JOURNAL OF APPLIED SCIENCE AND SOCIAL SCIENCE
eISSN 2229-3113 pISSN 2229-3205
Volume 15 Issue 01, January 2025
Impact factor: 2019: 4.679 2020: 5.015 2021: 5.436, 2022: 5.242, 2023: 6.995, 2024 7.75

ETIOPATHOGENETIC FEATURES OF MYOFASCIAL PAIN SYNDROME IN INDIVIDUALS OF WORKING AGE

Urazbaeva G.
Master's student in the specialty "Therapy: Traditional Medicine"
Ravshanova M.Z.
Assistant of the Department of Medical Rehabilitation, Sports Medicine and Traditional Medicine
Samarkand State Medical University, Uzbekistan

Abstract: This article is devoted to the problem of myofascial pain syndrome, which develops, according to a number of authors, in 30-85% of cases and is most often localized in the lower back. Over time, the pain becomes chronic, significantly reducing the quality of life of people of working age.

Key words: myofascial pain syndrome, trigger point, muscle tension, working age.

Myofascial syndrome is a non-inflammatory pathological condition characterized by muscle tension and the formation of trigger points, most often within a dense bundle of skeletal muscle and muscle fascia, which, when irritated, causes acute referred pain. [4,7]. Myofascial pain syndrome is diagnosed mainly in people of working age in 30-85% of cases [3,7,8] and myofascial pain is often localized in the lower back and becomes chronic, which significantly reduces the quality of life of patients, as proven by numerous studies [8,11,14].

Numerous epidemiological studies show that approximately 85% of the adult population experiences at least one episode of low back pain during their lifetime, and 40 to 70% experience neck pain. [2, 6, 10].

It has been established that 2/3 of patients with pain syndromes in the trunk and limbs have myofascial dysfunction, which is defined as a dysfunction of a particular muscle that occurs due to its overload and is manifested by muscle spasm, the presence of painful muscle seals or local muscle hypertonicity and trigger points in tense muscles. [5,16]

A detailed study of the etiology of myofascial pain syndrome has established that pain occurs as a result of the combined effects of factors. The main reason for this is a violation of the movement pattern, leading to muscle strain, which can be observed in many pathological conditions.

1. Posture and gait disorders, as well as developmental anomalies: body asymmetry due to different leg lengths; S-shaped scoliosis; reduced size of one half of the pelvis; kyphotic deformity of the thoracic spine; flat feet; short shoulders with an elongated torso; long second metatarsal bone with a shortened first [1,9,13].

2. Functional blockades in the vertebral motor segments.

3. Tension in a non-physiological position, arising from an incorrect posture and, accordingly, a non-optimal balance of the load on the muscles or the forced maintenance of a monotonous posture for a long time due to the nature of work, or prolonged immobilization, leading to a violation of the stereotype of movements of the whole body, the appearance of body asymmetries. Trigger points can also be activated by maintaining a monotonous posture for a long time during deep sleep [2,9]

JOURNAL OF APPLIED SCIENCE AND SOCIAL SCIENCE
eISSN 2229-3113 pISSN 2229-3205
Volume 15 Issue 01, January 2025
Impact factor: 2019: 4.679 2020: 5.015 2021: 5.436, 2022: 5.242, 2023: 6.995, 2024 7.75

4. Overload of detrained muscles, as well as muscle hypothermia. One of the risk factors for myofascial pain is a weak muscular corset. Unusual prolonged work of untrained muscles leads to the development of painful muscle tension and activation of trigger points. This is especially typical for people engaged in mental work. Provoking factors include general and local hypothermia of the muscles, often combined with physical overexertion.

5. Muscle compression or strain. Prolonged trigger point activity is promoted by prolonged compression of muscles by bag straps, heavy coats, tight collars, corsets, or belts. [9,12]

6. Emotional disorders that are always accompanied by muscle tension. In anxious individuals, after the stressful impact has ceased, the muscles continue to be in a contracted state, and in a state of chronic stress, this leads to a change in the stereotype of movements. Changing posture leads to muscle strain and pain. A vicious circle is formed. In addition, with emotional disturbances, descending antinociceptive impulses to the posterior horns of the spinal cord are weakened, which leads to a decrease in the threshold of pain sensitivity and an increase in pain sensations. In anxious individuals, even non-painful muscle impulses are perceived as pain, which causes muscle tension, which in turn increases the pain. [8,11].

7. A common cause of myofascial pain dysfunction is somatic pathology, accompanied by a change in impulses from the affected internal organ and causing protective tension in the corresponding muscles. Thus, coronary pathology may be accompanied by the appearance of tension pain in the scalene muscles, small and large pectoral, subclavian muscles. From trigger points in these muscles, pain radiates to the supra-, sub- and interscapular regions. In case of gynecological pathology, pain caused by muscle tension occurs in the lower abdomen, in the lower back, and in the sacral region. It is important to remember that half of patients with chronic myofascial pain have vitamin deficiency, especially B vitamins, folic acid, and ascorbic acid [8,11].

As mentioned above, myofascial pain syndrome is caused by the appearance of trigger points, first described by G. Travell in 1989. [15]. Pathogenetically, the formation of trigger points is associated primarily with prolonged low-intensity muscle tension, which leads to a significant increase in intramuscular pressure, disrupting tissue perfusion. As a result, there is a transition to anaerobic glycolysis, which, under conditions of impaired microcirculation, leads to the accumulation of lactic acid in the muscle. Increasing acidosis causes a decrease in acetylcholinesterase activity and the release of inflammatory mediators, which enhances the effect of acetylcholine on the postsynaptic membrane: sarcomere contraction is maintained, which leads to the closure of pathological chains and the formation of myofascial syndrome. Another pathological circle is associated with the accumulation of free calcium ions, which under normal conditions, thanks to the calcium pump, return to the sarcoplasmic reticulum after the actin-myosin bridges are opened. In hypoxia, there is insufficient energy for such opening, and therefore the concentration of calcium ions increases, maintaining sarcomere spasm and causing destruction of muscle fiber, which contributes to the development of local muscle hypertonicity. Long-term muscle spasm causes the formation of local fibrosis within the painful muscle [4,10,16].

Thus, the analysis of literary data allows us to conclude that myofascial pain syndrome occupies a leading place in the structure of chronic pain, is characterized by a chronic, persistent course, has comorbidity with emotional-vegetative and psychosomatic disorders, sleep disorders,

JOURNAL OF APPLIED SCIENCE AND SOCIAL SCIENCE
eISSN 2229-3113 pISSN 2229-3205
Volume 15 Issue 01, January 2025
Impact factor: 2019: 4.679 2020: 5.015 2021: 5.436, 2022: 5.242, 2023: 6.995, 2024 7.75

headaches and requires careful further study in order to develop optimal methods for treating this problem.

Reference

1. Abdusalomova M.A., Mavlyanova Z.F., Kim O.A. Orka miya va umurtka pogonasining bujin kismining tugruk zharohdtlari bilan bemorlarning diagnostikasida elektronejromiografiyaning urni //zhurnal biomediciny i praktiki. – 2022. – T. 7. – №. 2.
2. Abdusalomova M., Kim O., Dusyarov ZH. Ocenka kachestva zhizni u bol'nyh s dorsopatiyami //ZHurnal vestnik vracha. – 2019. – T. 1. – №. 4. – S. 7-10.
3. Belyaeva I.B., Mazurov V.I. Miofascial'nyj bolevoj sindrom v praktike klinicista: diagnostika i lechenie //Effektivnaya farmakoterapiya. – 2020. – T. 16. – №. 32. – S. 8-15.
4. Boldin A.V., Tardov M.V., Kunel'skaya N.L. Miofascial'nyj sindrom: ot etiologii k do terapii (literaturnyj obzor)//Vestnik novyh medicinskih tekhnologij. – 2015, №1, 6-3
5. Egorov I.V. Miofascial'naya bol': ot Virhova do nashih dnej// Nevrologiya, nejropsihiatriya, psihosomatika. – 2014,№ 6(3), s.75-79
6. Mavlyanova Z. F. i dr. Rasprostranyonnost' i klinicheskaya harakteristika shejno-grudnogo radikulita u rabotnikov fermerskih hozyajstv //Miasto Przyszłości. – 2024. – T. 46. – S. 634-637..
7. Novikova L.B., Akopyan A.P. Rol' miofascial'nogo sindroma v strukture boli v spine//Rossijskij medicinskij zhurnal.-2016, №25, s.1711-1714
8. Rozhkov D. O. i dr. Miofascial'nyj bolevoj sindrom u pacientok s hronicheskoj nespecificheskoj bol'yu v spine: diagnostika i lechenie //Nevrologiya, nejropsihiatriya, psihosomatika. – 2020. – T. 12. – №. 2. – S. 57-63.
9. Samiev A.S., Mavlyanova Z.F., Ernazarov A.ZH. Kompleksnaya reabilitaciya bol'nyh s poyasnichnymi spondilogennymi radikulopatiyami //Science and Education. – 2023. – T. 4. – №. 2. – S. 453-461.
10. Siricyna YU.CH., Sivakov A.P. Miofascial'nyj sindrom: etiologiya, klinika, principy lecheniya//Medicinskij vestnik. – 2020. - №8, s.13-17Galasso A. et al. A comprehensive review of the treatment and management of myofascial pain syndrome //Current pain and headache reports. – 2020. – T. 24. – C. 1-11.
11. Galasso A. et al. A comprehensive review of the treatment and management of myofascial pain syndrome //Current pain and headache reports. – 2020. – T. 24. – C. 1-11.
12. Lutfilloevna B.G., Anatolevna K.I.M.O. Синдром текстовой шеи у детей, занимающихся шахматами //Journal Of Biomedicine And Practice. – 2024. – T. 9. – №. 1.
13. Mamasharifovich M. S. et al. Анкилозланувчи спондилоартрити бўлган беморлар реабилитация дастурига янгича ёндашув //journal of biomedicine and practice. – 2022. – T. 7. – №. 1.
14. Qureshi N. A., Alsubaie H. A., Ali G. I. M. Myofascial pain syndrome: a concise update on clinical, diagnostic and integrative and alternative therapeutic perspectives //International Neuropsychiatric Disease Journal. – 2019. – T. 13. – №. 1. – C. 1-14.
15. Trevell G., Simons D.G. Miofascial'nye boli. M.: Medicina, 1989. 608
16. Vázquez Delgado E., Cascos-Romero J., Gay Escoda C. Myofascial pain associated to trigger points: a literature review. Part 2: differential diagnosis and treatment //Medicina Oral, Patología Oral y Cirugia Bucal, 2010, vol. 15, num. 4, p. 639-643. – 2010.