may increase quality of service and education.

Keywords

Fibromyalgia Syndrome; Hospital; Physician

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Introduction

Fibromyalgia Syndrome (FMS) is an extra-articular rheumatic disease characterized by widespread body pain, reduced pain threshold, sleep disorders, fatigue and frequently psychological disorders with an unknown etiology [1, 2]. American College of Rheumatology (ACR) recommended two points for the diagnosis of FMS: 1) diffusely pain lasting for at least three months 2) sensitivity with palpation in 11 of the 18 specified tender points. Widespread pain may be accompanied by findings and complaints such as headache, irritable bowel and bladder syndrome, paresthesia, dysmenorrhea, subjective feeling of hand swelling [3]. Recently, diagnostic criteria of FMS were modified according to 2010 ACR recommendations. According to these criteria, diagnosis was made with widespread pain index (WPI) and symptom severity scale (SSS) scores in patients who have suffered from pain for at least 3 months and this pain cannot be justified in any other pathology.

The rate of FMS in general population is about 2-6%. It occurs more frequently in women between 40-60 years of age than men. Based on community studies, it has been also reported that people with lower education and socio-economic level have developed FMS more frequently than others [4, 5].

Although FMS is not a psychiatric disease, psychological disorders such as anxiety, depression and mental stress have been observed in 60-40% of the patients diagnosed with FMS. Treatment or improvement of psychological factors in most of the patients positively affects the treatment of FMS, yet does not completely eliminate the symptoms [6, 7]. Also, certain personal characteristics named as "predisposition to pain" are frequently encountered in patients with FMS. Characteristics of personality with predisposition to pain include work centered life, perfectionism, failure to relax, and failure to enjoy life [8].

The term of assistant physician (AP) covers medical doctors continue his/her education at the special area (like general surgery, dermatology, etc.) of medicine in Turkey. To become an AP, person has to complete a six-years medical education in a school of medicine and then pass an exam called "Specialization in Medicine" for selecting the desired specialization [9]. Tasks of AP roughly include examining outpatients or hospitalized patients for their own practice, to research, to follow the current data, and to prepare seminars. The facts that AP work at the units where patients require urgent intervention and sensitive follow-up, that they keep on working after duty, and that they experience great stress throughout the days and nights may negatively affect their performance [10]. Also, it has been observed that all of these factors result occupational and social problems such as fatigue, exhaustion, distraction, lack of interpersonal communication, reduction in effectiveness, and even resignation [11]. Therefore, quality of life in AP may become worse and worse day by day.

The aim of this study is to determine the frequency of FMS in AP who form a vital part of the daily practice at the university and education and training hospitals and the relationship between the frequency and the factors such as age, duration of work and the kind of the special area.

Material and Method

Voluntary AP (n=102) including 65 male and 37 female working at the departments of internal diseases and surgery in a local university hospital were enrolled in the study. Diagnosis was made according to 2010 ACR FMS diagnostic criteria. According to these criteria, in patients who has suffered from pain for at least 3 months and this pain cannot be justified in any other pathology, FMS is diagnosed with total score of WPI is ≥ 7 and total score of SSS ≥5 or total score of WPI is 3-6 and total score of SSS is ≥ 9.

All AP fulfilled the questionnaire forms including age, gender, departments they work at, duration of work. Whether or not they have additional disease history and whether or not symptoms have lasted for at least 3 months have been questioned. In order to calculate the total score of WPI, they were asked to mark those areas where they felt pain out of the 19 body areas in the last one-week, and the total score was accepted between 0 and 19. In order to calculate the total score of SSS, the presence of fatigue, restless sleep, cognitive and somatic symptoms were questioned. Then the total score of SSS was marked between 0 and 12.

The relationship between the presence of FMS and the factors such as age, duration of work and the departments where one works at were examined statistically.

All statistical analysis was performed using SPSS 18.0 program. Chi-square test was used in the comparison of definitive statistics categorical data, whereas t test was used to compare constant variables. $p<0.05$ was accepted to be statistically significant.

Results

One hundred and two APs, including 65 male and 37 female, participated in the study. Group 1 was consisted of the AP working at the department of surgery and Group 2 was consisted of the AP working at the department of internal diseases. Total number and gender of the APs are shown on the Table 1. Total number and gender of the AP diagnosed with FMS are shown on the Table 2.

Table 1. Distribution of AP participated in the study

	Group 1(n=47)	Group 2 (n=55)
Female	11 (23.4%)	26 (42.7%)
Male	36 (76.5%)	29 (57.2%)

AP: Assistant physician, Group 1: those working at the surgery department, Group 2: those working at the internal diseases department

Table 2. Distribution of AP diagnosed with FMS

	Group 1	Group 2	p value
Female	3 (6.3%)	3 (5.4%)	0.05<
Male	2 (4.2%)	1 (1.8%)	0.05<

AP: Assistant physician, FMS: Fibromyalgia Syndrome, Group 1: those working at the surgery department, Group 2: those working at the internal diseases department,

Age, duration of assistant physician, mean score of WPI, mean score of SSS are shown on Table 2. When two groups are compared, no statistically significant difference has been established between the presence of FMS and age, assistant period, mean score of WPI where as the presence of FMS statistically significant difference is established between the total score of SSS and the presence of FMS (Table 3).

9 APs who were diagnosed with FMS comprised 8.82% of the

Table 3. Comparison of age, assistant period and FMS scores for AP participating in the study

	Group 1 (n=47)	Group 2 (n=55)	p value
Average age (year)	29.74±3.385	28.64±3.428	0.05<
Duration of assistant physician (month)	27.62±16.539	25.98±17.32	0.05<
WPI score	2.64±2.480	2.84±3.155	0.05<
SSS score	5.81±2.401	4.69±2.687	<0.05

AP: Assistant physician, FMS: Fibromyalgia Syndrome, Group 1: those working at the surgery department, Group 2: those working at the internal diseases department, SSS score: symptom severity scale score, WPI score: widespread pain index score,

AP who participated in the study. There was no statistically significant difference between Group 1 and Group 2 in terms of FMS diagnosis (p=0.550).

Mean ages of those AP who were diagnosed with FMS was 28.67±2.50; mean duration of assistant physician was 30.11±15.75 months; mean WPI score was 8.11±4.936; mean SSS score was 9.67±1.581.

No correlation was established between FMS and age and assistant period of MA (Table 4).

Table 4. Correlation of FMS diagnosis with age and assistant period

n=102	Age		Duration of assistant physician	
	p	r	p	r
FMS	0.66	0.44	0.53	0.63

FMS: Fibromyalgia syndrome

Discussion

FMS is abnormal central pain processing disorder and is a musculoskeletal system disease characterized by different symptoms such as fatigue, change in mood and cognitive function and pain [12]. According to 2010 ACR diagnostic criteria, FMS diagnosis is determined according to scores of WPI and SSS where a person has been suffering from FMS complaints for at least 3 months and there is no other disease that will justify the pain [13]. By merely using these diagnosis criteria, FMS may be diagnosed with an accuracy rate of 88,1% according to ACR 1990 criteria without conducting tender points examination. Also, SSS enables us to evaluate the severity of fibromyalgia symptoms in now or in the past, and is a useful method for a long-term evaluation in patients with obvious symptom variability. We have used these new criteria allow us to diagnose easier.

Prevalence of FMS in the community is about 2-6%. It is observed in women up to 9-10 times more frequently than men. Wolfe et al. [5] determined FMS in the general population at the ratio of 2% and reported that disease affects men by 0.5% and women by 3.4%. Carmano et al. [14] determined incidence of the disease in general population as 2.4%; 4.2% in women and 0.2% in men. White et al. [15] determined FMS in women by 4.9%, and in men by 1.6% at a study conducted in London with 3395 adults. In our study, FMS prevalence was determined as 8.82%. According to gender distribution, the ratio of male and female patients was 2.94% and 5.88%, respectively. The ratio found in our study is higher than those in the literature. This result may be explained that our study group is composed of members from a professional work group under high stress conditions and FMS is based on psychological stress.

While Carmano et al. [14] determined that the incidence of FMS is 1.6% in the ages range of 20-40 years and they found that the highest incidence was in the ages range of 40-49 (4.9%). In a study conducted in our country, the highest incidence of FMS (3.5%) was found in women of the 30-40 ages [16]. In our study, the mean age of AP diagnosed with FMS was determined as 28.67±2.50 years. This result is lower than the mean age found in previous studies. Reason for this is that AP generally graduate from the school of medicine at the age range of 24-26 years, that they have just passed the specialization test and they are in 4-6 yearlong education programs. However, if we conduct a study covering all physicians, age group that the disease is observed at the highest incidence may be determined.

2 studies conducted in our country were found when looking from perspective of FMS incidence and professional group. Güler et al. [17] reported that 53% of the patients included in the study are housewives, 18% of them are civil servants, 15% of them are workers, 5% of them are students and 9% of them are working at other jobs. Erdal et al. [18] reported distribution of the patients according to profession group as 53.33% being housewives, 33.33% being civil servants and health care personnel, 13.33% being students. They attributed these results to the fact that working women still form a minority group in their region, and studies are mostly conducted on the housewives due to reasons such as failure to allocate adequate time for these studies. In one of the studies conducted in the health care professionals, Waylonis et al. [19] examined incidence of FMS among members of different profession groups and reported that, out of the 321 persons diagnosed with FMS, 20% is composed of people working at general office jobs, 14% is composed of heath care personnel, 11% of them is composed of teachers and 8% is composed of the unemployed. Ratio found among health care personnel in such study is higher than that we found in our study, yet sub-group of health care personnel has not been established. Therefore, it may not be correct to compare it with the ratio we found in our study but it can give some information about FMS in health workers.

In the prospective cohort study conducted by Kwimaki et al. [20] with participation of 4832 health care personnel, ratio of FMS diagnosis is found 6% among physicians, 55% among nurses, 11% among those working at laboratory and X-ray department, 11% among administrative personnel, 17% among personnel working at cleaning and servicing care taking jobs. They reported that these ratios are correlated with busy work life, low competence of making a decision, and level of exposure to violence. In our study, we established a higher ratio of FMS compared to physician groups in such study. High frequency of FMS in our study may be considered to be close ratio observed in this study since our study were conducted among AP whose average daily working hours are quite high and who are the members of a health care professional group exposed to hierarchical order.

Henriksson et al. [21] discerned that work life influences the symptoms of FMS in 75% of the 56 FMS patients they monitored for 5 years, and 45% of them have a hard time in jobs that require long hours of sitting, and the other jobs involving use of typewriter and keyboard. Henriksson et al. and Waylonis et al. [19,21] reported that FMS patients are not able to tolerate ac-

tivities that take a long time, are repetitive and require staying in the same position and the professions with much stress. They also tolerate better mild sedentary professions allowing different activities. Our study has been conducted at a profession group with high levels of stress because of working in operation and emergency rooms and also crowded polyclinics and emergency room, and it requires long hours of stay in stressful environments. Therefore, symptoms may become worse. Such fact may explain why frequency of FMS syndrome has been found to be higher in our study group.

According to results of our study, a statistically significant difference has been found between the general surgery and internal diseases departments regarding with the mean score of SSS. We believe that AP working at the surgery department may experience higher levels of fatigue, somatic symptoms and sleep irregularity due to long hours of operations, busy shifts and urgent interventions. However, some of the APs working at the internal diseases departments work at shifts and working conditions that are as busy as surgery departments. There is no data available that shows whether or not there is a difference in terms of fatigue, sleep, cognitive and somatic symptoms between health care personnel working at these departments and staff of internal disease department that seems to be less intense.

According to the results of our study, it should be known that frequency of FMS may be higher than general population during assistant physician period that is a vital part of daily practice at the schools of medicine and education and training hospitals, and dense stress may aggravate the symptoms of FMS. Some precautions that may be taken as this period of medicine profession that is very important may further increase quality of service and education.

Competing Interests

The authors declare that they have no competing interests.

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