RESEARCH ARTICLE

Prevalence of comorbid diseases in patients with fibromyalgia: A retrospective cross-sectional study

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Abstract

Objective: To examine the prevalence of comorbid conditions in patients diagnosed with fibromyalgia.

Methods: The retrospective cross-sectional study was conducted at Eskisehir Osmangazi University, Eskisehir, Turkey, and comprised data of fibromyalgia patients aged 18 years or more admitted between January 1, 2012 and August 15, 2016. Hospital's database was investigated using the International Classification of Diseases, 10th Revision codes to identify fibromyalgia cases and predetermined comorbid conditions. SPSS 21 was used for data analysis.

Results: Of 509 patients, 51(10%) were males and 458(90%) were females with an overall mean age of 50.24±12.32 years. Of the total, 345(67.8%) patients had at least one comorbid disease, while 164(32.2%) had no comorbid disease. The most prevalent condition was cardiovascular diseases in 187(36.7%) patients followed by endocrine diseases in 157(30.8%).

Conclusion: Fibromyalgia is a disease that is seen to be increasing in frequency in recent years. It is useful to evaluate fibromyalgia patients with their comorbid conditions on their follow-up.

Keywords: Fibromyalgia, Comorbidity, Chronic disease, Prevalence. (JPMA 68: 729; 2018)

Introduction

Fibromyalgia syndrome (FMS) is a chronic and widespread pain syndrome characterised by fatigue, sleeping problems, cognitive disorders and somatic complaints and severe pain in the tender points of the body at the time of physical activity, with no laboratory findings specific to the disease. Its aetiology is not well known.[1,2] FMS is a disease that causes physical and psychological disturbances in the developed countries in recent years, which limits the social life, presents as a serious social problem by impairing the work capacity and quality of life. Depression is one of the most common accompanying conditions in women.[3] In FMS, fatigue, sleep disturbance, stiffness, paresthesia, headache, Raynaud-like symptoms, depression and anxiety disorders are common symptoms that associate pain. Hypothyroidism, depression, systemic lupus erythematosus (SLE) and some malignancies may mimic FMS. In addition, FMS may be associated with some inflammatory diseases such as rheumatoid arthritis (RA). The prevalence of FMS is reported to be 2-8%.[4,5] FMS can be seen in all ethnic groups, in all ages and genders. The disease mostly affects women in the 40-60 years age group and 85-90% of the patients are women. In women, the frequency is 4-9 times more than men.[6]

FMS is diagnosed by excluding other possible diagnosis based on the patient's clinical features. There is no specific laboratory test or diagnostic method for FMS. All laboratory tests are normal unless there is another accompanying disease or condition. In terms of helping the diagnosis, efforts to develop some criteria have been done over time.[2,7]

In recent studies it was shown that comorbid diseases affect the course of fibromyalgia. The current study was planned to examine comorbid diseases of patients diagnosed with fibromyalgia and to determine the rates of comorbid diseases.[4-7]

Patients and Methods

The retrospective cross-sectional study was conducted at Eskisehir Osmangazi University, Faculty of Medicine, Internal Medicine Department, Division of Rheumatology and Family Medicine Department, Eskisehir, Turkey, and comprised data of fibromyalgia patients aged 18 years or more admitted to the polyclinics between January 1, 2012 and August 15, 2016. Records were scanned in the database system of the hospital using the International Classification of Diseases, 10th Revision (ICD-10) codes and all FMS patients diagnosed according to 2010 American College of Rheumatology criteria were included. Patients were receiving appropriate treatment for their comorbid diseases and were in inactive period.[8] Patients aged under

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18 years were excluded in clinical practice at our institution, vitamin D levels of all patients with suspect fibromyalgia were evaluated and they were diagnosed as 'vitamin D deficiency' instead of fibromyalgia if low levels were seen, and they were not included in the study. At the time of diagnosis, all the patients had been asked for drug-related problems and all the obtained laboratory tests, including aspartate aminotransferase (AST), alanine transaminase (ALT), lactate dehydrogenase (LDH), creatinine kinase (CK), were within normal ranges. If not, such patients were not diagnosed with fibromyalgia.

Approval was obtained from the institutional ethics committee. SPSS 21 was used for data analysis. Continuous data was given as mean ± standard deviation. Categorical data was given as the frequency and percentage. Yate's Chi-Square and Fisher's Exact Chi-Square analyses were used in the analysis of the generated cross tables. Values of $p<0.05$ were considered statistically significant.

Results

Of the 509 patients, 51(10%) were male and 458(90%)

Table: Rates of comorbid diseases.

Comorbid Diseases		Frequency (n)	Percentage (%)
Cardiovascular Diseases	Hypertension	155	30.5
	Coronary Artery Diseases	26	5.1
	Heart Valve Disease/Heart Rhythm Disorders	6	1.2
	Total	187	36.7
Endocrine Diseases	Diabetes Mellitus	88	17.3
	Hypothyroid	65	12.8
	Parathyroid Dysfunction	3	0.6
	Acromegaly	1	0.2
	Total	157	30.8
Rheumatic Diseases	Rheumatoid Arthritis	30	5.9
	Sjogren Syndrome	12	2.4
	Behcet's Disease	8	1.6
	Ankylosing spondylitis	8	1.6
	SLE	3	0.6
	FMF	1	0.2
	Scleroderma	1	0.2
	Total	63	12.4
Neurological Diseases	Cerebrovascular Accident	9	1.8
	Dementia	8	1.6
	Parkinson's Disease	4	0.8
	Epilepsy	4	0.8
	Metabolic Syndrome	3	0.6
	Migraine	2	0.4
	Total	30	5.9
Other Autoimmune Diseases	Psoriasis	6	1.2
	Coeliac	5	1.0
	Primary biliary cirrhosis	3	0.6
	Total	14	2.8
Cancer	Breast Cancer	4	0.8
	Colon Cancer	2	0.4
	Thyroid Cancer	2	0.4
	Kidney Cancer	1	0.2
	CML	1	0.2
	Total	10	2.0
Mental Disorders	Anxiety Disorder	85	16.7
	Mood Disorder	41	8.1
	Psychosis	3	0.6
	Total	129	25.3
Chronic Obstructive Pulmonary Disease (COPD, Asthma)		45	8.8
Osteoporosis		37	7.3
Other Diseases		11	2.2

were female with an overall mean age of 50.24 ± 12.32 years. Of the total, 345(67.8%) had at least one comorbid disease while 164(32.2%) had no comorbid disease. Among those with comorbid diseases, 147(42.6%) patients had one, 107(31.0%) had two, 56(16.2%) had three, 26(7.5%) had four, 9(2.6%) had five or more comorbids. There was no significant difference between the number of comorbid diseases and gender (p=0.23).

The most prevalent comorbid condition was cardiovascular diseases in 187(36.7%) patients followed by endocrine diseases in 157(30.8%), rheumatology 63(12.4%), neurology 30(5.9%) (Table).

Discussion

In this study, rates of comorbid diseases of patients that diagnosed as fibromyalgia by a rheumatology expert and admitted to outpatient clinics of internal medicine and family medicine departments of a university were examined retrospectively. Fibromyalgia is more common in female gender and chronic diseases and mental disorders are significantly more common in these patients. These findings are consistent with a similar cross-sectional study done in Terrassa.[9]

Associated with widespread body pain, fibromyalgia is a medical diagnosis used to describe physical and psychological symptoms that emerge with reduced quality of life and the absence of a clear pathological cause. Past studies showed that fibromyalgia has an increased incidence in certain medical conditions. Rheumatic diseases, myocardial infarction (MI), hypertension, diabetes mellitus, mental disorders can be shown as examples of these.[10]

A total of 509 patients were enrolled in our study; 51 males and 458 females. In our study, it was concluded that fibromyalgia was far more common in women than man and these findings are consistent with the results of 2012 National Health Interview Survey in US and other studies. According to the studies Fibromyalgia is nine times more common in women than in men.[10-12]

In our study, cardiovascular diseases and endocrine diseases were most common comorbid disease groups associated with fibromyalgia. The most common diseases were hypertension and diabetes among them.

The prevalence of rheumatological diseases was 12.4% in our study. The most common such disease was rheumatoid arthritis. These findings were consistent with earlier results.[10]

The prevalence of psychiatric disorders was 25.3% which is one of the most important disorders related to fibromyalgia. The most common disease groups were anxiety disorders and mood disorders. Many behavioural and psychological factors are influential in the symptoms of patients with FMS. Psychiatric disorders accompany a large proportion of patients with FM. Among them, most commonly seen disorders are depression and anxiety. These findings were consistent with the results of the cross-sectional studies in US and Turkey.[13-16]

Psychological symptoms are present in a significant proportion of patients with FMS. That includes anxiety, stress and depression. The comorbidity rate in FMS patients is similar to that of other disease comorbidities, but FMS patients are taking more drugs and for a longer duration. There is a positive correlation between somatic symptoms and the prescribed drugs; more drugs are prescribed if the patient is more symptomatic.[17]

According to our results, there is a high rate of comorbidity in patients with FMS. Comorbid conditions may need to be treated well in order for patients to have a meaningful improvement in their quality of life. Therefore, it is necessary to evaluate comorbid conditions in the routine follow-up of FMS patients.[18]

Conclusion

FMS is an important disease with increasing frequency in recent years, limits physical and social life thanks to pain it causes, accompanied by psychological disorders, its aetiology is not well known. Our study draws attention to the fact that comorbid diseases can be seen with FMS and to give information about comorbid disease rates of patients with FMS. We believe that FMS, which can be seen with many diseases, is in fact related to physicians from many branches, and it is useful to evaluate FMS patients with their comorbid conditions on their follow-up.

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Conflict of Interest: None.

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