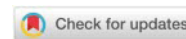


FIBROMYALGIA - CHARACTERISTICS AND PROOF OF PAIN

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Abstract: Fibromyalgia is a disease that remains unrecognized due to ignorance and misinterpretation of symptoms. This article presents a clinical case from the medical practice of Fibromyalgia, while characterizing the pain syndrome and the necessary tests to prove the diagnosis.

The clinical case concerned a patient with lumbar pain syndrome who did not respond to non-steroidal anti-inflammatory drugs. No connection has been established with the diseases provided for in the differential diagnosis, such as disc herniation, acute arterial insufficiency, rheumatoid arthritis. The laboratory tests performed are normal, except for a slight increase in AST of about 200 U / l, as well as high CRP values. No instrumental studies such as endophotonic emission computed tomography (SPECT), positron emission tomography (PET), magnetic resonance imaging (MRT) and electroencephalogram (EEG) were performed.

The case describes a modified symptom in the elderly. Modified symptoms are experienced differently by patients. In this case, our own (from the doctor's experience) paradigm was used for diagnosis. The paradigm consists of four main steps, which are: description of the specifics of each symptom; two aspects of the diagnosis: what is and what is not; the symptoms form a whole which represents the diagnosis with a logical connection and sequence and analysis of small deviations and nuances - a way of accurate diagnosis.

The burning nature of the pain, the presence of painful nodules in the lumbar and scapular areas bilaterally, point to myositis. Various non-steroidal anti-inflammatory drugs have been administered in various forms (oral, topical and injectable), with no effect. As a last resort, a tricyclic antidepressant, amitriptyline, was included, which showed that the pain disappeared within a month. The presence of a mental component in the field of rheumatic disease, the effect of amitriptyline pain and the presence of sore spots at the predilection sites, led to the disease "Fibromyalgia". Diagnosis of fibromyalgia is necessary to comply with two conditions clinical analysis of pain with the detection of painful points and instrumental nuclear magnetic resonance imaging to demonstrate dysfunction of the central nervous system and electroencephalogram for sleep disorders.

To improve the diagnostic process, it is necessary in practice to apply tests of hormones and neurotransmitters.

Keywords: *fibromyalgia, amitriptyline, muscle pain, endophotonic emission computed tomography, positron emission tomography.*

Field: Medical Science and Health

Introduction

Fibromyalgia is a common disease characterized by chronic widespread pain, sleep problems (including unrefreshing sleep), physical exhaustion, and cognitive impairment. The definition, pathogenesis and treatment are controversial, and some even dispute the existence of this disease (Roberto, E. H., & Marcelo, C. F., 2010). There is ignorance, misinterpretation of the symptoms, which remains undiagnosed. This article presents a clinical case from the medical practice of the disease "Fibromyalgia", while at the same time characterizing the pain syndrome and the necessary tests to prove the diagnosis.

Medical case

History: After a stressful moment, the patient complains of acute pain in the lumbar region, bilaterally, without irradiation to the limbs. The pain is sharp, cutting even when moving, and at the slightest movement it is provoked. Objective status: This is a woman of sixty-one years. Afebrile and hemodynamically stable: RR 140/90, Pulsus 72 / min. Expressed anxiety, to panic attack. Move both limbs in bed. Neurological status normal, with deep and superficial sensitivity preserved. Presence of pulsations on a. poplitea billateralis, a. dorsalis pedis billateralis and a. femoralis billateralis. The lower limbs are warm and mobile. There is no morning stiffness of the limbs (Enrico et al., 2013). A neurologist was consulted and diagnosed with Radiculitis lumbosacralis. Prescribed medications - NSAIDs and B

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vitamins - had no effect. The patient remained in bed for six months. After administration of amitriptyline for about a month, the pain disappea

Discussion

Theoretical statement

It is believed that in the etiology of the disease Fibromyalgia (Clauw DJ., 2009), factors such as:

- Dysfunction of the Central and autonomic nervous system - spontaneous nervous activity and increased excitability of neurons in the spinal cord;
- Neurotransmitters - serotonin, norepinephrine, dopamine, endorphins substance P, methenkephalins whose levels are high;
- Hormones: cortisol - increased under stress; growth hormone, which is reduced during sleep;
- Immune system - activated glial cells release cytokines;
- External stressors;
- Psychiatric aspects;

These factors determine the non-specific clinical picture, as well as the type of laboratory and instrumental tests, namely:

Fibromyalgia syndrome is characterized by three main symptoms (Clauw DJ., 2009): pain, fatigue and sleep disturbance. The diagnosis is clinical because there are no laboratory abnormalities. To make a diagnosis, it is necessary to emphasize the characteristics of pain. The patient should be asked about additional symptoms such as Raynaud's syndrome, irritable bowel syndrome, sleep disturbance and chronic fatigue. By its nature, the pain is diffuse, deep, burning, can irradiate. Presence of painful musculoskeletal pain at points in specific areas of the body. It is characteristic of them that they are painful under pressure (Figure 1).

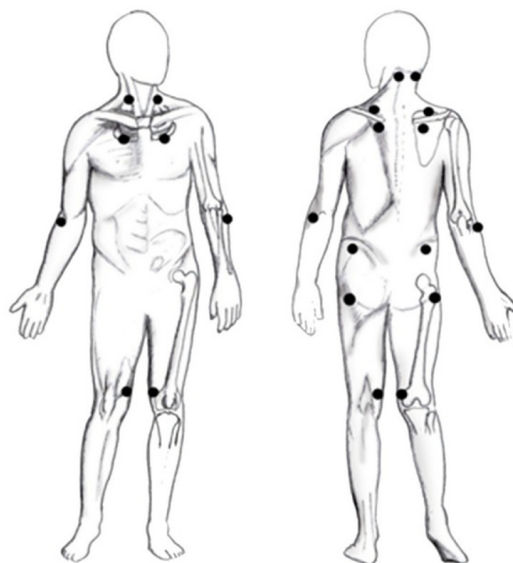


Figure 1 Pre-selection sites of pain in fibromyalgia

In order to be considered a positive point, it must be assessed by digital palpation with about four kilograms of pressure (when the thumb bed fades) and the patient must say that the palpation was "painful" [1]. The duration of musculoskeletal pain is about three months.

The scope of laboratory tests includes: complete blood count, biochemistry, thyroid-stimulating hormone (hypothyroidism may have fibromyalgia-like symptoms or may accompany fibromyalgia) and erythrocyte sedimentation rate and / or C-reactive protein. There are usually no laboratory abnormalities specifically related to this condition. The ANA (antinuclear antibody) test may be positive (Clauw DJ., 2009).

Instrumental research includes (Debra Fulghum, 2021):

1. Endophotonic emission computed tomography (SPECT);
2. Positron emission tomography (PET);
3. Magnetic resonance imaging (MRT);

4. Electroencephalogram (EEG).

Endophoton emission computed tomography demonstrates a reduction in regional cerebral blood flow in the bilateral thalamus and basal ganglia. After treatment with amitriptyline, an increase in regional cerebral blood flow was observed in these structures (Clauw DJ., 2009; Debra Fulghum, 2021).

Positron emission tomography has a higher spatial and temporal resolution than endophotonic emission computed tomography. Demonstrates dysfunction of normal cognitive pain management in patients with fibromyalgia, namely: increase in regional blood flow in the retro splenic cortex and decrease it in the frontal, temporal, parietal and occipital cortex.

Magnetic resonance imaging studies have demonstrated the hypothesis of centrally increased pain management in patients with fibromyalgia (Clauw DJ., 2009; Fibromyalgia, 2020).

Electroencephalographic studies revealed a disturbance in the fourth phase of sleep, a consequence of reduced levels of growth hormone.

Analysis of the medical case

In the clinical case presented above, the patient's life history and family history show a hereditary component for the father's disc herniation, and in childhood - tonsillectomy. There was a slight increase in AST around 200 U / l, as well as high CRP values.

The key point of clinical thought is "low back pain", for which acute arterial insufficiency, stroke, rheumatoid arthritis and disc herniation (closest diagnosis) have been discussed in the differential diagnostic aspect. The onset of pain at rest and the lack of irradiation to the heel or toes of the dermatome, the negative Laseg test, rejects this hypothesis. Given the positive AST values, the differential diagnosis should also include the presence of rheumatoid arthritis, which was ruled out due to lack of stiffness and lack of involvement of small and medium joints. The presence of pulsations of the large and small arteries of the lower extremities, warm and preserved skin color, rule out acute arterial insufficiency (Enrico et al., 2013).

The burning nature of the pain, the presence of painful nodules in the lumbar and scapular areas bilaterally, point to myositis. Various non-steroidal anti-inflammatory drugs have been administered in various forms (oral, topical and injectable), with no effect. As a last resort, a tricyclic antidepressant, amitriptyline, was included, which showed improvement within a month.

The case describes a modified symptom in the elderly. Modified symptoms are experienced differently by patients. In this case, our own (from the doctor's experience) paradigm was used for diagnosis. The paradigm is made up of four main steps, which are

- Description of the specifics of each symptom;
- Two aspects of the diagnosis: what is and what is not;
- Symptoms form a whole that represents the diagnosis with a logical connection and sequence
- Analysis of small deviations and nuances - a way for accurate diagnosis.

In the observed case, a modified symptom is lumbar pain. Its characteristic does not coincide with the characteristics of the symptom of pain from the diseases specified in the differential diagnosis. The presence of a mental component in the field of rheumatic disease, the effect of amitriptyline pain and the presence of sore spots at predilection sites, led to the disease "Fibromyalgia".

Conclusion

Diagnosis of fibromyalgia is necessary to comply with two conditions clinical analysis of pain with the detection of painful points and instrumental nuclear magnetic resonance imaging to demonstrate dysfunction of the central nervous system and electroencephalogram for sleep disorders.

To improve the diagnostic process, it is necessary in practice to apply tests of hormones and neurotransmitters.

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