Pharmacophore

ISSN-2229-5402

Journal home page: http://www.pharmacophorejournal.com

FIBROMYALGIA MANAGEMENT APPROACH: A BRIEF REVIEW FOR FAMILY PHYSICIANS

Mahmoud Salah Aldin Andijani[1], Musaab Abdullah Badawood[2], Shahad Abdullah Badawood[3], Zahraa Mohammed Al-Khwaildy[4], Afrah Farhan Alanazi[5]*, Mohammad Faisal Allaf[1], Yasser Owaidh Alsahli[6], Alaa Mohammed Alahmadi[7], Majed Abdulaziz Saeed Almajdui[8], Mohammad Ahmad Alshehri[3], Mayssan Hussein Almalki[9]

1. *Faculty of Medicine, King Saud bin Abdulaziz University for Health Sciences, Jeddah, KSA*
2. *General Practitioner, MOH Public Health, Makkah, KSA*
3. *General Practitioner, Ibn Sina National College of Medicine, Jeddah, KSA*
4. *Faculty of Medicine, King Faisal University, Al Ahsa, KSA*
5. *Faculty of Medicine, Hail University, Hail, KSA*
6. *Faculty of Medicine, Alfarabi Medical College, Riyadh, KSA*
7. *Public Health Department, Meegat general hospital, Medina, KSA*
8. *Emergency Department, Meegat general hospital, Medina, KSA*
9. *King Abdullah Medical Complex, Jeddah, KSA*

ARTICLE INFO

Received:
10 Feb 2020
Received in revised form:
19 Jun 2020
Accepted:
22 Jun 2020
Available online:
28 Jun 2020

Keywords: Fibromyalgia, Pathogenesis, Diagnosis, Criteria, Management

ABSTRACT.

Background: Fibromyalgia syndrome is a complex chronic musculoskeletal pain disorder that is believed to exist since the 16th century expressing functional and psychosomatic symptoms. The etiology of fibromyalgia is unknown so causes that have been proposed that suggest fibromyalgia were numerous. This might confuse clinicians sometimes on promoting the existence of fibromyalgia as the disease seems to be confusing by a complex set of clinical manifestations that diverse the definition of the disease. There have been several classifications and screening criteria to develop expert diagnostic abilities for clinicians over the years. However, many health interprofessional teams, particularly primary health care providers reported a lack of training and confidence in the recent criteria and unclear diagnostic options. Supporting the fact that fibromyalgia displays a form of chronic pain that might be misdiagnosed and very difficult to identify. **Objective:** To assist family medicine physicians' clinical approach towards fibromyalgia. **Methodology:** PubMed database was used for article selection, papers were obtained and reviewed. **Conclusion:** Fibromyalgia is often complex and requires multidisciplinary management as the disease might be profound with multidimensional disability. Family medicine physicians must develop the necessary clinical skills to achieve meaningful supportive management for the patient. There have been ongoing researches on developing a new diagnostic framework to improve clinicians' diagnostic outcomes.

To Cite This Article: Mahmoud Salah Aldin Andijani, Musaab Abdullah Badawood, Shahad Abdullah Badawood, Zahraa Mohammed Al-Khwaildy, Afrah Farhan Alanazi, Mohammad Faisal Allaf and *et al.*, (2020), "Fibromyalgia Management Approach: A Brief Review for Family Physicians", ***Pharmacophore, 11(3),*** *141-144.*

Introduction

Fibromyalgia syndrome is a complex chronic musculoskeletal pain disorder that is believed to exist since the 16th century expressing functional and psychosomatic symptoms. [1, 2] This condition is a form of a widespread disorder with unexplained pathogenesis and is often described as a chronic overlapping pain condition related to strong alterations in the nervous system. [3] Therefore, the aetiopathogenesis of fibromyalgia is unknown and not yet has been discovered and its postulated to be linked to numerous exogenous and physical factors. [4] Physicians might sometimes question the existence of fibromyalgia as the disease seems to be confusing by a complex set of clinical manifestations that diverse the definition of the disease. [5] Therefore, there have been several classifications and screening criteria to develop expert diagnostic abilities for clinicians over the years. However, many health interprofessional teams, particularly primary health care providers reported a lack of training and confidence in the recent criteria and unclear diagnostic options [6-9]. Therefore, there has to

Corresponding Author: Afrah Farhan Alanazi; Faculty of Medicine, Hail University, Hail, KSA. Email: ii__frh @ hotmail.com

be an advanced criterion that clarifies the current understanding of fibromyalgia and can be recognized by clinicians and researchers. [10] This review will explore the most recent findings in the epidemiology, diagnosis and management of fibromyalgia to assist family medicine physician approach towards fibromyalgia.

Methodology

PubMed database was used for article selection, and the following keys were used in the mesh ((“Fibromyalgia"[Mesh] AND “Pathogenesis” Mesh] AND “Criteria"[Mesh] AND “Diagnosis"[Mesh] AND “Management"[Mesh])). In regards to the inclusion criteria, the articles were selected based on the inclusion of one of the following endpoints; Fibromyalgia evaluation, presentation, classification criteria, and management. Exclusion criteria were all other articles that did not have one of these topics as their primary endpoint.

Review

Fibromyalgia is estimated globally to be around 0.2% up to 6.6% according to studies by numerous countries from around the globe. It commonly affects women particularly after 50 years of age. [11, 12] Fibromyalgia prevalence in the general population on female to male ratio is about (7:1). The mean rate of fibromyalgia globally was the lowest in Asia of 1.7%, 2.5% in Europe and the highest rates of fibromyalgia were found to be 3.1% in America. [13]

Aetiopathogensis

The etiology of fibromyalgia is unknown and not yet has been discovered. [4] The causes that have been proposed that suggest fibromyalgia were numerous. However, suggested psychosocial and environmental factors were found to significantly relate to fibromyalgia with psychiatric disorders notably in female victims of domestic violence. [4, 14] It has been postulated that immunity plays a vital role in the pathogenesis of fibromyalgia, as a part of an auto-immunity reaction linked to vaccinations, infections (Human papillomavirus), traumas, mineral oil injections, and silicone breast implants. [4, 15] Oxidative stress phenomenon in recent studies is linked to fibromyalgia causing major hemostatic alterations on the cellular base. [4, 16]

Diagnosis

Presentation

Fibromyalgia patients are frequently presented with chronic rheumatic diseases that are associated with widespread chronic painful muscles, tendons, joints, ligaments, and bones that persist for nearly 3 months or more. Complex forms of fibromyalgia are often granted in over 100 rheumatological diseases that identify fibromyalgia and are portrayed in inflammatory disorders (gout), biomechanical and biochemical disorders (osteoarthritis), and lastly, autoimmune dysfunctional disorders (rheumatoid arthritis and systemic lupus diseases). [4, 17] The fact that fibromyalgia displays a form of chronic pain that might be misdiagnosed and very difficult to identify, but also demands guidelines and significant classification criteria. [4, 18]

The American College of Rheumatology published and updated the fibromyalgia syndrome (ACR FMS) diagnostic criteria since 1990 this criterion could help with the diagnosis for many health interprofessional teams. The 1990 version of the ACR FMS criteria were not intended to adjust and aid in clinical practice but rather helped with clinical research. Chronic pain was the core symptom in the 1990 version. The 2010/2011 version defined other associated symptoms with generalized chronic symptoms with a specificity of 91.8% and a sensitivity of 96.6%. In the 2016 criteria, the definition of fibromyalgia was distinguished in 5 different spatial distribution of pain regions with a score of 4 out of 5 regions to confirm the diagnosis, but still has a considerable risk of misdiagnosis. [10] The table below clarifies the 2016 version of Fibromyalgia syndrome diagnostic criteria **(Table 1). [19]**

Table 1: Fibromyalgia syndrome criteria (2016): [19]

Fibromyalgia syndrome diagnostic criteria
1. Generalized painful regions in at least 4 out of 5 sites.
2. Painful symptoms at least 3 or more months.
3. Widespread pain index (WPI) is more than or equals 7 regions and symptom severity scale (SSS) score more than or equals 5 regions OR WPI of 4–6 and SSS score more than or equals 9 regions.
4. The validation of fibromyalgia syndrome diagnosis might include or exclude other clinical manifestations.

Recent international working researches proposals of the current 2016 criteria limitations for suggesting new perspectives of Fibromyalgia diagnosis. The new diagnostic proposal dimensional criteria of ACTTION-APS Pain Taxonomy (AAPT) and includes 5 dimensions. However, the AAPT criteria proposal is still under the study of the criteria diagnostic accuracy and is not yet valid for use**. (Table 2)**. [2]

Table 2: Dimensions of AAPT Diagnostic Criteria for fibromyalgia proposal [2]

Dimensions of AAPT Diagnostic Criteria for fibromyalgia

1. Core diagnostic criteria: identifies about 6 or more pain sites from a total of 9 sites, associated symptoms are fatiguability and sleep disturbances.
2. Existence of other possible features like cognitive dysfunction (forgetfulness, trouble concentrating, slow thinking, and disorganization) musculoskeletal stiffness, and hypervigilance.
3. Psychiatric and medical comorbidities like irritable bowel syndrome, fatigue syndrome, pelvic syndrome, depression, headache, anxiety disorders, restless leg syndrome, central sleep apnea, etc.
4. Functional, Psychosocial, and Neurobiological consequences, include general outcome, functional impairment, and sociomedical cost of FMS, morbidity, and mortality of the disease.
5. Putative Psychosocial and Neurobiological Mechanisms, Protective and Risk Factors, that present risk factors, pathophysiology, and comorbidities aspects.

Management

There are different effective treatment protocols in primary health care for managing patients with fibromyalgia as the disease has no definite cure. The protocol supports a delicate framework of pharmacological and non-pharmacological therapies. A majority of cases of fibromyalgia syndrome are diagnosed firstly in the primary care unit, a family medicine physician needs to improve his knowledge about the current guidelines, necessary diagnostic criteria regarding the disease to develop diagnostic accuracy and avoid delayed treatment. [18]

Family medicine physicians are also exposed to provide a trustworthy therapeutic relationship and ongoing support in helping and educating the patient about fibromyalgia and the recommended medical and non-medical interventions to encourage the patient's symptomatic improvements. [18] Pharmacological approach in fibromyalgia has an only supportive role in providing symptoms relieving effects such as pain the aggravating disorders that has a greater influence on pain **(Table 3)**. Drugs should highly be monitored cautiously during treatment and should be stopped if it appears to have no appreciable effects. [20]

Table 3: Disorders that aggravate pain in fibromyalgia: [20]

Disorders that aggravate pain in fibromyalgia
Chronic peripheral pain generators (Arthritis, myofascial triggers, and tendinopathies)
Sleeping disturbances (restless legs, obstructive sleep apnea, and limb movement disorder)
Cigarette smoke
Morbid obesity (painful meta-inflammation effects)
Statin myopathy
Depressive disorders
Psychosocial stressors
Opioid-induced hyperalgesia
Catastrophizing cognitive style

In general, the treatment strategies of fibromyalgia entail an overall multidisciplinary approach that is experienced in lifestyle modifications, pharmacologic measures, and other complementary approaches. [1]

Conclusion

The approach of fibromyalgia is often complex and requires multidisciplinary management as the disease might be profound with multidimensional disability. Fibromyalgia diagnosis is fundamentally based on the exclusion of symptoms to avoid any possibility of misdiagnosis with diseases. There have been ongoing researches on developing a new diagnostic framework to improve clinicians' diagnostic outcomes. On the other hand, family medicine physicians must develop the necessary clinical skills to achieve meaningful supportive management for the patient.

References

1. Araújo FM, DeSantana JM. Physical therapy modalities for treating fibromyalgia. F1000Res. 2019;8:F1000 Faculty Rev-2030. Published 2019 Nov 29. doi:10.12688/f1000research.17176.1
2. Galvez-Sánchez CM, Reyes Del Paso GA. Diagnostic Criteria for Fibromyalgia: Critical Review and Future Perspectives. J Clin Med. 2020;9(4):1219. Published 2020 Apr 23. doi:10.3390/jcm9041219
3. Sluka KA, Clauw DJ. Neurobiology of fibromyalgia and chronic widespread pain. Neuroscience. 2016;338:114-129. doi:10.1016/j.neuroscience.2016.06.006
4. Bazzichi L, Giacomelli C, Consensi A, Giorgi V, Batticciotto A, Di Franco M, Sarzi-Puttini P. One year in review 2020: fibromyalgia. Clin Exp Rheumatol. 2020 Jan 1;38(Suppl 1):3-8.
5. Häuser W, Fitzcharles MA. Facts and myths pertaining to fibromyalgia. Dialogues Clin Neurosci. 2018;20(1):53-62.

6. Ren-Zhang L, Chee-Lan L, Hui-Yin Y. The awareness and perception on Antimicrobial Stewardship among healthcare professionals in a tertiary teaching hospital Malaysia. Arch. Pharma. Pract. 2020;11(2):50-9.
7. Yusransyah, Halimah E, Suwantika A A. Utilization and cost minimization study of antihypertensive drugs in primary healthcare center. J. Adv. Pharm. Edu. Res. 2019;9(4):83-88.
8. Sundus A, Ismail NE, Gnanasan S. Exploration of healthcare practitioner's perception regarding pharmacist's role in cancer palliative care, Malaysia. Pharmacophore. 2018 Jul 1;9(4):1-7.
9. Malik M, Haider Z, Hussain A. Perceived emotional intelligence, work-life balance, and job satisfaction among healthcare professionals in Pakistan. Int. j. pharm. res. Allied sci. 2019;8(2):80-86.
10. Arnold LM, Bennett RM, Crofford LJ, Dean LE, Clauw DJ, Goldenberg DL, Fitzcharles MA, Paiva ES, Staud R, Sarzi-Puttini P, Buskila D. AAPT diagnostic criteria for fibromyalgia. The Journal of Pain. 2019 Jun 1;20(6):611-28.
11. Cabo-Meseguer A, Cerdá-Olmedo G, Trillo-Mata JL. Fibromyalgia: Prevalence, epidemiologic profiles, and economic costs. Med Clin (Barc). 2017;149(10):441-448.
12. Heidari F, Afshari M, Moosazadeh M. Prevalence of fibromyalgia in general population and patients, a systematic review and meta-analysis. Rheumatol Int. 2017;37(9):1527-1539.
13. Queiroz LP. Worldwide epidemiology of fibromyalgia. Curr Pain Headache Rep. 2013;17(8):356.
14. Gündüz N, Erzincan E, Polat A. The Relationship of Intimate Partner Violence With Psychiatric Disorders and Severity of Pain Among Female Patients With Fibromyalgia. Arch Rheumatol. 2019;34(3):245-252.
15. Ryabkova VA, Churilov LP, Shoenfeld Y. Neuroimmunology: What Role for Autoimmunity, Neuroinflammation, and Small Fiber Neuropathy in Fibromyalgia, Chronic Fatigue Syndrome, and Adverse Events after Human Papillomavirus Vaccination?. Int J Mol Sci. 2019;20(20):5164. Published 2019 Oct 18. doi:10.3390/ijms20205164.
16. Tuzcu A, Baykara RA, Alışık M, Omma A, Acet GK, Dogan E, Cure MC, Duygun F, Cure E, Erel O. Alteration of thiol-disulfide homeostasis in fibromyalgia syndrome. Acta Medica (Hradec Kralove). 2019;62(1):12-8.
17. Adler-Neal AL, Zeidan F. Mindfulness Meditation for Fibromyalgia: Mechanistic and Clinical Considerations. Curr Rheumatol Rep. 2017;19(9):59.
18. Arnold LM, Gebke KB, Choy EH. Fibromyalgia: management strategies for primary care providers. Int J Clin Pract. 2016;70(2):99-112.
19. Wolfe F, Clauw DJ, Fitzcharles MA, Goldenberg DL, Häuser W, Katz RL, Mease PJ, Russell AS, Russell IJ, Walitt B. 2016 Revisions to the 2010/2011 fibromyalgia diagnostic criteria. InSeminars in arthritis and rheumatism 2016 Dec 1 (Vol. 46, No. 3, pp. 319-329). WB Saunders.
20. Kwiatek R. Treatment of fibromyalgia. Australian prescriber. 2017 Oct;40(5):179. doi:10.18773/austprescr.2017.056.