

Acupuncture and Moxibustion Treatment for Sports Injuries

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Sports injuries include sports external injuries and sports disorders. They include shoulder joint disorders, hand disorders, pelvis and hip joint to thigh disorders, knee joint to lower leg disorders, and ankle to foot disorders [1]. This paper will discuss the causes of sports injuries, Western medical treatment, acupuncture and moxibustion, and conditioning to prevent sports injuries. According to a survey by the Sports Safety Institute, the most common sports injuries are hand, knee, and ankle injuries. The most common types of external injuries are sprains, fractures, and contusions [2]. When limited to sports, there are reports that injuries are more common in the ankle joint, which is more prone to loading.

There are both internal and external factors that contribute to the occurrence of sports injuries. Internal factors include technique, physical factors, and the influence of past injury. For physical factors, alignment and flexibility are important. Examination of alignment can reveal factors that contribute to injury. People who are prone to sports injuries often have problems with lower extremity alignment. Flexibility of the body during movement during play is also important. Treatment

involves understanding alignment and flexibility to prevent sports injuries in advance. As for past injury, patients are not allowed to return to games immediately after the pain of the disease is removed, but only after sports-related physical functions, such as muscle strength and joint mobility, are recovered before returning to games and other activities. External factors include the use of inappropriate equipment and practices and games in inappropriate environments.

In Western medical treatment, treatment should not be concentrated solely on the affected area. Various sites are treated considering their relevance to the cause of the injury. The choice of treatment strategy takes into account sport level, sport event, life planning, and timing of treatment. Professional athletes have a different level of medical care than the ordinary people because of their different sporting levels. In terms of life planning, professional athletes will not be able to continue treatment because their avenues of income will be cut off if their playing career is cut off. Therefore, having a separate source of income is important when considering a treatment plan. To achieve the level of medical care required

by athletes, the damage to the body should be minimized as much as possible, and a method should be selected that provides maximum functional gain with minimum invasion.

Acupuncture and moxibustion treatment is expected to have analgesic effects, relieve muscle tension, improve blood flow, and promote tissue repair. In particular, acupuncture and moxibustion treatment can be widely applied in overuse syndromes, whereas Western medicine's treatment methods are limited to poultices, etc. Field studies[3] and clinical studies[4] of acupuncture and moxibustion treatment make steady progress. In shin splints, pain was relieved and tissue blood flow increased. Improvements have been shown in the interphalangeal distance and straight leg raise test[5] during low back pain in athletes, patellar tendonitis (jumper's knee) evaluation scores[6], tenderness in ankle sprains[7], muscle pain in the lower extremities after a marathon[8], and tennis elbow[9].

Acupuncture and moxibustion methods include acupuncture needle, electrical stimulation, press needle, and moxibustion. Acupuncture needle is used in the treatment of sports injuries in general. Long and thick needles are used on the gluteus, while thin needles are used on the tendons to avoid damage. Electrical stimulation is used when pain or muscle tension is strong and relaxation is desired. The frequency is 2 to 5 Hz or 50 to 100 Hz depending on the area. Excessive stimulation may leave the muscles feeling uncomfortable or fatigued. Press needle is used for sustained or in-play effects. Diameter of 0.9 to 1.2 mm is used. Since

they can be used all the time, they may be more effective than transient acupuncture needles. Warm-tube moxibustion is used when there is strong muscle tension around joints. It is also effective for symptoms accompanied by coldness, and is used for female patients with shinsplints. Acupuncture treatment will consider methods other than acupuncture alone. It is important to use a combination of Western medical treatment and acupuncture and moxibustion to improve range of motion and strengthen muscles, and to avoid leaving instability [10].

Prevention is the key to sports injuries, rather than treatment after injury. For prevention, it is important to check the conditioning of athletes on a daily basis and to educate athletes on self-conditioning. The meaning of conditioning is to realize good condition. The condition is all the factors that affect an athlete's performance. These factors include mental, medical, physical, schedule, external environment, tactics, skills, and daily physical condition. The definition of conditioning is to tune all the factors necessary for performance into a desired state toward a certain goal [11]. The purpose of conditioning is to prevent sports injuries, injuries treatment, improve performance, suppression of muscle fatigue and muscle strain.

In conditioning, proper training intensity, adequate rest and nutrition, planning the schedule for game, feeling well-rounded and injury-free are important. Conditions are affected by muscle fatigue, muscle pain, and muscle tension. The effects of acupuncture and moxibustion treatment have been shown to restore

tension after muscle fatigue with retaining needle [9, 12], reduce muscle weakness and subjective fatigue with press needle [13], reduce and prevent muscle pain with needling to tender points [14], reduce tardive muscle pain [15], and reduce muscle tension in the gastrocnemius muscle [16]. Conditioning affects the athlete's internal disease and indefinite complaint [9]. Expeditions add to changes in physical condition due to environmental changes, changes in living hours, pressure, etc. In doping problems, acupuncture and moxibustion treatment that does not rely on drugs can be effective. Acupuncture and moxibustion treatment methods for internal disease and indefinite complaint exist and can use somato-visceral and visceral-somatic reflexes.

In the prevention of sports injuries, the concept of chapter 77 in Nan Jing, in which excellent doctor treats before symptoms appear, can be applied. Since it is too late after an injury, it is important to prevent the patient from going from a pre-symptomatic state to a sick state. Before pain appears, dysfunction can be detected and treated as a pre-symptomatic condition. It is also important to take the viewpoint of Oriental medicine, which looks at the body as a whole, rather than focusing on the painful part of the body. In order for athletes to achieve high performance, a health management system through self-conditioning of athletes must be established. Athletes need to understand the concept of self-conditioning to protect their own health, acquire the necessary knowledge and techniques, and actively implement them in their daily lives. It is an important job of acupuncturists working with athletes to educate athletes

from the perspective of Oriental medicine so that athletes do not leave conditioning to others, but rather grasp their own condition and consider how to deal with it.

In discussions of sports injuries, there are many cases in which acupuncture and moxibustion treatment has been applied, demonstrating the effectiveness of acupuncture and moxibustion treatment. In the treatment of sports injuries, conservative therapy is the first choice in many cases, so acupuncture and moxibustion treatment can be widely applied. The range of application of acupuncture and moxibustion treatment is expected to expand more and more in the future. In sports injuries, prevention is important rather than treatment after injury. Oriental medicine can educate athletes about prevention. In the acupuncture and moxibustion treatment of sports injuries, it is necessary to fully utilize the Oriental medicine approach. Instead of treating only the symptoms, the causes leading to the symptoms should be clarified. It is necessary to look at the athlete's body as a whole and eliminate the factors that lead to symptoms. In conditioning athletes, self-conditioning by the athlete is extremely important. In Oriental medicine, it is required to take care of one's health. Education of athletes based on Oriental medicine will be effective.

The problem that acupuncturists are prone to is that they are too outspoken, sticking to the treatment techniques and training methods they want to use, or imposing their principles and style of treatment on the athletes more than necessary. It is important for the acupuncturist to figure out what the athlete wants, not

what the acupuncturist wants to do to the athlete, and what the acupuncturist can do in response to what the athlete wants. The acupuncturist needs to work behind to figure out the best way to treat athletes to help the team and the athletes reach their goals. For this reason, it is important for acupuncturists to have the ability to communicate with athletes. While empirical rules of acupuncture and moxibustion treatment are important, it is necessary to correctly understand the players' condition and treat them based on scientific evidence. In order for the athletes to perform at their best, acupuncturists must properly understand the effects, limitations, and risks of acupuncture and moxibustion treatment and utilize them in the conditioning of the athletes. In addition to acupuncture and moxibustion treatment, acupuncturists need to apply the concepts of pre-symptomatic treatment and care of one's health, take a preventive approach, and provide a wide range of services for player education including self-care and environmental conditioning. Since it is a clinical stage, not a research stage, it is important to improve the communication skills to understand what the athlete wants and what the acupuncturist can do in response to the athlete's wishes, not what acupuncturist wants to do to the athlete. Through communication with the athlete, the acupuncturist must strive to help the athlete perform at his or her best. By doing so, the coverage of acupuncture and moxibustion treatment will be expanded step by step.

In summary, acupuncture and moxibustion treatment for sports injuries can be expected to provide analgesia, relieve

muscle tension, improve blood flow, and promote tissue repair, and is likely to become increasingly widespread. In particular, acupuncture and moxibustion treatment can be applied to overuse syndrome, for which Western medicine has limited treatment options. Factors affecting conditioning for the prevention of sports injuries include muscle fatigue, muscle pain, and muscle strain. Acupuncture and moxibustion can reduce or prevent muscle fatigue, muscle weakness, muscle pain, and muscle tension. It can also treat internal disease and indefinite complaint of athletes. Acupuncture and moxibustion treatment, which utilizes the concept of Oriental medicine, looks at the athlete's body as a whole and eliminates factors that contribute to symptoms. In self-conditioning by athletes, education of athletes based on Oriental medicine is important. Acupuncturists need to have a proper understanding of the effects, limitations, and risks of acupuncture and moxibustion, and through communication with athletes, strive to help them perform at their best.

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