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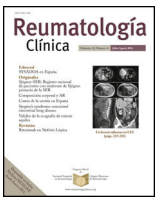

Original Article

Knowledge on Fibromyalgia Among General Practitioners, From Chiclayo-Peru, 2016☆

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ABSTRACT

Objective: Knowledge about fibromyalgia in general practitioners in the province of Chiclayo, Peru, 2016.
Materials and methods: Cross sectional descriptive study. Non-probability sampling, census type. In all, 145 physicians were evaluated through a questionnaire of 14 questions, validated by experts and a pilot. The analysis was performed using STATA v. 13.
Results: Accuracy in questions involving diagnosis was 41.1% and in questions about treatment: 65%; 75.1% 'had seen patients with fibromyalgia' previously. The average on locating pain points was 2.2 ± 2.8. Only 2.8% identified 11 or more painful points; 54.5% answered that 'the diagnosis is clinical and exams are for the differential diagnosis'; 46.1% in Ministerio de Salud (MINSA) and 28.3% in Seguro Social de Salud (EsSalud) answered the item about diagnostic criteria ($P = .021$); 65.7% said that psychotherapy, pregabalin and aerobic exercise were the most effective therapeutic triad, with no differences between MINSA and EsSalud: 61.5% vs 68.6% ($P = .23$); 59.3% responded that drugs that had proved to be useful were: pregabalin, duloxetine and amitriptyline; 66.2% responded that the most effective physical therapy is aerobic exercise.
Conclusions: Knowledge of the diagnosis and treatment of fibromyalgia by general doctors in Chiclayo is poor. There are some differences in knowledge depending on the age and type of institution to which each belongs.

Conocimientos de fibromialgia en médicos de atención primaria de la provincia de Chiclayo-Perú, 2016

Palabras clave:
Fibromialgia
Médicos de atención primaria
Conocimientos

RESUMEN

Objetivo: Describir los conocimientos en fibromialgia de los médicos de atención primaria de la provincia de Chiclayo durante el 2016.
Materiales y métodos: Estudio descriptivo transversal, con un muestreo no probabilístico, tipo censal. Se evaluaron 145 médicos mediante un cuestionario de 14 preguntas, validado por expertos y con una prueba piloto. El análisis univariado y bivariado se realizó con STATA v. 13.
Resultados: El acierto en las preguntas de diagnóstico fue del 41,1% y en las de tratamiento, del 65%. El 75,1% «habían visto pacientes con fibromialgia», previamente. La media de puntos dolorosos acertados fue de 2,2 ± 2,8. Solo el 2,8% identificaron de 11 a más puntos dolorosos; el 54,5% respondieron que «el diagnóstico es clínico y los exámenes son para el diagnóstico diferencial». El 46,1% de los médicos del Ministerio de Salud del Perú (MINSA) y el 28,3% de los del Seguro Social de Salud (EsSalud) respondieron correctamente el ítem de criterios diagnósticos (p = 0,021). El 65,7% respondieron que la psicoterapia, la pregabalina y el ejercicio aeróbico eran la tríada terapéutica más eficaz, sin diferencias entre MINSA y EsSalud, con un 61,5 y 68,6%, respectivamente (p = 0,23). El 59,3% respondieron que los fármacos con utilidad demostrada son: pregabalina, duloxetina y amitriptilina. El 66,2% respondieron que la terapia física más eficaz es el ejercicio aeróbico.

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Conclusiones: El conocimiento en diagnóstico y tratamiento de la fibromialgia en médicos generales de Chiclayo es deficiente. Existen algunas diferencias en el conocimiento según la edad y el tipo de institución a la que pertenecen.

Introduction

Fibromyalgia is a disorder with multiple etiologies,[1] which is frequently observed in the general population[2] and in outpatient clinics.[3] Its coexistence with mental health problems and the changes in the quality of life that it produces makes its early detection crucial. The diagnostic is eminently clinical, there being no ancillary test to determine whether the disease is or is not present.[1] Regrettably, as occurs with a number of conditions, its diagnosis comes late, often because its presence is not suspected. An extensive medical history and a detailed clinical examination can point to the diagnosis. The diagnostic criteria were established in 1990 by the American College of Rheumatology (ACR).[4]

The worldwide prevalence is 0.5%–5%.[2] In Chiclayo, Peru, the prevalence is 4.25%[5] and in Lambayeque district, it is 2.9%.[6] The frequency in the internal medicine outpatient clinic is 9.4%.[3]

The majority of the patients are diagnosed by rheumatologists.[7] This prolongs the time to diagnosis. In 2010, Choy et al. reported a study performed in 8 countries that found that patients with fibromyalgia had been evaluated by 3.7 physicians before being diagnosed; the diagnosis is obtained approximately 2.3 years after the onset of symptoms, and that period can range from months to 23 years.[8,9] Given its high prevalence and importance, its presence should be suspected by primary care physicians.

In Spain, the prevalence of fibromyalgia is 5%–7% in general medicine clinics; approximately 2 or 3 patients can go unnoticed per department.[10]

Perrot et al. conducted a study in 8 countries in 2012 and found that 61% of primary care physicians reported having difficulties with the diagnosis, 45% had very little training in fibromyalgia and 34% considered that they were not knowledgeable about the condition.[7]

Kamoun et al.[11] in 2010 and, in France, Túnez and Blotman et al.[12] in 2005 reported that 54% and 25%, respectively, of primary care physicians were aware of the identification of the tender points for the diagnosis.

With regard to treatment, physicians recommended physical exercise, swimming, regular walking and biking.[12] Other studies mention the use of painkillers and antidepressants as drug therapy.[11] In the available studies, most authors reported that they had not received training as undergraduates.[7,11,12]

In 2012, Pastor et al. found that the conception of fibromyalgia on the part of primary care physicians in Spain was that it was important, that it was poorly controlled and was associated with psychological disorders.[13] In Canada, Hayes et al. observed that 23% of the general practitioners considered fibromyalgia patients to be "malingerers", in comparison with 12% of the rheumatologists.[14]

In the province of Chiclayo, we found no information concerning knowledge of the diagnosis and treatment of fibromyalgia in primary care. The reason for performing this study is the present situation of this disease, and because it is a problem with a growing trend in terms of morbidity. The objective was to describe the knowledge of fibromyalgia of the primary care physicians of Chiclayo-Lambayeque in 2016.

Materials and methods

We conducted a cross-sectional descriptive study. The population was the primary care physicians of Chiclayo in 2016. The sample was non-probabilistic and censal-like; we contacted 145 primary care physicians from the province of Chiclayo practicing under the Ministry of Health (MINSA) or the Social Health Insurance system (EsSalud).

Setting: the province of Chiclayo is in the department of Lambayeque, in northern Peru. Its population is 857,405, 52.9% women and 47.08% men; in 2012, 28.9% were under 15 years of age, 63.2% were between 15 and 64 years old and 8.0% were 65 years old or more. These data correspond to the entire department of Lambayeque. The distribution in the province of Chiclayo is very similar.[15]

In Peru, the health system is composed of the public sector (MINSA, EsSalud, and the armed forces) and the private sector. The MINSA and EsSalud are administrators of the health sector with the greatest representation on the national level (92% of the hospitals, 69% of the health centers and 99% of the positions in health care). Given their representativeness and the feasibility of the study, we considered only physicians of MINSA and EsSalud. In MINSA, the patients attended to are in poverty or extreme poverty, whereas in EsSalud, the patients have a higher socioeconomic level and have worked all their lives. The first contact of the patient is with a primary care physician and, later, if it is warranted, he or she will be referred to a specialist. However, a substantial percentage of patients go directly to a specialist.[16]

We drafted a questionnaire of 14 multiple choice questions with a single correct alternative, based on a review of the literature and on the 1990 ACR criteria for fibromyalgia, to evaluate issues concerning the diagnosis (10 questions) and treatment (4 questions). The validity of the content was assessed by 4 rheumatologists, who evaluated the appropriateness and intelligibility of each item using a Likert scale in which "1" indicated being "totally in disagreement" and "5" was "totally in agreement", and obtained an average of 4. A pilot test was performed with 15 internal medicine residents from Chiclayo, and there were no problems with the wording. The average duration of completing the questionnaire was 15 minutes. The questionnaire included the illustration of the human body to evaluate the 18 tender points.

We performed a univariate analysis to calculate the central tendency measures, dispersion for numerical variables and frequencies, and percentages for categorical variables. An exploratory analysis was carried out to evaluate the association between the responses to the questions and the sociodemographic variables. The analysis of the data was done using STATA 13 and Excel 2010.

The study was approved by the research ethics committee of the Faculty of Human Medicine at the Universidad Católica Santo Toribio de Mogrovejo. To guarantee the confidentiality of the participants, they were given an informed consent form that explained the objectives of the study. The physicians were given an informative leaflet related to the topics of treatment and diagnosis in fibromyalgia.

Table 1
Sociodemographic characteristics of the physicians participating in the questionnaire.

Characteristic	n	%
Age		
<35 years	49	33.8
>35 years	96	66.2
Sex		
Male	100	41.2
Female	45	37.1
Health institution		
MINSA	78	53.7
EsSalud	67	46.2
Level of complexity		
MINSA		
I-3	26	17.9
I-2	20	13.8
I-4	18	12.4
I-1	14	9.6
EsSalud		
I-3	64	44.1
I-1	3	2.1

EsSalud, Social Health Insurance system; I, category indicating the level of complexity of the center; MINSA, Ministry of Health.

Results

We approached a total of 172 physicians; 14 (8.5%) refused to respond and 13 (7.5%) could not be found. Finally, 145 (84%) agreed to do the questionnaire; 78 (53.7%) were from MINSA and 67 (46.2%) came from EsSalud. All of those who participated were general practitioners, there being none from the specialty of family medicine. The questionnaire was completed once patient visits had ended.

The mean age was 39.9 ± 11.1 years, the median was 38 and the range was 24–67 years; 100 (68.9%) were men. The mean age of the men was 41.2 ±11.7 years and of the women was 37.03 ± 9.5 years. The men were older than the women ($P \geq .004$).

The mean number of years since they had graduated was 12.6 ± 9.7, the median was 10 and the range was 1–36 years.

Other characteristics are shown in Table 1.

With respect to the questionnaire, the average number of correct replies in diagnostics was 41.1% and in the questions on treatment was 65%.

The overall distribution of correct replies on the questionnaire is summarized in Table 2.

The physicians who mentioned that "they had heard about fibromyalgia" numbered 142 (97.9%), and 109 (75.1%) responded that "they had seen patients with fibromyalgia".

With respect to the diagnostic criteria, 24 (48.9%) and 31 (39.3%) physicians younger and older than 35 years responded correctly ($P = .005$). The years since the physicians who responded correctly to this question had graduated was 13.5 ± 9.6, and was 10.9 ± 9.6 in those who gave an incorrect reply ($P = .058$). Of the 109 physicians who mentioned that they had seen patients with fibromyalgia, only 38 (34.9%) responded correctly to the question on diagnostic criteria, with no sex-related difference ($P = .1$), but there was a difference between the health institutions: MINSA with 46.1% and EsSalud with 28.3% ($P = .021$).

For the total of the questions, there was no statistically significant difference in the knowledge of men and women. The average of the number of tender points positioned correctly was 2.2 ± 2.8 and the median was 2. Those under the age of 35 years located more tender points on the human figure (average of points was 2.8; $P = .02$); 56 (38.8%) physicians could not locate any tender points and only 4 (2.8%) positioned 11 or more points correctly. There was a difference in the number of tender points correctly identified depending on the health institution: 3.1 ± 3.2 in MINSA and 1.2 ± 1.6 in EsSalud ($P < .001$).

Table 2
Overall distribution of correct responses in the questionnaire.

Aspect evaluated by the questions	Correct response	
	n	%
Diagnosis		
Age and characteristic age group	93	64.1
The diagnosis is clinical	79	54.5
Mental health comorbidities	74	51.0
Diseases with similar symptoms	64	44.1
Associated comorbidities	62	42.8
1990 ACR diagnostic criteria	55	37.9
Sleep problems	46	31.7
Location of tender points	4	2.8
Treatment		
Ideal multidisciplinary team	101	69.7
Most effective physical therapy	96	66.2
Therapeutic alternatives	94	64.8
Drugs with demonstrated utility	86	59.3

ACR, American College of Rheumatology.

In all, 79 (54.4%) responded that "the diagnosis is eminently clinical and the tests are for the differential diagnosis," 46.1% in MINSA and 64.1% in EsSalud ($P = .022$).

With respect to the most efficient therapeutic triad, 94 (65.7%) responded that it was psychotherapy, pregabalin and aerobic exercise, and 22 (15.4%) responded that it was psychotherapy, paracetamol and anaerobic exercise; 69.7% of those older than 35 years responded correctly to this question ($P = .059$), and there were no differences between MINSA and EsSalud: 61.5% and 68.6%, respectively ($P = .23$); 59.3% responded correctly to the question on the drugs with demonstrated utility: pregabalin, duloxetine and amitriptyline; 66.2% responded that the most effective physical therapy was aerobic exercise and 69.7% responded that the ideal multidisciplinary team for integrated care of the patient would be a rheumatologist, a psychologist and a physical therapist.

Discussion

This is the first study on knowledge of fibromyalgia involving primary care physicians in Peru. With respect to the diagnosis, we found that only 4 (2.8%) physicians correctly positioned at least 11 tender points for the diagnosis (ACR 1990). In 2010, Kamoun et al., in a cross-sectional study carried out in Tunisia in 440 general practitioners, observed that 54% reported that they knew the location of the points[11] and Blotman et al., in 2005, in France, found that 25% of the physicians surveyed knew the number of tender points.[12] However, in those studies, the authors did not evaluate the knowledge of the location of the points. That datum is merely referential. Those results could be explained by unawareness of the existence of the disease, despite the fact that 75.1% of those who completed the questionnaire mentioned that they had seen patients with this condition. Another possibility is the difficulty involved in the anatomic location of the points, which could improve if training of this aspect were practical (in patients). The reality of this topic is unfamiliar to undergraduates in Lambayeque. In international studies, primary care physicians comment that their training in fibromyalgia was inadequate—54% in the study of Perrot et al.[7]—or they had not had any training.[11,12]

Moreover, the time allotted for outpatient clinics is too short to diagnose a disease of this type. According to the study of Perrot et al., 79% of those surveyed expressed this opinion.[7]

It was also found that, of all the physicians who had seen fibromyalgia patients, only 34.8% were acquainted with the 1990 ACR diagnostic criteria. A number of studies deal with knowledge

of the diagnostic criteria; the range goes from 14% to 59%.[7,11,12,14] Perrot et al. conducted a survey of 1622 physicians (among them, 809 general practitioners) in 8 countries (6 European, Mexico and South Korea) that showed that 53% reported difficulties with the diagnosis and that only 40% were knowledgeable about the criteria.[7]

In our study, we found that 55.8% were unfamiliar with conditions that were similar to fibromyalgia; it was considered that the differential diagnosis should include hypothyroidism, major depression and chronic fatigue syndrome. Perrot et al. observed that 90% referred to this matter. Differences in undergraduate training could explain these findings.[7]

Only 31.7% of those participating recognized that insomnia in the second half of the night was common in these individuals. In 2013, in patients from Chiclayo, the rate of insomnia was 80%, and the feeling of non-refreshing sleep was the most widespread type of insomnia (84.6%).

A number of studies report that primary care physicians find it difficult to distinguish between depression and fibromyalgia.[12] The symptoms are similar and frequently coexist. In a local study, it was found that 96.2% of the fibromyalgia patients had some level of depression, which was severe in 38.4%.[17]

With respect to treatment, it is noticeable that more than half of the questions to which correct responses were provided (65%), dealt with treatment rather than the diagnosis (41.1%). This result differs from those of other studies.[12,14] In Iran, Kianmehr et al. observed that 52.1% of the physicians indicated that nonsteroidal anti-inflammatory drugs were an option for treatment.[18] In our study, the use of nonsteroidal anti-inflammatory agents was evaluated among multiple alternatives, and we are unable to determine the proportion.

The majority of the physicians (69.7%) responded that the patients should be treated by a multidisciplinary team: psychologist, physical therapist and rheumatologist. Fibromyalgia is a disease in which collaborative management is fundamental for the success of the therapy. However, in this question, all of the response options included several professionals and, thus, this datum should be taken with caution. Kamoun et al.[11] and Blotman et al.[12] found that 40.2% and 54.6% of the physicians referred the patients to a rheumatologist. While it is true that it would be ideal that primary care professionals recognized fibromyalgia, the management of patients who are refractory to treatment or have several comorbidities is competence of a specialist.

Correct responses to the questions on tender points and diagnostic criteria were provided more frequently by physicians under 35 years of age. This probably reflects knowledge recently acquired in rotations through specialties of hospitals of greater complexity or more frequent contact with clinical practice guidelines; however, more often, professionals over the age of 35 responded correctly to the question on aerobic exercise, the use of pregabalin and the need for psychotherapy. This could be due to experience. We found no studies reporting similar findings. The years elapsed after graduation are not associated with a greater knowledge, an outcome that is similar to that observed in a 2015 publication by Kianmehr et al. in Iran.[18]

When the physicians from MINSA were compared with those from EsSalud, a greater number of the former had recognized the diagnostic criteria and the position of the tender points. However, the latter responded more frequently that the diagnosis was clinical and mentioned the need for aerobic exercise, the use of pregabalin and the need for psychotherapy as an alternative to the management. We found no studies that evaluated the relationship between the health agencies and the level of knowledge. This result might be useful for allocating resources for training medical personnel on the part of the institutions.

In this study, we considered the 1990 ACR criteria.[4] However, the ACR issued new diagnostic criteria in 2010.[19] Published works measure knowledge in terms of those of 1990. They are still applicable. The use of the new criteria in primary care has not been assessed by means of prospective studies; they include common symptoms and disregard the physical examination. While the diagnosis is mainly based on subjective parameters that are widely accepted in clinical practice, the utilization of the new criteria entails the risk of omitting significant findings detected in the clinical examination that could suggest alternative diagnoses.[20] Nevertheless, we must recognize that applying the 1990 ACR criteria is more difficult in outpatient clinics.

We should emphasize that each physician was personally evaluated using a structured knowledge questionnaire, in comparison with other studies involving a self-administered questionnaire based on a score that made it impossible to verify the data.

A number of local studies refer to the inadequacy of the knowledge about diseases that are widespread in the population.[17] This might reflect problems in undergraduate training that should be evaluated by the universities and the medical association. It is important to adapt continuing medical education and training of health professionals to the national and regional necessities of medical education. Moreover, it is important that education programs concur with the epidemiological reality of the country, as well as health policies and national programs.

Conclusions

Primary care physicians in Chiclayo have an inadequate knowledge of the diagnosis and treatment of fibromyalgia.

Younger physicians and those of MINSA were more familiar with the diagnostic criteria and tender points.

The question about the most effective triad for treatment was answered correctly by a larger number of the older physicians and those of EsSalud.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that no patient data appear in this article.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Conflicts of interest

The authors declare they have no conflicts of interest.

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