

Chronic Low Back Pain Treatment

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Abstract. Chronic low back pain is the attachment point of lumbar muscle fascia and sola.t, and chronic inflammation damage. This is one of the common causes of low back pain. The main symptoms are lumbar or lumbar spine swelling pain, soreness, recurred, and pain changes with the degree of climate or accumulation. Lumbar pain can also from muscle pain to shooting, burning or stabbing. In addition, pain will emit legs. Bending, twisting, weightlifting, standing or walking will make the situation worse. Lumber muscles degeneration has a lot of different treatments like Muscle strengthening such as ab strengthening, gluteal strengthening, back strengthening to prevent muscle dystonia. Physical therapy, such as electromagnetic, ultrasonic, infrared, laser, acts on the human body through sound, light, electricity, heat, and plays the role of thinning tendons and activating complexions. Chinese medicine therapy such as electroacupuncture. This article is about the above three therapies, hope to provide reference for chronic low back pain treatment.

Keywords: Non-specific low back pain; treatment; chronic.

1. Introduction

Pain felt in the lower back is referred to as low back pain. Additionally, it may have difficulty standing up straight, stiffness in the back, and decreased lower back motion. The low back often hurts. Most people have back discomfort at some point in their lives. Most of the time, the source of the pain is unknown. The discomfort might not have originated from a single incident. It might have performed a variety of tasks for a long period, such lifting incorrectly. Then, all of a sudden, even the simplest motion, such reaching or bending from the waist of the patient, causes pain. Arthritis affects a lot of people who experience persistent back pain. They might also experience increased spine deterioration, which could be brought on by: surgery, fractures or injuries from work or sports, and heavy use.

At some point in their life, almost 80% of people will have low back discomfort. Low back pain is 12 to 33% prevalent at any given time worldwide. Women and people between the ages of 40 and 80 have a higher prevalence of the condition [1]. There are no precise statistics available on the prevalence of low back injuries globally.

The lower back injuries accounted for 7-13% of the injury-related injuries related to the athletes of American universities. Muscle strains (60%) and intervertebral disconsolation (7 %) are the most common types of back problems. In France, more than 50 % of the 30-64-year-old people reported that there were at least LBP month in the top 12. Over the past 12 months, 17% of people have reported that LBP has exceeded 30 days. In a African study, the average LBP point prevalence of adults was 32 %, the average 1 -year prevalence was 50 %, and the average lifelong prevalence was 62 % [2-4]. Over time, it can cause muscle fibrosis, resulting in small tears, scarring, fiber strips, or adhesions.

Chronic low back pain can be treated in a variety of ways, including but not limited to rest, activity conditioning, anti-inflammatory drugs, eccentric exercise, physiotherapy, injection therapy, traditional Chinese medicine or surgery, but a complete recovery for Chronic low back pain is a rare luxury, and resting is considered the most suitable therapy for mild patients, reducing the frequency of use of the psoas muscle and reducing the amount of time spent sitting. The following is a brief introduction to three different types of treatment.

2. Treatment

2.1. Physiotherapy

2.1.1 Introduction

An important component of rehabilitation therapy is the utilization of man-made or natural physical elements to influence the body favorably and achieve the goals of illness prevention and treatment.

Physical factors that directly act locally and indirectly act on nerves and body fluids can caused multiple reason. Electricity, light, sound, magnetism, temperature, and mechanical forces are common manmade physical elements. Artificial physical factors can also be used in physical diagnosis. The physiotherapy department frequently uses low frequency pulse electric measurement of peripheral nerve function, along with pressure sensor to assess balance, along with ultraviolet erythema reaction to assess body sensitivity to sunlight and measuring electrical excitability of acupoints to estimate functional status of meridians [5].

2.1.2 Types

Electric therapy is divided into DC, low frequencies, intermediate frequency, high frequency and electrostatic therapy. Phototherapy is divided into infrared, visible light, ultraviolet and laser therapy. Sound therapy is divided into ultrasonic and ultra -low sound therapy. The use of temperature therapy suffers from heat therapy, cold therapy and frozen therapy. The use of mechanical force therapy has massage, massage, manipulation therapy, traction and movement.

And for the low back pain there are three main different treatment to help rehabilitate it:

Cold therapy: In the acute stage of the strain in the waist strain, the cold therapy (up to 48h in a short time) should be applied to the affected area to limit local tissue inflammation and edema [6].

TENS (Low Frequency Electrotherapy): TENS is a pain-relieving method that employs electrical currents. Transcutaneous electrical nerve stimulation is the delivery of brief, low-voltage electrical pulses to certain nerves via electrodes positioned on the skin with the goal of altering neuronal communication and obstructing the transmission of pain signals to the brain.

Ultrasound: Effects of ultrasonic waves traveling through media. It causes a variety of reactions in the body. Due to the subtle massage of ultrasonic waves, the substances in the tissue cells cause the cytoplasm to flow, the cells to rotate and rub, thereby producing a cell massage effect. This is the unique feature of ultrasound therapy, which can change the permeability of cytoplasm and stimulate the permeability of the cell membrane. The diffusion process of cellular translucent membranes promotes metabolism, accelerates blood and lymphatic circulation, and improves cell ischemia and hypoxia. Improve organizational nutrition, change protein synthesis rate and improve regeneration functions. It may cause changes in the cell structure, which will cause changes in cell function, which will extend, soft tissue and soft tissue.

The mechanical effects of ultrasound soften tissue, facilitate penetration, boost metabolism, excite the nervous system, and improve blood circulation.

2.1.3 Efficacy

The proposed TENS and Ultrasound have a better treatment effect than cold therapy is based on latest research and opinion of the author. According to this article there are less evidence shows that cold therapy can provide a positive effect during the treatment of chronic low back pain [7].

2.2. Muscle Strengthening

2.2.1 Introduction

As the name suggests, it exercises specific muscle groups to make this muscle group competent for its original work.

2.2.2 Types

The strengthening training of abdominal muscles and gluteal muscles is to avoid the lumbosacral muscles being in a state of high tension and stretch for a long time, which leads to lumbar muscle strain.

2.2.3 Efficacy

According to the final results of the article, gluteal muscle stretching, and abdominal muscle training can bring different degrees of help to the psoas muscles, so that the psoas muscles can no longer be damaged due to muscle compensation, and gluteal muscle stretching in gluteal muscle stretching and abdominal muscle training is a more effective treatment method [8].

2.3. Acupuncture

2.3.1 Intrduction

Traditional acupuncture is based on the ancient Chinese philosophical beliefs, that is, the flow of human flow along the so-called meridian along the way along the so-called sub-meridian. In acupuncture treatment, the specific points along the meridian are used to balance the energy flow in the body. Over time, many different styles of acupuncture and auxiliary technologies have been developed because their use has spread to other cultures. Although the mechanism of effect is very little aware of the mechanism, acupuncture is widely used in the treatment of LBP. Acupuncture may be excellent or equivalent to medical care, waiting for the list control or usual care.

2.3.2 Efficacy

According to two articles, acupuncture is a good choice for patients with not serious low back pain, because no drugs are needed to assist the treatment. However, due to the nature of low back pain recovering slowly by itself, there is not a lot of evidence to show whether acupuncture is really effective [9]. Another article answered this question, among 52 patients, there were 48 patients with significant results, and nerve conduction velocity was used to determine whether acupuncture was effective rather than self-healing or placebo, and a case study of a patient who self-heal could not demonstrated that the benefits were indeed from acupuncture [10].

3. Conclusion

In summary, this paper briefly introduces the three most commonly used non-drug treatment methods for low back pain in China, and there is a large amount of evidence showing the reliability of physiotherapy and muscle stretching and exercise in the efficacy low back pain, and moderate evidence showing the role of acupuncture in the treatment of low back pain.

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