Original Article

Assessment of medical practitioners' knowledge of fibromyalgia in Saudi Arabia

ABSTRACT

Background: Fibromyalgia (FM), a relatively common disease, is difficult to diagnose owing to its subjective symptoms and poor knowledge among medical practitioners. The purpose of this study was to assess the knowledge regarding FM among medical practitioners in Saudi Arabia and the need for educational programs at the undergraduate level.

Subjects and Methods: An online survey was administered to physicians, nurses, and technologist/technicians in different regions of the country. Responses were obtained from 104 medical practitioners. Knowledge regarding FM including clinical symptoms, diagnosis, and treatment was assessed.

Results: Only 26% of the respondents reported that FM was part of their undergraduate curriculum, and only 8.7% attended educational programs about FM. (Approximately 50% of the medical practitioners either referred FM patients to unrelated specialty or did not know whom to refer these patients to). Only 33.7% of the respondents were familiar with the diagnostic criteria. Physiotherapy (69.4%) and pharmacological treatment (63.9%) were predominantly reported as the appropriate treatment.

Conclusions: Knowledge regarding FM among medical practitioners in Saudi Arabia is poor. Further education at the undergraduate level is needed to improve knowledge and avoid delays in diagnosis and treatment.

Key words: Fibromyalgia; knowledge; medical practitioners; pain management; rheumatological disease

Introduction

Fibromyalgia (FM) is defined by the American College of Rheumatology (ACR) 1990 classification as widespread pain affecting both sides of the body in the upper and lower segments along with tenderness in at least 11 of 18 specific tender sites.[1] In 2010, the ACR published preliminary revised criteria to diagnose FM that does not include tender points but severity of fatigue, waking unrefreshed, and cognitive symptoms as part of the core diagnostic assessment. The diagnosis for FM according to ACR 2016 revision should fulfil: (1) generalized pain (at least 4 of 5 regions); (2) persistent symptoms for at least 3 months; (3) widespread pain index (WPI ≥7) and Symptom Severity Scale (SSS) score ≥5 or WPI 4–6 and SSS score ≥9; and (4) a diagnosis of FM is valid irrespective of other diagnoses.[2,3]

The prevalence of FM in Saudi Arabia is unknown. Globally, the prevalence ranges 0.5%–5%, affecting more women than men. An estimated 6–10 million people in the United States have FM.[4-7] There is no known cause of FM and the pathophysiology

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is uncertain.[8] However, central sensitization as well as genetic and environmental causes have been explored.[9-11]

Treatment for FM should be multidisciplinary and involve pharmacological and nonpharmacological measures. The aim of this study was to assess the knowledge regarding FM among medical practitioners in Saudi Arabia.

Subjects and Methods

Following approval from the Ethics Committee in King Abdulaziz University Hospital, Jeddah, Saudi Arabia, an epidemiological study was conducted to assess medical practitioners' knowledge regarding FM in Saudi Arabia. An online survey was sent to different medical practitioners (physicians, nurses, and technologist/technicians) in different cities in the country. A total of 104 anonymous responses were received. The survey consisted of 23 questions that obtained information regarding demographics, professional background, and opinions of the old criteria (ACR 1990) for diagnosis and treatment of FM. In addition, we asked the participants whether they attended any activities or lectures about FM recently or during their undergraduate training. Acceptance to complete the survey indicated informed consent.

The demographic information included sex, age, region of the country, specialty, position, and graduation year and country. The survey was designed to assess 4 areas of the medical practitioner's knowledge: (1) Attendance at Continuing Medical Education/awareness campaigns or lectures regarding FM during undergraduate training (questions 10, 11, and 12); (2) knowledge of FM (questions 13, 14, 17, and 18); (3) diagnosis (questions 15, 16, and 19); and (4) treatment (questions 21, 22, and 23) [Appendix 1]. The data collected through the online survey were downloaded and analyzed using Microsoft Excel.

Results

A total of 104 medical practitioners (73 physicians, 13 nurses, 3 pharmacists, 8 technologists/technicians, and 7 others) completed the survey. Of the 73 physicians, 28 were consultants, 31 specialists, 13 residents, and 2 medical students/interns. Table 1 shows the demographic background of the participants. The average age was approximately 35 years (range 22–60 years). The average years of practice were 10.6 years after graduation. Most of the participants graduated from the same country (78.8%), and most of the participants were male (n = 79; 76%).

Table 1: Demographic characteristics of the medical practitioners

Variable	Numbers
Male:female ratio (%)	79:25 (76:24)
Age (years)	
Range	22-60
Mean±SD	35.4±7.2
Studied in SA (%)	78.8
Years of experience range (mean) (%)	2-34 (10.6)
Physicians: nonphysicians (%)	67:37 (64.4:35.6)

SD: Standard deviation; SA: Saudi Arabia

More than half of the respondents (68.3%) claimed that they heard about FM, but only 8.7% had attended educational programs regarding FM and only 26% attended lectures regarding FM during undergraduate training. There was no big difference in terms of education for FM between those who studied inside (8.5%) or outside (9.1%) Saudi Arabia. However, a higher proportion of respondents who studied in Saudi Arabia (29.3%) than those who studied outside (13.6%) had FM as part of their curriculum during undergraduate training. A higher number of physicians (11.9%) than nonphysicians (2.7%) attended educational programs. Similarly, a higher number of physicians (32.8%) than nonphysicians (13.4%) attended FM-related lectures during their undergraduate training.

The responses to the question regarding referrals were as follows: Rheumatologist, 28.8%; pain physicians, 22.1%; don't know, 20.1%; and neurologist, 18.2%. This might explain why a high percentage of FM patients are usually seen by rheumatologists and pain physicians. More than two-thirds of the respondents (71.2%) reported not encountering any cases of FM, and 66.7% stated that they saw 1–20 FM patients in the last year.

Only 33.7% of respondents stated that they were familiar with the 1990 ACR classification criteria for FM.[1] However, when asked about the number of tender points out of 18 required to diagnose FM, only 37.1% answered correctly, and only 47.1% knew that the diagnosis is established clinically. Less than half of the respondents (46.2%) knew that FM more commonly affects women. Figure 1 summarizes the respondents' responses to items regarding symptoms of FM. Fatigue (60.6%) and widespread pain (52%) were the most commonly recognized symptoms by medical practitioners, followed by sleep problems, anxiety, and headache. Finally, physiotherapy (69.4%) was predominantly selected as the appropriate treatment approach, followed by pharmacological treatment (63.9%). The most common drugs chosen were amitriptyline (58.3%) and pregabalin (52.8%), followed by duloxetine (33.3%), and nonsteroidal anti-inflammatory drugs (33.3%) [Figure 2].

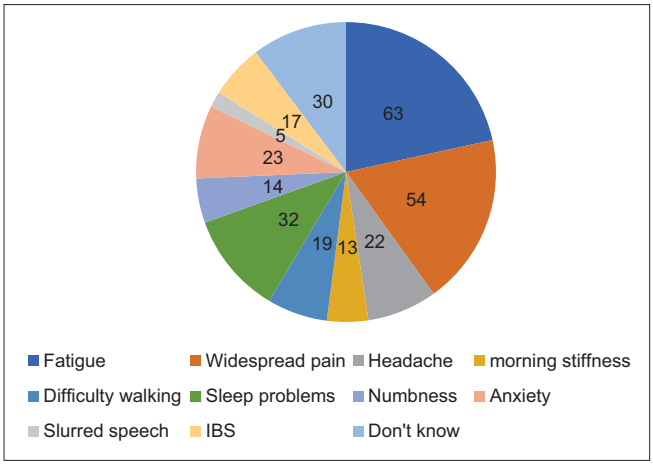

Figure 1: Common clinical presentation of fibromyalgia

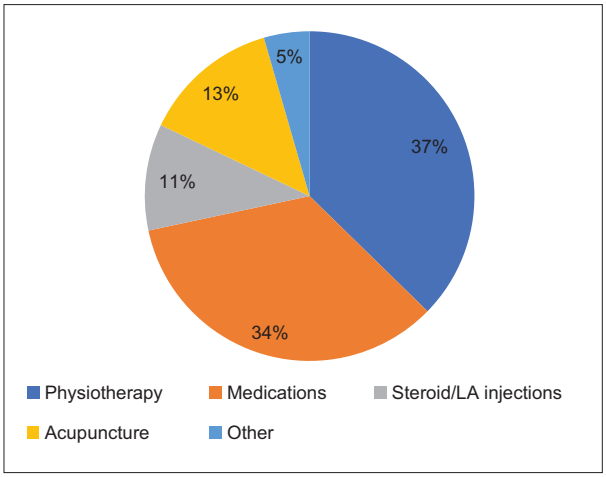

Figure 2: Treatment options for fibromyalgia patients

Discussion

We found that approximately half of the medical practitioners do not know whom they should refer FM patients to because they lack the knowledge since undergraduate training; moreover, only a few of the respondents attended educational programs about FM. Although the medical practitioners who studied in Saudi Arabia attended more lectures at the undergraduate level than those who studied outside Saudi Arabia, their knowledge about FM was poor. This was clear from the answers to the questions about diagnostic criteria and treatment options. Physicians usually facing difficulty in diagnosing and managing FM patients because diagnosis based on subjective symptoms and also because of poor knowledge of medical practitioners about FM from different studies done worldwide.[12-20] For that reason, it took usually an average of 2.3 years and visit an average of 3.7 physicians to reach the final diagnosis.[21] The early diagnosis is important to save the cost of unnecessary tests and frequent visits to different specialties in addition to the positive impact on the patients if diagnosis is known.[22,23] In contrast, many patients with musculoskeletal symptoms have been incorrectly diagnosed as FM.[24]

Based on the responses to questions regarding the 1990 ACR criteria, rheumatologists and pain physicians were more familiar with FM than other medical practitioners. This reflects the greater level of expertise in managing such conditions among rheumatologists and pain physicians. Thus, although FM is considered a rheumatological disease according to the ACR,[1,2] it is not surprising that FM patients are referred to different specialties. Important limitations to this study include recall bias and the small sample size.

Conclusions

The results emphasize the need to improve physician training modules in terms of the diagnosis of FM, especially family medicine physicians. It is important for all medical practitioners to be familiar with FM to avoid delays in diagnosis. To address this issue, additional educational programs as well as inclusion of information regarding FM at the undergraduate level training is necessary.

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Conflicts of interest
There are no conflicts of interest.

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Appendix

Appendix 1

QUESTIONNAIRE

Assessment of medical practitioners' knowledge of fibromyalgia in Saudi Arabia (by completing this questionnaire, I accept to participate in this study)

DEMOGRAPHIC DATA

Gender: ☐ M ☐ F **Age:** _____

Type of hospital: ☐ University ☐ Ministry of Health ☐ Military Hospital ☐ Security of Forces ☐ National Guard ☐ KFSH ☐ Private ☐ Other ……

Specialty: _____ **Position:** ☐ Intern/SHO ☐ Resident ☐ Specialist ☐ Consultant

Educational qualification: _____

Graduation year: _____ **Graduation country:** _____

PROFESSIONAL BACKGROUND

Did you hear about fibromyalgia:
☐ Yes ☐ No

Did you attend any CME activity or awareness event about fibromyalgia:
☐ Yes ☐ No

Have you heard any lecture about fibromyalgia during your undergraduate teaching?
☐ Yes ☐ No ☐ I don't remember

Do you manage any case of fibromyalgia?
☐ Yes ☐ No

How many patients diagnosed as fibromyalgia you have seen in the last year?
☐ 1–20 ☐ 21–50 ☐ >50

Do you know what are the criteria for diagnosing fibromyalgia?
☐ Yes ☐ No

Did you hear about the tender points (ACR 1990)?
☐ Yes ☐ No

How many tender points needed to diagnose fibromyalgia?
☐ 8 ☐ 11 ☐ 18

Fibromyalgia is common in:
☐ Male ☐ Female ☐ Equal

To whom you refer a patient suspecting fibromyalgia:
☐ Orthopedic ☐ Rheumatology ☐ Psychiatry ☐ Neurology ☐ Pain Management ☐ Rehabilitation
☐ Family Medicine

What are the common presentations of fibromyalgia patients (can chose more than one):
☐ Fatigue ☐ Widespread Pain ☐ Headache ☐ Morning stiffness ☐ Difficulty walking
☐ Sleep problems ☐ Numbness ☐ Anxiety ☐ Slurred speech ☐ Irritable bowel syndrome

How to confirm the diagnoses of fibromyalgia?
☐ Clinical ☐ Laboratory ☐ Radiological ☐ Laboratory and radiological

Is there any treatment for fibromyalgia?
☐ Yes ☐ No

If yes what type of treatment you recommend? (can chose more than one)
☐ Physiotherapy ☐ Medications ☐ Steroid injections ☐ Acupuncture ☐ Other

Which of the following drugs you think are effective for fibromyalgia patient (can chose more than one):
☐ Tramadol ☐ Amitriptyline ☐ Pregabalin ☐ Duloxetine ☐ Ibuprofen ☐ Prednisolone ☐ Other

Thank you for your cooperation