Precision Grounding Combined with Precision Deep Tissue Massage

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ABSTRACT

Massage is a popular complementary and alternative medicine (CAM) treatment. In recent years, deep tissue massage (DTM) has grown in popularity. As a result, DTM with grounding should be examined as any other treatment method to determine its safety and efficacy. Massage can help to reduce inflammation, speed up recovery, and relieve muscle pain. We study beneficial mechanisms in this paper by combining the idea of grounding with the massage. Grounding massage has been shown to help stabilize the physiology of the body, inflammation, reduce pain, enhance sleep, as well as stress, increase stamina and blood flow, and improve health by reconnecting the body with the electrostatic forces of the Earth. By modulating inflammatory signaling pathways, this mechanism can reduce collateral sprouting, secondary injury, and nerve sensitization, leading to better damage recovery and pain avoidance. On the other hand, deep tissue massage has long been used as a key therapeutic therapy in Traditional Medicine because of its low side effects and therapeutic efficacy. This paper examines the possibility of deep tissue massage with earthing as a simple and widely available technique with significant clinical value.

Keywords: CAM, deep tissue massage, earthing, grounding, tigger points.

I. INTRODUCTION

Complementary and alternative medicine (CAM) involves a wide range of medical techniques and therapies that, in the past, were neglected mainly by health experts. Nevertheless, recent research shows that 36% of Americans now use alternative medicine [1]. Alternative therapies cost Americans $27 billion in 1997, with 627 million unique visitors to alternative medicine experts. On the other hand, only 386 million family go to the practitioners [2]. As the scientists has become more aware of the physiological and therapeutic benefits of alternative medical therapies, they are now being supported by insurance providers and used during hospitalization. Furthermore, because many areas of alternative therapies have strong physiological and even pharmacodynamic benefits, these approaches and therapies are now being included into medical school curriculums, and scientific studies are being conducted to assess their efficacy [3]. Acupuncture, chiropractic manipulation, and massage are a few examples of alternative therapies.

Massage therapy, in particular, has become extremely popular. More than 18% of Americans utilized massage treatment in the last 12 months in a 2002 poll held by the American Massage Therapy Association (AMTA) in contrasted to a similar time in 1997 (8%). The AMTA recognized that by the increase of older population and increased knowledge of the adverse effects of stress and the advantages of massage. Furthermore, medical practitioners placed massage treatment first among CAM practices that are usually or always remain successful (74 percent) [4]. Although there is a growing awareness of massage’s health benefits, they are not extensively researched. However, primary clinical trial findings make it critical that massage therapy investigation become a main concern [5].

II. PRECISION DEEP TISSUE MASSAGE

Massage is one of the most well-known therapeutic methods. For thousands of years, it has been practiced in various cultures worldwide. Massage can help you relax, be more comfortable at the end of your life, and perform better. Massage therapy (MT) is a type of therapy used to treat pain. Despite being classified as a CAM component, it is now commonly employed in allied health professions, including occupational and physical therapy. Recent growth in CAM in general, and massage in particular, has led to an increase in the number of persons pursuing this type of care throughout the years [6], [7].

Deep tissue massage (DTM) is a type of MT that is commonly used for therapeutic purposes by physical, occupational, and massage therapists. The experimental data is used to develop the safest and most effective treatment in the evidence-based practice process. As a result, including various forms of massage into the therapeutic practices of
occupational and physical massage therapists wants scientific proof of their safety and efficacy.

"DTM, as the name implies, focuses on the deeper layers of muscle tissue. It's designed to reach the deepest portions of thick muscles and individual muscle fibers." DTM, according to [8], is "the ability to work with muscle in these layers to relax, stretch, and release holding patterns in the most productive and energy-efficient method feasible within the patient's limits of comfort." Although this description may comprise the complete theory of the method, it is too ambiguous to be employed as a primary research definition.

In this study, we conduct research about deep tissue massage to trigger points with the help of earthing probe. A professional massage therapist is trained to conduct trigger point DTM. Trigger point DTM is usually performed by a skilled massage therapist. This treatment focuses on pinpointing and stimulating trigger spots throughout the body. Some bodily muscles spasm and stiffen, producing severe pain. Knots or trigger points do not always loosen on their own. Injuries, overuse, and stress are common causes of trigger points. By physically stimulating these points on the wounded or damaged area, a trigger point massage aids in the release of stiffness and promotes healing. Hand massage or equipment like the Grounding Probe (Fig. 1) are commonly used. Deep tissue massage with the earthing probe is a non-invasive, effective, and safe treatment. Furthermore, this method helps you to avoid pain medicines and potentially dangerous operations, both of which have adverse effects and can be obsessive.

The method uses a blend of strong, gentle, and deep pressure. As a result, the patient may feel uneasiness when the trigger points are initially touched, but this is soon replaced by relief as the knot loosens.

A. How Does Earthing Deep Tissue Massage Work?
Earth ing deep tissue Massage produces changes in the different physiological systems in the body by:
1. The relaxation response, although it is uncontrolled, the nervous system shows a predictable reaction to massage treatments and contact.
2. Mechanical responses occur when force is used on the soft tissues.
   These reactions can have physical and emotional benefits when they are combined.
   a) What is the relaxation response?
      A caring, gentle touch during a DTM invites you to unwind. A "relaxation response" is induced by this effect, combined with pain alleviation.
      The relaxation reaction causes heart and breathing rates to slow down, drop blood pressure to drop & stress hormone production and relax the muscles [9]. The relaxation reaction also appears to boost the amount of serotonin in the body, which have good impacts on thoughts and emotions. Though this is encouraging, but more investigation is required to prove the link between massage and brain serotonin amounts.
      The relaxation reflex may help to reduce the negative effects of stress and the risks associated with it, such as cardiac arrhythmias, hypertension, anxiety, insomnia, sexual dysfunction, chronic fatigue, psychological issues, and digestive problems.
   b) What are mechanical responses?
      Two significant physical effects caused by the mechanical responses are [10],
      i. Improve lymph and blood circulation DTM with grounding is thought to promote blood and lymph flow. It is likely owing to the chemicals generated as part of the relaxation response and the physical manipulation of soft tissue.
      Improved circulation can improve oxygen and nutrient delivery to muscle cells. Tissues perform more effectively as a cellular response to therapy. More efficient functioning allows waste items to be removed, boosts the absorption of more fluids, and reduces soft tissues swelling [11].
      ii. Relaxation of soft tissue (muscle, ligaments, tendons, connective tissue) allow the release of nerves and deeper connective tissues.
      DTM relieves painful contractions and spasms by relaxing muscular tissue. Massage can also help to relieve nerve pain. Consider how muscles can pinch nerves [around them when they contract]. Because the nerves are not constricted when these muscles are relaxed, they may receive sufficient nutrition and perform more efficiently. Nerves can resume their regular function of sending and receiving messages from the brain, which improves muscle and organ function.
      Muscles, tendons, and ligaments are relaxed by touching the skin or exerting pressure. Furthermore, while a massage therapist cannot easily touch some of the body's deeper tissues, such as deep spinal musculature, the release of more superficial layers of muscles may affect these deeper layers. It can improve the alignment and balance of both superficial and deep tissues.
Because organs share neurological pain pathways with muscles, bones, and nerves, DT massage can help them. Occasionally, organs can reflect distress and dysfunction when muscles, bones, or nerves are affected. Low back discomfort, for example, can aggravate menstrual cramps and cause low back muscles to contract. As a result, DT massage with earthing can help with organ and muscle function symptoms.

The main ideas of the process are,

1. Grounding precision deep tissue massage relieves pain by releasing biochemical chemicals in the body. This procedure may reduce your pain sensitivity. It’s also been proven to aid your body in minimizing inflammation.
2. A grounding massage stimulates the sympathetic nerve fibers in your body. Endogenous opioids like endorphins, which aid in alleviating inflammation, are released when these fibers are activated. The nerve fibers that have been stimulated may also aid in the reduction of chronic pain symptoms. It can help with chronic pain and stress.
3. It may also assist your body release mesenchymal stem cells (MSCs) into your bloodstream, according to studies. Adult stem cells are located largely in the bone marrow. MSCs assist your body in the formation of various tissues. They have therapeutic powers as well.
4. It is thought to improve blood circulation. It could aid in the relief of any pain you're experiencing. This form of massage also helps to warm your muscles. It could aid in the treatment of impaired circulation and potential obstructions.
5. Chronic stress has also been proven to be reduced by earthing deep tissue massage. According to studies, this form of therapy can help you reduce long-term chronic stress by stimulating your brain. For many centuries, deep tissue massage has been used to treat pain, including chronic pain disorders.

Grounding precision deep tissue massage is a more modern form of massage, and it has become a substitute for a traditional massage (Fig. 2).

IV. DISCUSSION

With the appearance of well-trained massage therapists, the public's perception of massage, particularly DTM, has shifted dramatically. Massage therapy's popularity and demand will only grow as scientific research continues to support its advantages. This shift in public perception of massage treatment forces health professionals from all professions to learn about its favorable physiological effects.

DTM with grounding can dramatically impact heart rate, mean arterial blood pressure, and systolic and diastolic blood pressure in predominantly normotensive people. Although these findings reveal insight into the effects of massage, they also raise numerous questions, as the exact mechanisms are unknown. Long-term benefits are unknown in this area, and there is no consensus on which physical states might benefit from this treatment procedure.

These effects could play a role in blood pressure improvement. Increased O2 saturation may reduce renin-angiotensin pathway activation, decrease blood sodium levels by reducing aldosterone synthesis and lowering vasopressor reactions via angiotensin II.

DTM with grounding has also been demonstrated to help patients with postoperative edema [12]. Massage may help patients with vascular and lymphoreticular irregularities.

Massage may have a cellular pathway that affects blood pressure. Massage has been shown to affect the length and size of fibroblasts by stretching the tissue. Signal transmission modification, ribosome and mRNA placement, transcriptional processes, extracellular matrix synthesis and cell adhesion dynamics are only a few biological changes triggered by this alteration [13]. Modulation of pain and stress could potentially be a component of our findings. Due to underlying pathophysiological processes, short-term generation and persistent increases in numerous mediators can cause transitory high blood pressure [14].

Although massage treatment is generally considered safe, some techniques, such as DTM, may require a significant amount of physical force. As a result, several illnesses, such as skin damage from rashes deep venous thrombosis, infections, bone fractures, wounds, and advanced osteoporosis, are contraindications to massage therapy. Serious side effects like liver damage and bone fractures have been documented, but they are uncommon [15]. As a result, DTM's efficacy and safety in individuals could be considered a supplemental therapy to drugs, and further research is needed to determine the benefit in diverse subpopulations and gain a deeper understanding of the mechanisms discovered in this study. Only a few studies that measure the effects of DT massage have been reported in recent years [16].

Extensive animal studies on grounding and the use of DFM as a pain reliever were show its efficacy. According to the findings, it may help reduce various forms of pain. The researchers also discovered that a blend of grounding with DTM and pain medication is more useful than pain medication alone. It's encouraging because it suggests that using grounding to reduce pain could decrease the demand for high doses of medication. Remember that these findings are based on animal research. The effects of this therapy on human pain modulation require more research.

DT Massagees are getting more popular among the general people, who have a variety of diseases, and the therapeutic benefits are becoming increasingly acknowledged. Increased insurance coverage, physician approval, the alternative medicine practitioners’ visits, and the increased research into its advantages demonstrate the growth and acceptability of this therapy. Even though numerous research has been conducted to understand the benefits of massage treatment better, the scientific quality of these efforts has been variable and inadequate. Many questions remain unanswered as a result.
DTM with grounding's long-term efficacy and cost-effectiveness has yet to be determined. Unfortunately, the design of the pre-and post-testing has been insufficient. Before the results may substantially impact the medical community, appropriate sample sizes and diagnostic methods must be followed. Furthermore, more extensive studies are required before anybody can safely recommend that it be included in a therapy plan, coupled with treatment standardization. Finally, future research may focus on this treatment's long-term safety and cost-effectiveness against standard medical intervention.

V. Conclusion

Massage is an evidence-based, well-researched therapy that has been used with great success for thousands of years. More research is needed to properly ground this ancient practice. While precision deep tissue massage with grounding is comparable to traditional massage, it involves the flow of an electrical current generated by earthing. Some believe that this enhances traditional massage's therapeutic benefits.

The ailment being treated, the severity of symptoms, the patient's particular qualities, and the practitioners' choice and experience all play a role in the decision for using grounding in treatment. It is critical to understand how medical decisions should be made, such as when to use grounding and the precise stimulation parameters, must consider what appears to be best for specific patients and conditions, as well as compare and contrast the experiences of patients with grounding and traditional massage. The many claims claimed regarding grounding with massage have little data to back them up. The current study shows a strong link between DTM and grounding and improved efficacy. These findings are promising and optimistic, indicating a bright outlook for future research in this field.

References