

# Research Updates of Traditional Rehabilitation Therapy in Treating Cervical Spondylosis

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**Abstract:** Cervical spondylosis has many obvious symptoms. Through literature reviews and hospital visits and collecting information under the guidance of our instructors, three methods of traditional rehabilitation therapy are reviewed in this study: massage, cupping, and Gua Sha. Information regarding cervical spondylosis was sorted out, from the causes of the disease and treatment methods to precautionary measures, which are discussed in this paper.

**Keywords:** Traditional rehabilitation; Cervical spondylosis

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## 1. Introduction

Cervical spondylosis is also known as cervical spondylosis or cervical disc herniation. It is caused by cervical disc degeneration, bone hyperplasia, and other factors, leading to cervical joint instability and cervical nerve root compression, causing neck pain, dizziness, shoulder and back pain, and other symptoms. Cervical spondylosis is more common in people who maintain bad posture for a long time, have cold necks, and have suffered from neck injuries. Survey data shows that white-collar workers and students who work at desks for long periods are the main affected groups. Most of the subjects surveyed were between the ages of 18 and 25, but some data were still provided by middle-aged patients, so the experimental data are still significant.

## 2. Causes of cervical spondylosis

Through literature review and on-site investigations, the five most common causes of cervical spondylosis were sorted out. (1) Degenerative changes in the cervical intervertebral disc: As a person ages, the cervical intervertebral disc gradually undergoes degenerative changes, the annulus fibrosus becomes thinner, and the nucleus pulposus herniates, compressing the cervical nerve roots, causing symptoms such as neck pain and dizziness. (2) Cervical vertebrae bone hyperplasia: Cervical vertebrae bone hyperplasia is a structural abnormality of the cervical vertebra caused by wear and tear of cervical vertebra articular cartilage, formation of osteophytes, etc., which makes cervical vertebrae joints unstable and aggravates cervical vertebra nerve

root compression. (3) Bad posture: Looking down at electronic products such as mobile phones and computers and working in the same posture for a long time will put an excessive burden on the cervical spine, accelerate the degenerative changes of the cervical spine, and induce the onset of cervical spondylosis. (4) Cold in the neck: Cold in the neck will directly lead to poor local blood circulation and worsen the symptoms of cervical spondylosis. (5) Neck injuries: External forces such as cervical sprains and impacts can easily lead to cervical ligament damage, intervertebral disc damage, etc., which can in turn induce cervical spondylosis.

### **3. Principles, treatment methods, and precautions of traditional rehabilitation methods**

#### **3.1. Massage**

Massage is a method of stimulating the meridians and acupuncture points of the human body through manual techniques, accelerating blood circulation, strengthening communication between the inside and outside of the body, and coordinating yin and yang. Utilizing the coordination of the human body's meridian system, massage facilitates self-relief and self-healing. In order to achieve the treatment method of adjusting qi and blood, relaxing muscles and activating collaterals, and relieving pain. For patients with cervical spondylosis, massage can effectively improve blood circulation in the neck and relieve symptoms of cervical nerve root compression <sup>[1]</sup>.

##### **3.1.1. Treatment method**

###### **(1) Muscle relaxation**

Before massage, patients need to relax their muscles so that the tense areas can be identified easily. Commonly used relaxation methods include deep breathing, progressive muscle relaxation training, etc. Some soothing music can be played to soothe the patient. Hot compress methods can also be applied to expand capillaries, enhance blood circulation, and soothe the muscles.

###### **(2) Find acupoints**

According to the patient's condition and constitution, the doctor will select the corresponding acupoints for massage. Commonly used acupoints include Fengchi, Dazhui, Tianzhu, Jianjing, etc. These acupuncture points are distributed around the neck and aid muscle relaxation, collateral activation, and pain relief. Body postures may vary from patient to patient, so therapists need to position them according to their body proportions to select and identify the acupuncture points.

###### **(3) Massage techniques**

Various massage techniques will be applied depending on the patient's condition. Common techniques include kneading, holding, pinching, pushing, and pulling. These techniques can effectively improve local blood circulation in the neck and relieve symptoms of cervical nerve root compression. Other techniques can also be used for different muscle conditions. The kneading and pushing techniques are the most common techniques used in head and neck massage.

###### **(4) Operation skills**

The following five points should be noted when performing a massage: (1) The intensity of the massage should be moderate, not too heavy or too light, (2) the movements should be rhythmic, (3) the techniques and intensity of the massage should be adjusted according to the patient's condition, (4) physicians should communicate with their patients to ensure that they are comfortable with the massage, (5) each massage session should not be too long, usually around 25 minutes. Long periods of massage may lead to muscle damage; on the other hand, sessions that are too short may result in lower effectiveness.

### 3.1.2. Precautions

- (1) Massage should be performed under the guidance of a professional physician to avoid aggravating the patient's condition due to improper operation.
- (2) Massage might not be suitable for some cervical spondylosis patients. Patients with severe conditions should be treated by a doctor. Cervical spondylosis with radiculopathy requires acupuncture and other nerve-stimulating treatments for it to be effective.
- (3) Before performing massage, patients should inform the doctor of their medical history, drug allergies, etc., so that appropriate treatment plans can be formulated and accidents can be prevented.
- (4) The patients should be kept warm after a massage to avoid catching a cold and other diseases.
- (5) The massage given should be adjusted according to the patient's condition. The physician should communicate with the patients during the session to ensure that they are comfortable. If the patient is reluctant to communicate, the physician should observe their reactions and body language closely, so as to make timely changes in their techniques and intensity or treatment of acupoints.

## 3.2. Cupping therapy

Cupping therapy is applied when the skin or limbs are bruised. When a bruise occurs, the yin in the blood vessels can overflow from the injury and damaged blood vessels and accumulate in the skin and between the skin - in the path of defensive qi circulation. As a result, the circulation of surrounding micro-vessels is blocked, exudates increase, and edema, blood stasis, qi stagnation, and other phenomena of excessive yin occur, resulting in a temporary imbalance of yin and yang. The injured area then becomes swollen and with intense pain. A bruise is defined as "pain caused by obstruction" in traditional Chinese medicine. After cupping therapy, a yang substance is applied to the affected area - the negative pressure replenishes and moves qi, resulting in a warming effect on the body, which can overcome the prevailing yin. It has the effect of promoting blood circulation and removing blood stasis, dredging the meridians, and activating collaterals, resulting in analgesic and anti-inflammatory effects. The yin and yang are balanced thus restoring the normal physiological state, ultimately leading to recovery <sup>[2]</sup>.

### 3.2.1. Treatment method

The first group of acupoints includes Dazhui, Jianliu, and Jianliao. After the acupoints are selected, the patient assumes a position that fully exposes the skin at the cupping site. After local disinfection, the flash fire method is used to suction and pull out the cups on the acupoints. After removing the cup, the patient's neck is moved around slowly for 1 to 2 minutes. Usually, the cupping is left on each acupoint for 5 to 10 minutes each time, and cupping is performed 2 to 3 times a week, with each course of treatment consisting of 7 to 10 sessions.

The second group of acupoints that can be selected are Tianzong, Jianzhen, and the cervical spinous process. After the acupoints are selected, the patient assumes a position that fully exposes the skin at the cupping site. After local disinfection, the flash fire method is used to suction and pull out the cups on the acupoints. After removing the cup, the patient's neck is moved around slowly for 1 to 2 minutes. Usually, the cupping is left on each acupoint for 5 to 10 minutes each time, and cupping is performed 2 to 3 times a week, with each course of treatment consisting of 7 to 10 sessions.

### 3.2.2. Precautions

- (1) The same part cannot be cupped twice or more within a short period of time.
- (2) The patients should be kept warm after cupping to prevent them from catching a cold.

- (3) The cupping equipment should be disinfected properly using disinfectants after use to avoid cross-infection among patients.
- (4) Cupping cannot be performed on damaged skin. This is because if the cups are contaminated, viruses and bacteria may be able to enter the patient's body through the wounds.
- (5) Women cannot undergo cupping during menstruation. Since cupping has the effect of relaxing muscles, activating collaterals, and improving blood circulation, cupping during the menstrual period may cause increased menstrual flow, prolonged menstrual time, and aggravated dysmenorrhea, which is not conducive to physical recovery and may cause damage in severe cases.
- (6) Cupping cannot be performed until local congestion caused by previous cupping returns to normal. If there is congestion after cupping, a hot towel or water bottle can be placed on the acupoints to enhance microcirculation and improve blood circulation.

### **3.3. Gua Sha therapy**

Gua Sha therapy uses special instruments and is guided by the theory of meridians and acupuncture points of traditional Chinese medicine. It involves using various techniques to scrape the body surface to remove flushing, red miliary, purple, or dark red blood spots. It is an external treatment method that can promote blood circulation and remove blood stasis, dispel pathogenic factors, and detoxify to prevent and treat diseases caused by changes in Sha, such as bleeding blister<sup>[3]</sup>. Gua Sha is one of the characteristic treatment methods in traditional Chinese medicine. It has a definite curative effect and it is simple and cost-effective, so it is popular among the Chinese community.

#### **3.3.1. Treatment method**

The acupoints selected include Fengchi, Jianjing, Tianzhu, and Dazhui points. The patient first takes a sitting position and local disinfection is performed. A scraping board or fascia knife is used to scrape the selected acupuncture point at a 45° angle between the blade and the skin until the local skin flushes.

#### **3.3.2. Precautions**

- (1) Violent head and neck movements should be avoided, especially violent head rotation because it may aggravate neck symptoms and even cause dizziness.
- (2) The patient's neck should be kept warm. This can be achieved through local physical therapy or hot compress methods, such as using hot towels or infrared rays. This can dilate the blood vessels in the scraped area, dredge the meridians, and enhance blood circulation, accelerating the self-repair of local tissue.
- (3) Since scraping oil is used, it is best to apply a small amount of scraping oil to the patient's skin before formal treatment to test for allergies. The physician should communicate with the patients and adjust the strength or method of scraping according to the patient's expressions, speech, and reactions. The excess oil should be removed from the scraper.

## **4. Summary**

Many young and middle-aged people in China work and study at their desks for a long time and do not pay attention to adjusting their posture in daily life. As a result, the incidence of cervical spondylosis remains high. Therefore, the prevention and treatment of this condition is crucial. Traditional rehabilitation treatment methods such as massage, cupping, and scraping are simple, convenient, and effective treatment options. Besides,

patients should also be educated on cervical spondylosis so that they are less afraid of this condition. Traditional rehabilitation treatment methods should also be explained to patients to facilitate communication between rehabilitation therapists and patients.

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