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REVIEW

A Review of the Application of Myofascial Release Therapy in the Treatment of Diseases

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Abstract: Myofascial release (MFR) therapy is widely used in clinical practice to treat various musculoskeletal and pain-related conditions. However, there is a lack of comprehensive reviews that systematically evaluate its effectiveness across different medical conditions, leading to inconsistent applications and understanding of its therapeutic potential. This review aims to synthesize the current applications of myofascial release therapy in the treatment of various diseases, highlighting its efficacy and identifying areas where further research is needed. The review covers the application of myofascial release therapy in conditions such as chronic pain, fibromyalgia, post-surgical recovery, and neurological disorders. It evaluates the outcomes of existing studies, identifies gaps in the literature, and discusses the mechanisms through which myofascial release exerts its effects. Additionally, the review provides insights into the limitations of current research and suggests directions for future studies to enhance the clinical application of myofascial release therapy.

Keywords: myofascial release, chronic pain, cancer pain, stroke

Introduction

Myofascial release therapy has gained increasing attention as a non-invasive treatment for various musculoskeletal and pain-related conditions.[1–3] It involves applying sustained pressure to the myofascial tissues to release tension, reduce pain, and improve function.[4,5] Myofascial release is utilized in treating conditions such as chronic pain, muscle tension, fibromyalgia, and post-surgical recovery.[6–8]

Tense myofascial areas may form pain-sensitive points inside the myofascia, which are often referred to as "trigger points" (MTrPs) or "tender points" (TePs). However, it is important to note that these two phenomena are distinct. The etiology and pathophysiology of myofascial trigger points (MTrPs) and tender points (TePs) differ, with MTrPs typically associated with palpable nodules within taut bands of skeletal muscle and TePs being more diffusely tender without a clear nodular structure.[9] This distinction is critical for understanding their respective roles in pain syndromes.

Despite its widespread use, there is a lack of comprehensive reviews that critically evaluate the effectiveness of myofascial release therapy across different medical conditions.[10] Existing studies often focus on isolated cases or specific applications, leaving a significant gap in understanding its overall therapeutic potential.[11] Moreover, while myofascial release is widely recognized for its benefits, the mechanisms through which it operates remain partially understood, and the varying techniques employed across studies add to the complexity of evaluating its effectiveness.[12,13]

This review aims to systematically summarize the current applications of myofascial release therapy in the treatment of various diseases, with a focus on its efficacy and identifying areas where further research is needed. By providing a comprehensive overview, this study seeks to fill the gap in the literature, offering clinicians and researchers a clearer understanding of the role myofascial release therapy can play in clinical practice and guiding future research directions.

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Chronic Pain

Chronic pain refers to painful sensations that last for months or even years and usually last for more than three months.[14–16] Unlike acute pain, chronic pain tends to be persistent and may lead to long-term physical and psychological effects. Chronic pain may be caused by multiple factors, including but not limited to disease, injury, nerve injury, postoperative complications, metabolic diseases, autoimmune diseases, age-related factors, and psychosocial factors.[17] Chronic pain negatively impacts patients' daily activities, work, sleep, emotional state, and social activities, and severely reduces patients' quality of life. Chronic pain may lead to neuroplastic changes that make pain sensation more sensitive and affect nerve conduction and the ability to process pain.[18]

Chronic Low Back Pain

Chronic low back pain (CLBP) is one of the most common musculoskeletal problems in modern society and seriously affects patients' physical function and quality of life.[19] Because of the diversity of predisposing factors, it often leads to patients unable to accurately find out the cause, and accurate treatment is a great challenge. The prevalence of CLBP is positively correlated with age, and the proportion of patients with a clear etiology is small. Currently, with increasing social pressure and increasing workload, CLBP is also increasing in incidence in young populations.[20] After research, it is believed that 90% of low back pain is considered to be non-specific low back pain (nLBP), and the accurate cause cannot be identified, one of the main reasons is myofascial disorders.[21,22] Disorganized myofascia includes localized areas of pain and distant sites of pain. Myofascial disturbances distant from the site of pain can cause low back pain through numerous functional connections.[23] Myofascial release is a form of manual therapy directed at the myofascial system that gradually returns to normal by mechanically stimulating connective tissue and increasing the flexibility of the myofascia, thereby reducing the patient's pain and improving the patient' s health status.[24] Myofascial release is most widely used in chronic low back pain, and many articles have reported that myofascial release can effectively relieve the health status of patients with chronic low back pain. A Systematic Review reported six randomized controlled studies on the use of myofascial release in chronic low back pain through screening, and the results showed that 397 CLBP patients aged 18 to 60 years could effectively relieve the pain level of patients, promote the increase of patients' range of motion, and improve the physical function of patients after myofascial release.[25] The treatment options for myofascial release performed by different investigators vary, such as the time of myofascial release each time, and the frequency of myofascial release. In terms of overall effect, myofascial release has a significant improvement effect in CLBP patients. Arguisuelas et al[26] treated CLBP with myofascial release every two days for two weeks as a cycle, while Boff TA et al[27] treated three 40-minute sessions per week. Reports by Paolo et al[28] and Ozóg et al[21] evaluated the treatment effect of a single MFR dose of two regimens, one with a single treatment of 40 minutes and multiple methods designed during the treatment period, and the other with a treatment technique lasting 5 minutes.[29] CLBP in myofascial release therapy treatment, according to the actual situation of patients can develop different treatment options, gradually deep-seated relief of patients' intermuscular fascial disorders. Combined with the above studies, the application of myofascial release in CLBP can not only reduce the degree of pain, but also greatly improve the quality of life of patients and improve their mood. However, in the course of treatment, appropriate treatment options should also be developed according to the actual situation of patients to achieve the best therapeutic effect.

Chronic Pelvic Pain

Chronic pelvic pain syndrome (CPPS) is a non-malignant condition associated with pelvic structures and is commonly treated using myofascial release (MFR).[30] CPPS may result from inflammation, fibromyalgia, or chronic fatigue. Recent studies have shown that CPPS is closely related to pelvic muscles, where repeated muscle overload leads to sustained hypertonicity, activating myofascial trigger points (MTrPs)—hypersensitive palpable nodules located in taut muscle bands.[31] The pelvic floor myofascial structures, including the levator ani, piriformis, and obturator internus muscles, are often implicated in CPPS. Trigger points in the levator ani muscle cause referred pain in the pelvic region, significantly contributing to CPPS symptoms.[32] In the piriformis muscle, trigger points can compress the sciatic nerve, leading to pain in the pelvic and lower back areas.[33] Meanwhile, MTrPs in the obturator internus muscle are linked to pelvic pain and dysfunction.[34] By releasing these trigger points, MFR helps to alleviate pain and restore pelvic floor function. In the

study by Fitzgerald et al,[35] manual myofascial release was performed by trained therapists. The technique involved applying sustained pressure and stretching to the pelvic floor muscles to release myofascial trigger points and alleviate pain. Heyman et al[36] focused on releasing myofascial trigger points within the pelvic floor muscles. This method involved identifying hyperirritable nodules (trigger points) in the muscles and applying direct pressure to these points to release tension and reduce pain. Moreover, myofascial release proved to be safe and reliable in terms of side effects. The above studies have shown that myofascial release is worthy of promotion in the treatment of chronic pelvic pain syndrome.

Fibromyalgia

Fibromyalgia is a chronic painful condition that usually presents with generalized muscle pain, fatigue, sleep disturbances, and cognitive dysfunction.[37] It is also called fibromyalgia syndrome. It is mainly characterized by generalized, persistent, and unbearable muscle pain, usually in multiple parts of the body. These pains can vary, sometimes concentrate in specific areas and sometimes spread throughout the body.[38] Pain may be exacerbated or relieved. Patients often experience extreme fatigue and weakness that cannot be relieved even with adequate rest. Most patients have sleep disorders, such as difficulty falling asleep, dreaminess, low sleep, or frequent waking up.[39] Including memory loss, difficulty concentrating, slow thinking and other symptoms.[40] The exact etiology of fibromyalgia is also unknown.[41] At present, there is no cure for fibromyalgia, and treatment is mainly aimed at symptom relief and improving the quality of life.[42] Common treatment methods include: drug therapy: including painkillers, antidepressants, antiepileptics, muscle relaxants and so on. Physical therapy: such as massage, physiotherapy, acupuncture and so on help relieve muscle pain and stiffness. Psychotherapy: Helps patients cope with pain and emotional problems through cognitive behavioral therapy, relaxation skills, etc. Exercise and rehabilitation: Moderate aerobic exercise, stretching exercises, and rehabilitation training help improve physical condition and reduce symptoms.[43]

Myofascial release can help patients with fibromyalgia relieve muscle pain and stiffness by improving muscle and fascial tension. It can be achieved by massage, manipulation, tools, or other means of physical therapy.[44] Myofascial release has been widely reported in patients with fibromyalgia. Studies have shown that myofascial release can effectively improve the pain, quality of life and sleep quality of patients with fibromyalgia, contribute to the improvement of patients' mood, and help patients better restore health. Two studies assessed the effect of fascial release on pain in fibromyalgia patients by setting up a control group, and the results showed that fascial release was effective in reducing pain in patients after 6 months of treatment with fascial release.[45] The results of A.M. Castro-Sanchez et al[46] showed that fascial release was effective in improving the quality of life of patients with fibromyalgia while relieving pain, and they assessed the effectiveness of fascial release for fibromyalgia from the indicators of days patients felt good, absence from work, work ability, stiffness and pain. In addition, two independent studies have shown that fasciolysis improves sleep levels in patients with fibromyalgia, improves sleep quality, improves habitual sleep efficiency, and also improves depressive mood in patients.[41,47] However, in the study by A.M. Castro-Sanchez et al,[46] fascial release did not significantly improve sleep in fibromyalgia patients. Therefore, whether fascial release contributes to the improvement of sleep in patients with fibromyalgia remains to be further studied, but it is certain that fascial release can effectively relieve the pain of patients with fibromyalgia, can improve the quality of life of patients with fibromyalgia, so that patients with fibromyalgia can better invest in life and work.

Sports Injuries Recovery

Sports injury refers to a condition in which body tissues are damaged or function is limited during exercise or exercise. These injuries can occur in tissues such as skeletal muscles, joints, ligaments, tendons, cartilage, and are usually caused by overuse, postural errors, poor exercise techniques, poor environmental conditions, or the influence of external forces.[48] Sports injuries are usually divided into acute injuries and chronic injuries. Acute injuries usually occur in a short period of time and are caused by severe force or external impact, such as sprains, strains, fractures, and contusions. Such injuries are usually accompanied by symptoms such as sudden pain, swelling, and bruising.[49] Chronic injuries develop gradually during long-term exercise or training and may be caused by factors such as overuse, poor posture, lack of appropriate rest, or rehabilitation.[50] Common chronic injuries include muscle strains, tendinitis,

arthritis, and stress fractures. Symptoms of such injuries may worsen gradually and include persistent pain, swelling, stiffness, and motor dysfunction. The occurrence of sports injuries can affect an individual's exercise capacity, quality of life, and health status. Key to preventing sports injuries include: proper warm-up and cooling, proper exercise techniques, proper training programs, adequate rest and recovery, proper nutrition and supplementation, and avoidance of overuse and overtraining. For sports injuries that have already occurred, prompt diagnosis and treatment are also crucial, usually including rest, ice, massage, physical therapy, and drug therapy. During rehabilitation, individuals should follow the advice of a physician or rehabilitator to gradually resume activities and prevent re-injury.[51]

Myofascial release is commonly used for chronic sports injuries or for recovery after sports in athletes. Myofascial release helps reduce muscle tension and pain by releasing the muscles and fascia of the body by manipulation or tools. During recovery from sports injuries, myofascial release can help relax tense muscles, promote rehabilitation and reduce pain.[52] Myofascial release can improve the elasticity and flexibility of muscles and fascia, and help to improve joint range of motion and movement efficiency. In sports injury recovery, increasing muscle flexibility can reduce further damage and facilitate rehabilitation progress. Myofascial release can promote blood circulation, increase the blood supply and nutrient supply of damaged tissues, and accelerate the rehabilitation process. Good blood circulation helps to remove waste products and metabolites from tissues and reduce pain and inflammation. By relaxing muscles, increasing flexibility, and promoting blood circulation, myofascial release helps to improve motor function and posture and improve motor performance. In sports injury recovery, improving motor function can help restore normal sports levels and prevent re-injury.[53]

Several studies have shown that myofascial release can effectively improve the flexibility of muscles and thus improve the athletic ability of athletes after the end of exercise.[54] But some studies showed different results, and their findings showed that myofascial release had no significant effect on the improvement of flexibility in athletes. The study of Oranchuk et al[55] found that myofascial release has a certain promoting effect on the elevating ability of athletes, and the same was confirmed in Richman et al's study.[56] Wang F et al[57] and Markovic et al[58] have also been studied in tennis players and soccer players and showed that myofascial release contributes to physical recovery after exercise, while increasing aerobic capacity and flexibility in athletes. A study by Romero-Franco et al[59] showed that myofascial release improves tibial flexion testing in athletes, and a study by Aune et al[60] came to the same conclusion. Several studies have reported that myofascial release can enhance athletes' strength. Richman et al[56] showed that myofascial release improved CMJ test results in female volleyball and basketball players, indicating an increase in athlete strength. Kurt et al[61] also demonstrated that myofascial release can also improve athlete strength in professional female handball players. The use of myofascial release after the athlete's end of training helps the athlete's better state recovery. A report by Rey et al[62] showed that myofascial release can improve the overall level of recovery after exercise in athletes. The results of Rahimi et al[63] showed that myofascial release helped athletes to play better on the second and third day of competition days, while the detection of lactate content in blood also verified this conclusion that myofascial release helped athletes to decompose lactate in the body after competition and accelerated athletes' physical status recovery. Lopez-Samanes et al,[64] Barrenetxea-García et al,[65] and Koźlenia et al[66] also found no indicators suggesting that myofascial release contributes to motor recovery after myofascial release with foam rollers. In addition to the above effects, myofascial release has been reported to be able to improve the speed and sensitivity of athletes. In summary, myofascial release has a significant effect on the recovery after exercise and the improvement of athletes' related ability, which is worthy of further promotion after exercise.

Headache

Headache is a common disease that affects human health worldwide. The prevalence of active headache disorder is alarmingly high at 52.0%, and headache is one of the top ten causes of disability worldwide.[67] According to pathology, headache can be divided into two categories: primary and secondary headache disorders. Primary headache is the most common type of headache and refers to symptoms caused directly by pathological differences in the head. Among primary headaches, tension-type headache (TTH) and migraine headache (MH) are the most common.[68] TTH is the most common type of headache and is usually caused by tension, anxiety, or emotional stress. However, the cause of TTH is currently unknown and remains to be further investigated.[69] However, some research evidence has shown that pain perception in pericranial myofascial tissue as well as increased excitability of the central nervous system play an important role in TTH.[70]

MH is the second most common type of headache after tension headache. MH is usually a periodic headache and may be accompanied by nausea, vomiting, and increased sensitivity. They may be caused by genetic factors, neuronal abnormalities, as well as environmental factors. Its pathophysiological mechanisms are very complex, including abnormal cortical activity or cortical spreading depression as well as abnormal brainstem activity in premonitory people.[71] In addition, pain originates from sensory fibers that transmit pain signals from intracranial and extracranial vessels. Secondary headache develops as a symptom of an underlying disease, such as acute sinusitis, cerebral aneurysm, and meningitis.[72] As a very common disease, headache treatment and drug development has been a research hotspot. Many drugs have also been developed and applied successively. For example, common drugs such as non-steroidal anti-inflammatory drugs (NSAIDs), acetaminophen, and triamcinolone acetonide, the use of these drugs can relieve headache symptoms.[73] However, these drugs also have certain side effects, such as causing kidney and liver damage, ulcers, and even high-risk side effects of ischemic vascular events in humans. Especially in children and the elderly, these drugs have more significant side effects.[74] In view of the therapeutic consequences of traditional medicines, physical therapies with less side effects are now beginning to be widely used. For example, myofascial release has been shown to be effective in improving physical function, such as basal metabolic rate, diastolic blood pressure, pain, and quality of life. In the treatment of headache, myofascial release can reduce the excitability of corticospinal and spinal reflexes, indicating that overall, it reduces motor excitability and plays a certain effect for the treatment of headache. At the same time. Myofascial release improves blood flow to the brain, and parasympathetic stimulation treats headache by secreting vasodilator neurotransmitters or reducing pressure on the internal carotid artery and vertebral artery by external tissues.[75–77]

Several studies have reported the use of myofascial release in the treatment of headache. In the treatment of tension headache, myofascial release has also been found to work as well as pharmacological treatment and is effective in relieving headache symptoms in patients.[78] Ajimsha MS et al[79] showed that treatment with myofascial release was effective in reducing the number of tension headaches experienced by patients over a 20-week period. Mohamadi M et al[80] found that treatment with myofascial release reduced headache frequency, pain intensity, and pain threshold in headache patients, but no significant changes in glutamate-glutamine/creatine metabolites were detected in biochemical parameters in patients after treatment with myofascial release. Therefore, how myofascial release exerts its effect to treat headache remains to be further investigated. In summary, myofascial release can play a role in the treatment of headache, helping to relieve headache symptoms and headache frequency and improve the quality of life of patients.

Stroke Patients Recovery

Stroke is a severe neurological disorder caused by the interruption of blood supply to the brain or by the rupture of blood vessels within the brain, leading to significant brain tissue damage. One of the most critical aspects of stroke rehabilitation is the restoration of balance and gait, as these are essential for regaining independence and improving the quality of life. Myofascial release therapy, particularly when combined with cervical mobilization techniques, has been shown to positively affect balance and gait parameters in stroke patients. According to a study by Dengiz and Baskan,[81] cervical mobilization as part of myofascial release therapy led to significant improvements in balance and gait parameters in individuals recovering from stroke. These findings suggest that targeted myofascial interventions can play a crucial role in enhancing post-stroke motor recovery and overall rehabilitation outcomes.

Stroke refers to a disease caused by interruption of blood supply to the brain or vascular rupture due to sudden lesions in the cerebral vessels.[82] It is a serious neurological disorder that can cause brain tissue damage and, in severe cases, can even endanger the patient ‘s life. Stroke can be divided into two types: ischemic stroke: this is the most common type of stroke and accounts for approximately 80% of stroke cases. Ischemic stroke is caused by the blockage or narrowing of blood vessels in the brain, resulting in the interruption of blood supply. This obstruction is usually caused by thrombosis (thrombotic stroke) or arterial stenosis (arteriosclerosis). Hemorrhagic Stroke: This type of stroke is caused by blood leaking into the brain tissue due to rupture of blood vessels in the brain. Hemorrhagic stroke may be caused by ruptured aneurysms, small vessel rupture caused by hypertension, or other vascular abnormalities. Hemorrhagic stroke is usually severe and has a high mortality rate.[83] Stroke is associated with serious sequelae, persistent symptoms or functional impairment that patients may experience during rehabilitation. These sequelae may affect the quality of life of patients and vary depending on the severity of the stroke, the site of injury, and the individual ‘s ability to recover. Stroke may

cause partial or total paralysis of the body. This depends on the location and severity of the stroke. Patients may lose the ability to control body parts such as arms, fingers, legs, etc. Stroke may lead to sensory loss or abnormalities. Patients may experience numbness, tingling, paresthesia, etc. Pain symptoms may occur after stroke, such as headache, muscle pain, and neuralgia. The treatment and rehabilitation of stroke sequelae is usually a comprehensive process, including physical therapy, speech therapy, occupational therapy, psychological support and other aspects. Regular rehabilitation training can help patients maximize functional recovery, improve quality of life, and reduce the negative effects of sequelae. Therefore, for stroke patients and their families, continuous support and rehabilitation programs are essential.[84]

Myofascial release can be used as part of rehabilitation for stroke patients to help stroke patients reduce muscle spasm, improve motor function, increase joint range of motion, and promote rehabilitation.[85] For stroke patients, MFR primarily targets the myofascial tissues surrounding the cervical and thoracic spine, which are often compromised due to abnormal muscle tone and spasticity following a stroke. The release of these myofascial restrictions can improve motor function and balance, facilitating better rehabilitation outcomes (Figure 1). A report by Rutu J Parikh et al[85] showed that in patients with chronic stroke, the use of myofascial release with the tennis ball improved muscle spasm, improved the function of upper limb movement, and contributed to the recovery of physical function in stroke patients compared with conventional physical therapy. Similarly, Du-Jin Park et al[86] showed that in patients with chronic stroke, the use of myofascial release helps to improve the balance of patients with spastic chronic stroke, while improving the walking ability of patients and facilitating the recovery of stroke patients. At present, there are few studies on the application of myofascial release in stroke patients, and more clinical controlled trials are needed to be carried out subsequently to determine the application value of myofascial release in stroke patients.

Cancer Pain

Cancer pain refers to pain caused by the cancer itself or treatment associated with the cancer. Cancer pain can be transient, intermittent, or persistent, and severely impacts a patient's quality of life.[87] Myofascial release has also been used in cancer pain, and the most widely used is cancer pain treatment in breast cancer patients.[88] Breast cancer is a common malignancy that usually arises from malignant cells within the breast tissue. It is one of the most common cancers in women, and the risk of breast cancer increases with age in women, especially over 50 years of age. However,

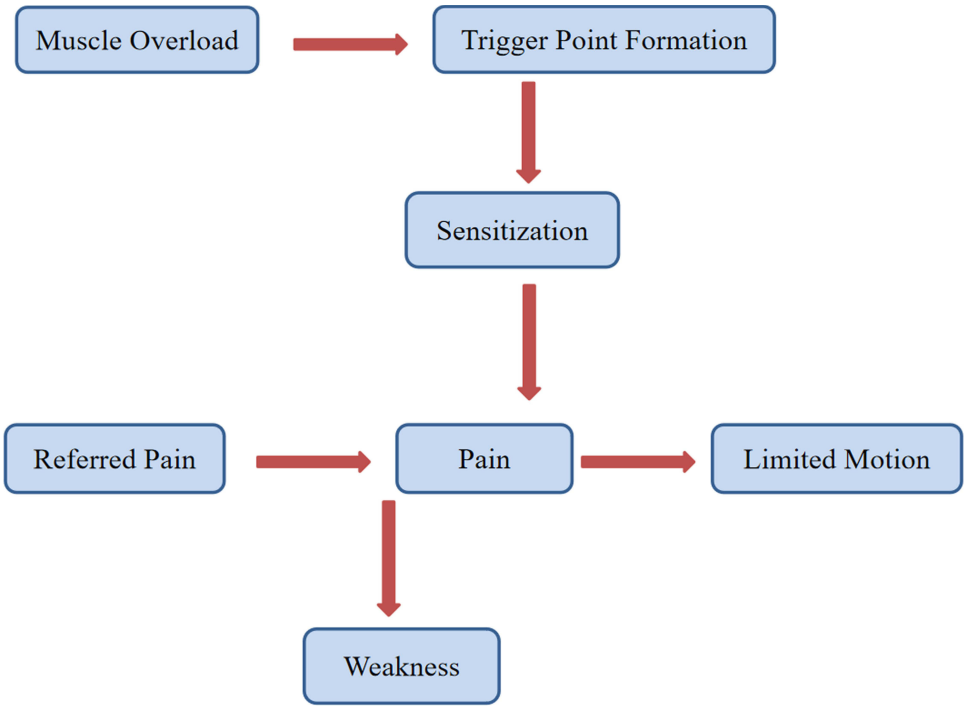

Figure 1 Mechanism of pain production and consequences of trigger point formation in stroke patients.

it can also occur in young women.[89] Treatment options for breast cancer are usually multidisciplinary and include surgery, radiation therapy, chemotherapy, hormonal therapy, and targeted therapy. Treatment options vary according to the type, stage, and individual circumstances of the cancer. However, breast cancer patients tend to experience greater side effects after experiencing treatment. Examples include bleeding at the surgical site, infection, arm or shoulder weakness, limitation of movement, swelling, numbness, pain, and lymphedema.[90] Postoperative pain is another side effect, occurring in at least half of women undergoing surgery within 6 to 15 months of surgery. The prevalence of neuropathic pain was 24% at nine months.[35] Cancer pain can lead to discomfort and feelings of pain can weaken appetite, sleep quality and immune function. Long-term pain may also affect weight, nutrient absorption, and physical recovery. Persistent cancer pain can cause psychological problems such as anxiety, depression, fear, and insomnia in patients. This seriously affects the patients life as well as the quality of work. Cancer pain may affect patient acceptance and compliance with treatment. Patients may dare not receive treatment for fear of increased pain or may abandon treatment because of side effects of treatment. Pain may also affect the patient's perception of the treatment's effect, making them suspicious of the treatment's effect. Therefore, timely and effective management of cancer pain is essential to improve the quality of life of patients and improve treatment outcomes.[91]

Myofascial release belongs to the category of manual therapy and is a low-impact, long-term treatment designed to restore the length of the fascia, eliminate functional limitations, reduce pain, and improve the function of the motor system.[92] In the context of breast cancer-related pain, MFR targets the myofascial tissues in the pectoral muscles, particularly the pectoralis major and minor, as well as the upper trapezius. These muscles often develop tightness and trigger points due to post-surgical adhesions and radiation therapy, leading to shoulder and chest pain.[93,94] Several studies have reported the efficacy of myofascial release in relieving cancer pain in patients after breast cancer surgery. De Groef A et al[95] showed that the use of myofascial release was effective in relieving the degree of persistent arm pain after treatment in breast cancer patients and contributed to the recovery of patients' postoperative upper limb ability. Eduardo Castro-Martín et al[96] showed that myofascial release was effective in relieving neck and shoulder pain in breast cancer patients by randomizing a single-blind, placebo-controlled group. The study by Massingill, J et al[97] yielded the same findings. However, some studies suggest that myofascial release has no significant efficacy in relieving cancer pain in patients compared with drug efficacy, which may be related to the number of samples and the drugs used. Overall, the use of myofascial release helps to relieve cancer pain and improve physical function in breast cancer patients.

Conclusion

Myofascial Release Therapy is a physical therapy that relieves tension in muscles and myofascia by applying continuous, slow pressure and stretching to relieve pain in patients. Myofascial release is commonly used to treat various pain symptoms, including muscle tension, muscle pain, joint pain, headache, neck pain, and back pain. Following breast cancer surgery, patients may experience pain in the shoulder and upper extremity and limitation of motor function, and myofascial release can be used as a non-pharmacological therapy to help ameliorate these problems. Myofascial release therapy has also shown promise in the treatment of neurological disorders, particularly in alleviating symptoms such as muscle spasm, motor dysfunction, and balance issues. Studies have demonstrated that myofascial release can improve gait parameters and enhance overall physical function in patients recovering from neurological conditions such as stroke. This suggests that myofascial release may play a vital role in neurorehabilitation, offering a non-invasive approach to improve the quality of life in patients with neurological impairments. Myofascial release does not involve drug therapy in the use process, so the side effects are small. It is worthy of being widely popularized in the clinical use of a variety of diseases, helping to relieve the pain symptoms of patients, helping patients to improve physical function, and improving the life and psychological status of patients.

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