

A CLINICAL STUDY OF TRIGGER POINT CHINESE MEDICINE ON CHRONIC STRAIN INJURY OF HIP JOINT IN GOLF PLAYERS

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ABSTRACT

Objective: To investigate the effect of using trigger point Chinese medicine on the rehabilitation of athletes with chronic strain injury of the hip joint in golf.

Methods: By adopting random sampling method, 80 athletes who had experience in golf and had symptoms of chronic hip strain were selected and divided into a control group (n=40) and an experimental group (n=40) according to the random number table method. The length of treatment was one month for both groups. Harris and Vas scores, hip function, hip flexion, quality of life, and patient satisfaction were recorded before treatment, the half a month of treatment, and one month of treatment for the control group and experimental group and were compared and analyzed.

Results: In this study, by analyzing and comparing the control group and the experimental group, it was concluded that the conventional treatment plan was effective, but the course of treatment was long, and the effect was slow; combined with the trigger point, Chinese medicine, it could effectively restore the hip mobility of the athletes, and after one month experiment, it was shown that the experimental group had better treatment effect.

Conclusion: Through the combination of daily rehabilitation training and trigger point herbal medicine, TCM's relaxation technique, trigger point acupuncture therapy, and cupping therapy were used to carry out side-effect-free rehabilitation training with good effect and professionalism. The satisfaction and recovery of the experimental group were better than those of the control group, thus proving that trigger point Chinese medicine has an irreplaceable rehabilitation effect on the chronic strain injury of the hip joint of golf players, and that the trigger point acupuncture therapy significantly reduced the degree of hip pain, effectively restored the muscle strength of the hip joint and prolonged the length of the athletes' career.

Keywords: Trigger point, TCM complex therapy, hip injury, golf.

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Introduction

Golf is an acronym for GOLF, which consists of four acronyms: Green, Oxygen, Light, Friendship, meaning "Green, Oxygen, Sunshine, Friendship." It is a sport that combines the enjoyment of nature, physical exercise, and play⁽¹⁾. It originated in Scotland, and most of the tournaments have 18 holes, with the winner being the one with the least number of strokes. Golf tournaments are held frequently, with the British Open, U.S. Open, U.S. Masters, and PGA Championship being the four top tournaments in

golf. Golf is now developing in China in all aspects, with more and more tournaments and a wide range of audiences. The Hangzhou International Golf Championship, the National Golf Championship, and the China Golf Volvo Open have all been held in recent years, adding to the glory of golf in China. With golf in full swing, it is inevitable that sports injuries will occur. Many golfers in China have developed chronic strain injury of the hip joint. Due to the large amount of training and competition input energy, not warming up sufficiently before the game, not stretching in time after the game, in the long tug-

of-war of the golf game, the hip joint continues to be tense and stable, playing a fixed role for a long time, resulting in the phenomenon of chronic strain injury of the hip joint in golf players more and more. When an athlete develops a chronic hip strain, failure to rehabilitate the hip in a timely manner and continue to play and train at high intensity can exacerbate the injury and even interrupt a cycling career.

Myofascial pain syndrome (MPS) is a common cause of chronic pain⁽²⁾, and myofascial trigger points (MTPs), also known as provoked pain points and tenderness points, are important indicative features for the diagnosis of MPS, as well as an important means and site for judging the effectiveness of its treatment. In recent years, with the development of science and technology and clinical research, myofascial trigger points are widely accepted and defined as points with spontaneous or reactive pain to movement. Unlike hip replacement, trigger point herbs can be used in the clinical treatment of end-stage hip joints for timely rehabilitation when problems arise; for golf, the game is long, the hip joint is stressed and stable for a long time, and the athletes In golf, the game is long, the hip joint is stressed and stable for a long time, and the athletes are stressed and stable for a long time, and the athletes are stressed and stable for a long time. long game time, the hip joint is stable under long-term stress, and the athletes overly pursue the stability of hitting the ball and the power of turning and swinging, and the hip joint is always under tension.

In this paper, with regard to the occurrence of chronic hip joint strain in golf players, the combination of TCM compound therapy and trigger point not only retains the advantages of trigger point relaxation therapy in reducing or eliminating pain, but also shortens the rehabilitation treatment cycle by using TCM, which allows for timely and effective targeted treatment. For ball players with chronic hip strain experience, the use of TCM acupuncture therapy and trigger point relaxation therapy can effectively relieve chronic hip strain and prolong the athletes' sports career.

Research subjects

In this paper, 80 athletes who had experienced golf and had symptoms of chronic hip strain were randomly selected and divided into a control group (n=40) and an experimental group (n=40) according to the random number table method. 18 males and 22 females were in the control group; their ages

ranged from 20 to 26 years old, with an average of (23.2±2.5) years old.

In the experimental group, there were 19 male cases and 21 female cases, ages 19-24 years old, mean (of 21.5±2) years old. The general data of the two groups were compared, and the differences were not statistically significant. (p>0.05), comparable, and the information of the subjects is shown in the following Table1.

Group	Number	Age (year)	Height	Body weight
	60.12±8.32	58.32±7.88	0.398	0.5542
BMI (kg/m ²)	23.11±2.35	22.71±2.41	0.092	0.8947

Table 1: Information on golfers (n=80).

Research methods

The control group and the experimental group used different treatment methods, in which the control group used conventional treatment and rehabilitation methods, and the experimental group used a fusion of trigger point Chinese medicine and conventional treatment and rehabilitation methods for a period of one month, and the data were recorded and analyzed in time for three time periods.

Control group

Static training:

- Standing position external rotation of the hip joint: single leg upright support, the other side rotate the hip outward, lift the hip joint upward, lock the knee, lower leg perpendicular to the ground, keep the thigh parallel to the ground, abduct and abduct the hip joint, 10 times 1 group, 4 groups in total, exercise the hip joint attachment muscles.

- Standing position up and back extension of the hip: single leg upright support, the hip will be lifted forward, thighs parallel to the ground, calves maintain 90 degrees, carry out the lift down and backward stirrup extension of the calf, thighs calves straight and parallel to the ground, can open the arms to maintain balance, back and forth up and back extension of the hip for 1 whole action, 10 times a group, a total of 4 groups.

Dynamic training:

- High lift leg running: upper body straight, looking straight ahead, calves and thighs at right angles, both legs alternately lift the lower stirrups, lift the thighs to a horizontal height with the ground, keep this alternate running in place, a group of 1 minute, a total of 4 groups.

- Backstroke running: upper body is straight or leaning forward, both arms swing powerfully between the line, fully stirrup, stretch the hip joint, backstroke, weight forward, body relaxation, swing the leg actively swing forward and up, close to the horizontal part, drive the same side of the hip forward to send, knee relaxation, thigh active down, forefoot on the ground, excessive force, rapid buffer, from the front span to backstroke, 50 meters a group, 4 groups.

Other training:

- Hold the object squat method: one hand or both hands hold the object in front of you, keep your body upright, feet shoulder-width apart, slowly squat and then get up, feel the hip flexion, keep the rate slow, repeatedly squat, 3 to 5 minutes a group, 2 groups.

- Swimming: the action of swimming can enhance the muscle strength of the hip; choose to use more breaststroke positions by simulating the movement of the frog, the hip force, and exercise of the surrounding muscles.

- Perform muscle training, joint mobility exercises, functional exercises, weight-bearing and balancing exercises, immobilizer exercises, etc.

Relaxation after training:

- Hip joint around the ring exercise: feet open, parallel to the shoulders, hands pinch the waist, the hip joint out to the outside of the top for the ring, left and right in turn, repeatedly, from small to large circles.

- Crab stretch: limbs brace the ground, face up, hips slightly off the ground, lift as high as possible, one arm around the head to touch the opposite arm after the shoulder joint, arm back to brace the ground, left and right hands alternately, 20 times a group, two groups.

- Lunge stretch: take a step to the front side, keep the knee of the back leg on the ground, stretch your hands over your head and keep your arms straight. Subjects can train the hip joint and nearby muscles through the above different multiple training programs to promote the rehabilitation of chronic strain injury of the hip joint.

The increase of synovial fluid in the synovial membrane of the hip joint after training is more conducive to the recovery of the hip joint, while the active stretching exercise after training also helps a lot in the rehabilitation training.

Experimental group:

Same as the control group, conventional treatment methods were carried out, static training, dynamic training and other training were completed, and warm-up and post-training relaxation stretching were actively carried out, after which trigger point Chinese medical treatment was added, and the specific therapies were as follows.

- Chinese medicine relaxation techniques: the patient takes a prone position, the lateral palm kneading, pressing method, and pinching method to relax the muscles; after the patient is in a supine position, the palm kneading method is implemented in the groin, the stroking method to relieve hip pain.

Put the index and middle fingers together and press the large intestine, ring jump point, Yanglingquan point and hanging bell for 30~50 times each, then use the lion rolling embroidery ball method to operate on the affected area and the front and back side of the thigh for 10~15 minutes, and finally take and pinch the committee center, Kunlun and Taixi for 20 times each.

- Cupping therapy: using Zhuang medicine lotus needle cupping therapy to remove blood stasis, use plum blossom needle to tap and release blood in the affected hip at the A-Yi point⁽³⁾, then repeatedly cupping with a glass sterilized fire pot at the bleeding site to suck out the blood stasis. After removing the jar, iodine was wiped to disinfect it. Once every five days.

- Acupuncture trigger point therapy: make the athlete in a supine position, keep relaxed, receive acupuncture combined with general drug anesthesia, select 0.30 mm × 13 mm first use short stab with the infusion method acupuncture points such as Nei Guan, Feng Shi, Band Vein, Foot Lin Weeping, A-Yi point, etc., the intensity to the patient's comfort, and then in the foot San Li, Sanyin Jiao with lifting and inserting tonic method, the remaining points flat tonic and flat diarrhea, in the rest of the acupuncture points stay in the process of needle manipulation for intermittent The remaining acupuncture points were intermittently performed during the remaining acupuncture points to enhance and consolidate the continuous therapeutic effect on the rehabilitation of knee injuries.

The acupuncture points were adjusted appropriately according to the patient's tolerance. Xiao Heng⁽⁴⁾ et al. added acupuncture treatment to exercise rehabilitation and showed results after several weeks, thus illustrating the efficiency of TCM acupuncture therapy for rehabilitation.

- After all the training, stretching of the hip joint was performed, and ice was applied.

Statistical analysis

In this paper, we used SPSS23 statistical software and Excel to organize and analyze the data of Harris and Vas scores, hip function and hip flexion of 80 golfers who were extracted, and the data of three time periods of the control group and the experimental group were compared, and the difference was considered statistically significant at ($p < 0.05$).

Results

In this paper, we used SPSS23 statistical software and Excel to organize and analyze the data of Harris and Vas scores, hip function and hip flexion of 80 golfers who were extracted, and the data of three time periods of the control group and the experimental group were compared, and the difference was considered statistically significant at $p < 0.05$. See Table 2.

Group	Number of cases	Time	Harris rating
Control group	40	Before treatment	73.57±6.87
		Half a month of treatment	80.52±8.33
		One month of treatment	85.23±13.42
Experimental group	40	Before treatment	74.22±8.99
		Half a month of treatment	85.85±12.66
		One month of treatment	93.32±4.22

Table 2: Harris score of the hip joint in the control and experimental groups.

Vas score of knee joint in two groups of athletes

The VAS scale is a pain scale that uses visual simulation to assess the severity of pain⁽⁵⁾. The scale is divided into 10 equal parts using a ruler, with 0 being no pain, 1-3 being mild pain, 4-6 being moderate pain, and 7-10 being severe pain⁽⁶⁾.

Before treatment, there was no statistically significant difference between the Vas scores of the control and experimental group patients ($p > 0.05$), which was comparable; after treatment, vas scores were reduced, and the experimental group scores were lower than the control group, and the difference was statistically significant ($p < 0.05$). See Table 3.

Comparison of hip mobility between two groups of athletes before and after treatment

Before treatment, there was no statistically significant difference between the hip mobility

of the control group and the experimental group ($p > 0.05$), which was comparable. After treatment, the hip mobility of the athletes in both groups was higher than that before treatment, and the hip mobility of the control group was lower than that of the experimental group, and the difference was statistically significant ($p < 0.05$). See Table 4.

Group	Number of cases	Time	Vas rating
Control group	40	Before treatment	7.02±1.52
		Half a month of treatment	5.42±1.67
		One month of treatment	3.87±1.44
Experimental group	40	Before treatment	6.92±1.99
		Half a month of treatment	4.76±1.34
		One month of treatment	2.81±1.92

Table 3: Vas score of the hip joint in the control and experimental groups.

Group	Number of cases	Flexion			Backward extension		
		Before treatment	Half a month of treatment	One month of treatment	Before treatment	Half a month of treatment	One month of treatment
Control group	40	93.58±17.65	104.2±12.04	115.22±14.52	10.25±2.24	14.32±2.09	16.59±3.21
Experimental group	40	94.29±16.02	110.8±15.52	125.15±10.29	10.78±3.21	16.04±2.59	19.98±5.29

Table 4: Hip mobility in the control and experimental groups.

Discussion

With the aggravation of aging in China, too many people have serious hip injuries and have to adopt total hip arthroplasty⁽⁷⁾, and the earliest cause of such phenomena is chronic strain injury of the hip bone, which is a common clinical disease, mostly caused by incorrect sleeping posture, sitting posture, and other daily life phenomena, with the development of the disease, gradually wear the bursa, joint capsule, and ligament and muscle tissue, causing Femoral head necrosis, femur fracture and other diseases, serious bed-ridden paralysis, so we need to take timely and effective measures to intervene. Most golf players also have a hip strains, but at present, there are not many treatment cases and means in China, and there is no prevention from the source. When hip discomfort occurs, the players should be treated with relaxation and stretching for the first time in time, and cold spray treatment can also be carried out to eliminate the stasis of blood to reduce the burden for future treatment.

Through the combination of daily routine rehabilitation training and trigger point Chinese medicine, the combination of Chinese medicine's relaxation techniques⁽⁸⁾, trigger point acupuncture

therapy⁽⁹⁾, and cupping therapy⁽¹⁰⁾ can be used to carry out rehabilitation training without side effects, which is not only effective but also extremely fast, without delaying athletes' training and competition, with professionalism. In today's environment, trigger point Chinese medicine is widely used for rehabilitation of targeted injury areas, which is very useful for rehabilitation of sports injuries and has the effect of improving athletes' performance and preventing and treating injuries.

In this study, through the analysis and comparison of the control group and the experimental group, it was concluded that the conventional treatment plan was effective, but the course of treatment was long, and the effect was slow, and the combination of trigger points Chinese medicine could effectively restore the hip mobility of the athletes. Therefore, it is proved that the trigger point Chinese medicine has an irreplaceable rehabilitation effect on the chronic strain injury of the hip joint of golf players, and the trigger point acupuncture therapy can significantly reduce the degree of pain in the hip joint, effectively restore the muscle strength of the hip joint, extend the length of the athlete's career, and not delay the athletes' training and competition. Therefore, the trigger point of Chinese medicine is also respected and appreciated by the athletes.

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