The role of Doctors in fibromyalgia misdiagnosis

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The role of Doctors in fibromyalgia misdiagnosis

The aim is to show objectively that may be a risk of FM misdiagnosis. The objectives are: 1. Is there a lack of interest in FM diagnosis? 2. Is there a lack of knowledge in FM diagnosis? 3. Is it related FM misdiagnosis with every specialty? 4. Is it related FM misdiagnosis with Doctor’s age? This is a transversal descriptive research study, which is going to be based in the data collected by a survey. The sample of study is 39 random Doctors from different specialties which receive the most of patients with FM (12 FMED, 7 Psychiatrists, 10 Neurologists and 10 Rheumatologist) from large public hospital from the Region of Murcia (Spain). The analysis of data shows that the most of them (74,4 %) consider FM a disorder related with medicine and psychology fields. Also, the majority (94,9 %) thinks that FM diagnostic is important in their specialties. But the 35,9 % do not know which is the method used to diagnose FM. The 74,35 % do not know all symptoms/signs of ACR criteria for FM diagnosis and from the 25,65 % who knows them, the 70 % do not know the method used for its diagnosis. (1) According to this analysis the most of Doctors think that FM is a disorder important in medicine and psychology, and that FM diagnosis is important in their specialties, so we can assume that the problem of FM diagnosis is not related to the lack of interest. (2) The most of them know that ACR criteria is the best method to diagnose FM, but it is very difficult to recognize a patient with FM if you do not know the symptoms and signs. Therefore, there is a high risk of FM misdiagnosis according this analysis related with the lack of knowledge. (3) According to the results the specialties less aware of FM diagnosis are FMED and Psychiatry. This is interesting, because FMED is the specialty that sees for the first time the majority of people with this syndrome. Many Psychiatrist consider FM as conversion disorder, so that may be related with the lack of knowledge about diagnosis of FM as rheumatologic disorder. It is necessary a good training of FM diagnosis in Psychiatry, because a lot of patients are going to visit them because depression, which can not be solved if they only focus in that problem. (4) The age was also relevant because Doctors between 46 – 55 y.o. look like to be more trained to diagnose FM, younger Doctors know less symptoms/sings included in ACR criteria, maybe because less clinic experience but also older Doctors present this lack of knowledge, maybe because FM is a disorder relatively new. Summarizing, specialties less trained to perform FM diagnosis are Doctors from FMED and Psychiatry younger than 46 y.o. and older than 55 y.o.
ACKNOWLEDGEMENT

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CONFLICT OF INTEREST

There are not conflicts of interest.
DĖL PRITARIMO TYRIMUI


Bioetikos centro vadovas

doc. E. Peičius
ABREVIATIONS

FM: fibromyalgia.
FMED: family medicine.
ACR criteria: American College of Rheumatology criteria.
RA: rheumatoid arthritis.
MDD: major depressive disorder.
TERMS

Factitious: simulation of a disease.

Malinger: person that simulate to be ill.

Polymorphism: different forms arise from the same genotype.

Handicap: disadvantage.
INTRODUCTION

FM is a syndrome characterized by muscular pain, fatigue, waking up tired, cognitive disturbances, pain/cramps in lower abdomen, depression, headache, during more than 3 months. It is estimated to have a worldwide prevalence in the order of 0.5 - 5% in the general population. The etiology of FM is already unknown but is related with: abnormal pain sensitivity and inhibition where evidences of enhanced sensitivity to a wide array of stimuli, such as heat and cold, as well as to mechanical and ischemic pressure; neuroendocrine system disorder because its relation with stress that involves abnormal functioning in the hypothalamic-pituitary-adrenal (HPA) axis; autonomic nervous system aberrations in autonomic nervous system (ANS) functioning are often observed among patients with FM; circadian cycle disturbances related with the sleep disorders; genetic factors are found in patients with RA, or MDD and FM, as well as in the first-degree relatives of these individuals, which are involved with single nucleotide polymorphism (SNP) in the serotonin transporter (5-HTT) gene may contribute to enhanced pain sensitivity among patients with FM; physical and psychosocial stressors may be especially pervasive because in addition to being associated with the onset of chronic widespread pain, they may also contribute to enhanced pain responses via involvement of the neuroendocrine system as described earlier.

It represents a problematic disease for Doctors and patients because the variability and chronology of the symptoms, the similarity of the clinic with other disorders, the unknown etiology, the relative efficacy of the treatment, the lack of trust between doctor and patient, the disbelief of doctor about this is a real medical syndrome, and the lack of knowledge about its diagnosis. I decided to work on this because, during many years working as physiotherapist with fibromyalgic patients, most of them complained about doctors spent many years to know what problem they have, how to treat them and also some of them considered these patients as malingerers. Later, as medical student some Doctors talked about FM considering it as not real disorder but as psychologic disorder. So, my hypothesis is that may be a lack of interest and/or knowledge about diagnosis of FM. I want to work on this to figure out this problem may happen and make Doctors aware, trying to avoid it, to improve fibromyalgic patients quality of life.
AIM AND OBJECTIVES

The aim is to show objectively that may be risk of FM misdiagnosis. The objectives are:

1. Is there a lack of interest in FM diagnosis?
2. Is there a lack of knowledge in FM diagnosis?
3. Is it related FM misdiagnosis risk with every specialty?
4. Is it related FM misdiagnosis risk with Doctor’s age?

LITERATURE REVIEW

FM is estimated to have a worldwide prevalence in the order of 0.5 - 5% in the general population [1-4]. The diagnosis takes an average of 2,3 years after experiencing symptoms and presentation to an average of 3,7 physicians before a diagnosis of FM was made [5]. 85% physicians find FM symptoms difficult to discriminate from other conditions, and 75% were not always comfortable with diagnosing FM [6]. Awareness of the ACR criteria is highest among rheumatologists (83%), neurologists (55%), PCPs (40%) and psychiatrists (32%) [6]. The 21% of PCPs not see a patient with FM in a period of time of 2 years, in an average of 1500–3000 patients [7] and estimating that FM constitutes 5% of a PCP’s consultation rate it is surprising [8, 9]. In this period, rheumatologists see 127 patients with FM, and psychiatrists 26 [6]. The 54% of doctors receives inadequate training in FM, and 32% still considered themselves not to be very knowledgeable about FM despite their experience in medical practice [6]. 51% of GPs and 50% of specialists identified their inability to offer psychological support to patients as a barrier to care. Overall, 66% of GPs and 53% of specialists reported that they should be doing more to help their patients with FM. However, 23% of GPs and 12% of specialists agreed with a statement that FM patients are malingerers, with GPs agreeing significantly more strongly. Seventy-six per cent of GPs and 64% of specialists described FM patients as time consuming and frustrating [10]. A research with 670 patients indicate: there is a moderate understanding to the Doctor; intermediate trusting to the Doctor, medium quality of life; moderate current pain [11]. Patients with FM do not trust doctors and refuse them [12]. Not well diagnosed and treated patient with FM increase the risk of suicide [13]. Accuracy of GPs in questions involving diagnosis of FM was 41.1% and in questions about treatment [14]. Rheumatologists’ awareness of the need for mental health services is high, but they may lack the confidence, time, and/or referral networks to provide consistently effective care for
depressed patients. Improving depression care in rheumatology may require a combination of clinician-level interventions (e.g., enhanced behavioral health training) and practice-level reforms (e.g., collaborative care) [15]. FM can be challenging to diagnose and treat, and patients often feel isolated and misunderstood. Surveys of patients with FM suggest that patients would benefit from greater understanding and acceptance. NPs can provide this support and play a prominent role in helping patients manage their FM [16]. Pain-associated diagnoses and the typical "unexplained" medical conditions (chronic fatigue syndrome, FM, irritable bowel syndrome) are frequent among people contacting a center dedicated to undiagnosed diseases. The chief symptoms are mostly unspecific. An interdisciplinary organizational approach involving mainly internal medicine, neurology and psychiatry/psychosomatic care is needed [17]. Historically, it has been classified as a rheumatologic disorder, but patients consult physicians from a variety of specialties in seeking diagnosis and ultimately treatment. Patients report considerable delay in receiving a diagnosis after initial presentation, suggesting diagnosis and management of FM might be a challenge to physicians [18]. The association between claiming retirement pension and high self-assessed pain and disability in FM should be kept in mind in the context of pain therapy as well of medical expertise [19]. The lack of recognition for the disease, together with the fact that said disease is socially constructed as a woman’s problem, could result in a lack of effort in diagnosis, which in turn generates a possible under diagnosis. [20]. Faking fibromyalgia: "Stand and deliver, for you are a bold deceiver" [21].

RESEARCH METHODOLOGY AND METHODS

This is a transversal descriptive research study, which is going to be based in the data collected by a survey. This survey is going to be answered by doctors through questionnaires. They are going to be very simple, short and contains closed and directed answers, to try to increase the adherence of Doctors to the survey. The chief of every department agreed to distribute the questionnaires, in other case Doctors could not accept to form part of the survey. So, by this way the rate of response was 68.4%. The collection of questionnaires was 1 month approximately. To get the first objective, I ask to Doctors their opinion about what kind of disorder is FM, medical, psychological or both, and also if FM diagnosis is important in their specialty. To get the second objective, I ask to Doctors what method is used to diagnose FM and what symptoms/signs include. To get third and fourth objective, I ask age and specialty and all data is analyzed according these variables. The sample of study is 39 random Doctors from different specialties which receive the most of patients with FM (12 FMED, 7 Psychiatrists, 10
Neurologists and 10 Rheumatologist) from a population of 57 Doctors (12 FMED, 14 Psychiatrists, 11 Rheumatologists, 20 Neurologists). I got this sample through the help of some department’s chiefs in a large public hospital from the Region of Murcia (Spain) which agreed to help me after the authorization of the Academic Chief of the hospital. I choose that hospital, because there I am going to perform my internship. It may facilitate the process of the research because I am a large period in that hospital and also to talk the same language improves the cooperation. The age of distribution is 14 Doctors from 25–35 y.o., 7 Doctors from 36 – 45 y.o., 10 Doctors from 46 – 55 y.o., 17 Doctors from 56 – 65 y.o. The younger Doctor is 25 y.o. and older Doctor is 65 y.o.. According this, I make 4 groups separated by an interval of 9 years of age to evaluate them according different levels of experience. Statistical significance of 95 % confidence level was calculated using the program STATCAL (EPI INFO) and the differences between groups of specialty and age are tested using Chi square. The limitations of the research may be the size of the sample.

RESULTS AND DISCUSSION

The distribution according age in the sample is the higher percentage of Doctors are between 25 – 35 y.o. and the lower between 36 – 45 y.o. (Fig. 1.)
The specialty with more Doctors included in the study is FMED and with less Psychiatry (Fig. 2.).

Results and discussion by Doctors in general

Figure 2

Figure 3
Relation mark/no mark ACR criteria and mark ACR criteria symptoms/signs by all Doctors

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Table 1

The analysis of data collected from all Doctors included in the research shows that the most of them (74.4 %) consider FM a disorder related with both, medicine and psychology fields (Fig. 3.). Also, the majority (94.9 %) thinks that FM diagnostic is important in their specialties. But the 35.9 % do not know which is the method used to diagnose FM (Fig. 3.). The 74.35 % do not know all symptoms/signs of ACR criteria for FM diagnosis and from the 25.65 % who knows them (Fig. 3.), the 70 % do not know the method used for its diagnosis (not all Doctors which choose ACR criteria as best method for FM diagnosis know all symptoms/signs of ACR criteria, and also the opposite. So, here it is explained the relationship between mark or not ACR criteria as best method and the number of symptoms/signs of ACR criteria marked) (Tab. 1.) So, assuming this information we may consider that the risk of FM misdiagnosis is very high, and we may understand why the diagnosis and treatment delay, frequent derivation to other specialties, suffering, lack of comprehension, lack of trust to the doctor of these patients and why Doctors feel uncomfortable and frustrating during the diagnosis and management of FM. The 12.8 % of doctors think that FM is just a psychological disorder or in other cases it is just a simulation of a pathology (Fig. 3.), so we may now understand why these patients feel like malinger in some cases. Due to subjectivity and the difficulty to demonstrate the real existence of the disease some persons are going to try to simulated it in case to get economic compensation, but Doctors should not generalize that.

These results propose two main questions:

How are going to know the non-rheumatologist Doctors when to derivate the patients to a Rheumatologist if they do not know that they have patients with this syndrome?

How are going to diagnose the Rheumatologist a patient with FM if they do not know how to diagnose it?
Results and discussion by specialty

Figure 4

The higher percentage of Doctors considering FM only important in medicine field is in neurology (20%) (**Fig. 4.**) (**P** < 0.05).

Figure 5

The higher percentage considering FM only important in psychology is FMED (16.7%) (**Fig. 5.**) (**P** < 0.05).
According to the analysis of every specialty it shows that the most of them consider FM important in both, medicine and psychology fields (Fig. 6.) (P < 0.05).

To know FM diagnosis is less important in neurology than for the rest of specialties (90%) (Fig. 7.) (P < 0.05).
Neurologist know better which is the best method to diagnose FM (90 %) and Psychiatrist know it worst (0 %), because they prefer other methods (Fig. 8) (P < 0.05).
Relation mark/no mark ACR criteria and marked ACR criteria symptoms/signs by psychiatrist

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|Table 2|

Psychiatrist know better all symptoms and signs of ACR criteria (57.10 %) (Fig. 9.), but 100 % of them do not choose ACR criteria as the best method to diagnose FM (not all psychiatrist which choose ACR criteria as best method for FM diagnosis know all symptoms/signs of ACR criteria, and also the opposite. So, here it is explained the relationship between mark or not ACR criteria as best method and the number of symptoms/signs of ACR criteria marked) (Tab. 2.). So, has not sense, because the symptoms/signs included belong to this method. These results may be possible if they do not know the FM diagnosis and they mark randomly or if they cheated, actually 4 out 7 psychiatrist mark in the questionnaire exactly the same with same mistakes. The specialty which combine better knowledge about the best diagnostic method of FM and symptoms/signs included in ACR criteria is neurology (90 % and 20 % respectively). FMED know worst all symptoms/sings if ACR criteria (8.3 %) (Fig. 9.) (P < 0.05).
Results and discussion by age

**Figure 10**

The higher percentage of Doctors considering FM only important in medicine was between 56 – 65 y.o. (20 %) (*Fig. 10.*) (*P* < 0.05).

**Figure 11**

The higher percentage of them considering FM only important in psychology was also between 56 – 65 y.o. (30 %) (*Fig. 11.*) (*P* < 0.05).
Most of them consider FM is important in both, medicine and psychology fields except Doctors between 56 – 65 y.o. (Fig. 12.) (P < 0.05).

To know FM diagnosis is less important between 25 – 35 y.o. (100 %) (Fig. 13.) (P < 0.05).
Doctors between 56 – 65 y.o. know better which is the best method to diagnose FM (80 %) and Doctors between 36 – 45 y.o. know it worst (28.6 %) (Fig. 14.) (P < 0.05).

Between 46 - 55 know better all symptoms and signs of ACR criteria (62.5 %) and between 30 – 40 y.o. know it worst (0%) (Fig. 16.) (P < 0.05).
CONCLUSIONS

(1) According to this analysis the most of Doctors think that FM is a disorder important in medicine and psychology, and that FM diagnosis is important in their specialties, so we can assume that the problem of FM diagnosis is not related to the lack of interest. (2) The most of them know that ACR criteria is the best method to diagnose FM, but this is not enough. It is very difficult to recognize a patient with FM if you do not know the symptoms and signs (“The best treatment is a good diagnosis”), therefore, there is a high risk of FM misdiagnosis according this analysis related with the lack of knowledge. (3) The specialties less aware of FM diagnosis are FMED and Psychiatry. (4) Doctors between 46 – 55 y.o. look like to be more trained to diagnose FM, younger Doctors know less symptoms/sings included in ACR criteria.

We can accept the hypothesis because there is a high risk of FM misdiagnosis due to the lack of knowledge of FM diagnosis.
REFERENCES


ANNEXES

Questionnaire (in Spanish):

It was performed in English with the supervisor. I tried to make it simple and in Spanish to get more cooperation from Doctors. It includes age, specialty, field related to FM, FM diagnostic method, ACR criteria symptoms/sings and a question asking about if FM diagnosis is important in their specialty. First and second question, Age and specialty, respectively are asked to perform the analysis of results according to these variables. Third question is asked to know if they consider FM as medical disease or only a psychologic problem. Fourth and fifth question are asked to know level of knowledge about FM diagnosis. And sixth question is asked to know if they consider that they need to know FM diagnosis or it is something only regarding Rheumatology.

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Consideras que la fibromialgia es una enfermedad relacionada con el campo: (marcar sólo una)

| medicina     | ○ |
| psicología   | ○ |
| ambas        | ○ |

Cómo se diagnostica la fibromialgia? (marcar sólo una)

| Análisis de sangre | ○ |
| Criterios ACR      | ○ |
| Biopsia            | ○ |
| Test psicológico   | ○ |
| Otros              | ○ |

Qué características están incluidas en el diagnóstico de la fibromialgia? (marcar todas las que consideres)

| Índice de dolor difuso | ○ |
| Fatiga                | ○ |
| Cansancio matutino    | ○ |
| Desórdenes cognitivos | ○ |
| Dolor o cólicos intestinales | ○ |
| Depresión             | ○ |
| Dolor de cabeza       | ○ |
| Clínica > 3 meses     | ○ |

Consideras que es necesario conocer el diagnóstico de fibromialgia en tu especialidad? (marca sólo una)

| Sí  | ○ |
| No  | ○ |
Questionnaire (in English):

<table>
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<th>neurology</th>
<th>psychiatry</th>
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You consider fibromyalgia related with:
(mark only one)
- medicine
- psychology
- both

How would you diagnose fibromyalgia?
(mark only one)
- Blood test
- ACR criteria
- Biopsy
- Psychologic test
- Others

What characteristics are included in fibromyalgia diagnosis?
(mark all you consider)
- Widespread pain index
- Fatigue
- Morning tiredness
- Cognitive disturbances
- Intestinal pain or cramps
- Depression
- Headache
- Clinic > 3 months

Do you consider important to know fibromyalgia diagnosis in your specialty?
(mark only one)
- Yes
- No