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Case Report

A COMBINATION OF ACUPUNCTURE, MOXIBUSTION, TUI NA AND CUPPING IN TREATING CHRONIC NECK PAIN AND STIFFNESS: A CASE REPORT

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ABSTRACT

Background: Neck pain is one of the most frequently reported complaints of the musculoskeletal system. Treatments for neck pain are varied, including physiotherapy, chiropractic, analgesics, and other drugs or steroid injections. Neck pain frequently recurs in 50% to 80% of people. Symptoms of neck pain range from mild discomfort to severe disability and can interfere with daily activities and quality of life. Moreover, incidents of neck pain can be associated with headache, arm pain or even neurological deficits. Acupuncture and other traditional Chinese techniques have been widely used as an alternative to more conventional treatments for musculoskeletal pain. This case report investigates the effectiveness of a combination of acupuncture, moxibustion, cupping, and tuina in treating chronic neck pain.

Case presentation: An 85-year-old patient diagnosed with cervical spondylosis was suffering from chronic neck pain and muscle spasm for several years. He had undergone all conventional treatments for spondylosis without any long-lasting effects. He was interested in trying out traditional Chinese techniques. He was treated for 8 weeks with Acupuncture, Moxibustion, Tui Na and Cupping. The treatment outcomes were measured on Day1, after 4 weeks and at the end of 8 weeks of treatment. The primary outcome measures used were Visual Analogue Scale (VAS) and Neck Disability Index (NDI). After 8 weeks of treatment, the patient reported full recovery from pain and acute spasms of his neck muscles. VAS score reduced from 5 to 1. Neck Disability Index score reduced from 20 to 08. His quality of life improved as measured by SF-12 score which reduced from 33 to 29.

Conclusion: Traditional Chinese therapies can be undoubtedly used as an adjunct to conventional therapies like physiotherapy or chiropractic to treat chronic neck pain. However, long term studies are needed to validate the findings of this study on a larger population.

KEYWORDS: Traditional Chinese techniques, chronic neck pain, alternative therapy, physiotherapy, quality of life.

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INTRODUCTION

Chronic neck pain and stiffness limits a person's daily activities and brings down his quality of life. It can be due to pathologies of the muscles, tendons, and bones of the neck. Commonly available treatments are analgesics and anti-inflammatory drugs to reduce pain and inflammation and physical therapy to improve the movement of the neck. Unfortunately, these treatments do not always help and prolonged

medications can have side effects. Consequently, many people with chronic neck pain seek alternative treatments, such as acupuncture.

Acupuncture was first invented in China more than 2000 years ago and involves putting special needles into specific acupoints of the body along the meridians to treat different medical conditions. Moxibustion therapy involves the burning of Moxa which is a type of herb and applying the resultant heat to the acupoints along the meridians on the body. It is usually combined with acupuncture. In cupping therapy, cups (glass, plastic or wooden) are placed on the skin over the painful area to create vacuum and suction which facilitates healing by increasing the blood supply to the affected area.Tui Na is a therapeutic form of Chinese massage to relieve pain and spasm. Increasingly, mainstream medicine is recognizing acupuncture and other Chinese techniques as an effective treatment for a variety of disorders. However, there is also a growing trend for dry needling globally. Dry needling techniques are less time consuming and the practitioner does not require a thorough knowledge of the meridians and acupoints. Unfortunately, the main concepts and theories behind Chinese acupuncture and other techniques remain poorly known to the world as there are very few international studies outside China which prove that authentic Chinese acupuncture and other Chinese techniques benefit patients with chronic pain. This case study aims to prove the efficacy of traditional Chinese techniques over and above the conventional treatments available for chronic neck pain [1,2].

SUBJECTIVE ASSESSMENT

An 85-year-old man presented with neck pain that he had been experiencing for the last 25 years. He had been under the treatment of both orthopedic specialists and physical therapists from time to time which relieved him from acute pain spells. However, he remained symptom-free only for a very short period which could be even less than a week.

His main complaints were acute pain, muscle spasm and stiffness mostly on the right side of his neck and upper back, which when quite severe would radiate into the right side of his head and cause a headache. The headaches would go as far as behind his right eye, and sometimes into both eyes. When it was most severe, he felt a pull over his head to the frontal and parietal bones. The neck pain was often dull and achy, and would sometimes be sharp. He would get sudden neck muscle spasms which limited his neck movements severely. Heat packs alleviated the discomfort. There were no symptoms of radiculopathy. He had trigger points over his right upper trapezius and sternocleidomastoid muscles. The headaches could be related to his neck problems and also could be attributed to tension-type headaches. He had no history of heart palpitations or hypertension. He was not under any medications.

The patient had been experiencing occasional discomfort and distension or bloating at times in his hypochondriac region for the last few years. His pulse was moderate but thin and his tongue was red with a greasy, yellow coat.

Objective assessment: The patient appeared to be otherwise healthy. On palpating his neck, suboccipital area at the origin of the trapezius muscle and the insertion of the splenius capitus and cervicis muscles and scalenes were found to be tender. Cervical compression, distraction and compression tests were negative. X-ray findings of his neck suggested of spondylosis and facet joint arthritis around the 3rd, 4th and 5th cervical vertebrae, presence of osteophytes and loss of the cervical lordotic curve. In comparison to the left, his ROM on the right was decreased with lateral flexion and rotation. The pain also increased with lateral flexion and rotation to the right.

Diagnosis: Cervical spondylosis and facet joint arthritis of C3, C4, C5 vertebrae.

Traditional Chinese Medicine (TCM) Diagnosis: The symptoms are mainly due to the obstruction caused by the invasion of cold and dampness into the meridians, blocking the flow of Qi (Chi) and blood stagnation mainly in the DU, BL and GB meridians. There is also insufficiency of Qi and blood due to age, leading to malnutrition of the tendons.

Treatment Plan

Treatment 1: Tui Na massage on the back, neck and shoulders and Fire Cupping on the back once

a week for 8 weeks.

Treatment 2: Acupuncture and moxibustion in the acupoints around the neck and arm twice weekly for 8 weeks.

A total of 3 days of TCM treatment in a week for 8 weeks was planned. The 2 acupuncture sessions in a week were interspersed by one day of Tui Na and Cupping therapy.

The researcher also gave some advice on gentle stretching and neck mobility exercises daily.

METHODOLOGY

After examination, the patient was explained about his condition and the treatment protocol planned for him. Informed consent was taken before the start of the treatment. He was treated with acupuncture and moxibustion twice weekly for 8 weeks. Disposable, sterile needles (40 mm in length and 0.25 mm in diameter) were perpendicularly inserted to a depth of almost 10 mm at the acupoints. The needles were manipulated by twirling for about 3min until *Deqi*sensation (soreness, numbness, distention, and heaviness) was achieved and the needles were retained for 30 min. The needles were maneuvered 3 times for every 10min. The patient was allowed to move his head in all directions during the treatment period.

Acupoints selected [1]:

1. GB20 (Fengchi) – On the nape, in the depression between the upper portion of the sternocleidomastoid and trapezius muscles.

2. GB21 (Jianjing) – On the shoulder, directly above the nipple, at the midpoint of the line connecting GV 14 and the acromion.

3. BL10 (Tianzhu) – On the nape, in the depression on the lateral border of the medial trapezius, within the posterior hairline, 1.3 cun lateral to GV 15.

4. BL11 (Dazhu) – On the back, 1.5 cun lateral to the lower border of the spinous process of the first thoracic vertebra.

5. Ashi points in the cervical area and on the Trapezius muscle.

6. LI15 (Jianyu) – When the arm is abducted 90 degrees laterally, the point is on the middle deltoid muscle, in the depression anterior and superior to the acromion.

7. SI14 (Jianwaishu) – On the back, 3 cun lateral to the lower border of the spinous process of the first thoracic vertebra.

8. SI15 (Jianzhongshu) – On the back, 2 cun lateral to the lower border of the spinous process of the seventh cervical vertebra.

9. LI4 (Hegu) – On the dorsum of the hand, between the first and second metacarpal bones, in the middle of the second metacarpal bone on the radial side.

Moxibustion was applied to the Ashi points and GB21.

Tui Na massage with traction and joint mobilization was performed to loosen the muscles and fascia that were tight and caused stiffness and reduced mobility of the cervical vertebrae. Tui Na was done for the entire upper and lower back.

Dry Fire Cupping therapy was done using glass cups on the entire upper and lower back. Different methods of cupping were used like "sliding cupping" using sesame oil, "flash cupping" where the cups were placed and quickly removed and general cupping where the cups were placed for 15-20 minutes.

Outcome: The treatment outcomes were measured on Day1(baseline), after 4 weeks and at the end of 8 weeks of treatment.

The primary outcome measures used were Visual Analogue Scale (VAS) and Neck Disability Index (NDI). (Table1)

Table 1: Comparison of VAS and NDI before and after treatment.

	Baseline	After 4 weeks	After 8 weeks
VAS	09/10	05/10	01/10
NDI	29/50	20/50	08/50

The secondary outcome measure used was the SF-12 questionnaire to assess the health-related quality of life. The lowest possible score can be 48 in SF-12. (Table 2)

Table 2: Comparison of SF-12 before and after treatment.

	Baseline	After 4 weeks	After 8 weeks
SF-12	34/48	33/48	29/48

After 4 weeks, the patient reported almost 60% less pain in the right suboccipital area and right upper trapezius muscle. VAS score reduced from 9 to 5. His ROM in lateral flexion and rotation to

the right also improved. Neck Disability Index score reduced from 29 to 20. However, he still felt a slight pulling in the neck muscles upon rotation to the right. His quality of life as measured by SF-12 reduced from 34 to 33.

After 8 weeks of treatment, the patient reported full recovery from pain and acute spasms of his neck muscles. His neck movements were free and painless. VAS score reduced from 5 to 1. Neck Disability Index score reduced from 20 to 08. His general well-being (both physically and mentally) improved which was evident from the SF-12 questionnaire scores. His quality of life as measured by SF-12 reduced from 33 to 29.

After completion of 8 weeks of treatment with Acupuncture, Moxibustion, Tui Na and Cupping, the patient felt symptom-free and painless most of the time as compared to the start of the treatment. The frequencies of the acute spasmodic attacks were reduced. The patient felt much better and his quality of life improved significantly.

Fig. 1: Acupuncture and Moxibustion.

Fig. 2: Fire Cupping.

DISCUSSION

This case study aimed to find out the combined effects of acupuncture, moxibustion, cupping and Tui Na in chronic neck pain and stiffness. The results obtained after 8 weeks of the treatment protocol were very promising. There was a significant increase in the pain-free periods and the frequency of the acute spasms was reduced as reported by the patient.

Similar findings were seen in a study by Huang et al., where a combination of acupuncture, cupping, and Tui Na was useful in reducing shoulder pain [2].

Research evidence indicates that acupuncture triggers the release of neurotransmitters and hormones such as endorphins [3] and serotonin [4] involved in central descending pain inhibitory pathways. In 1997, Tang et al proved that cholecystokinin octapeptide (CCK-8) is released, which is responsible for acupuncture-induced analgesia [5]. In 2009, Chen et al said that in the peripheral nervous system, â-endorphin released from keratinocytes after acupuncture causes pain reduction [6]. Huang et al in 2012 found out that acupuncture alters brain activation patterns in areas associated with pain processing [7].

In moxibustion, the acupuncture points are stimulated by heat which increases *qi* circulation and relieves *qi* stagnation, leading to an improvement in the symptoms [8].

Cupping therapy creates a vacuum through suction which increases blood flow by which toxins are removed and pain is relieved [9]. Goats G.C. in his study found out that Tui Na (Chinese massage) releases *â*-endorphin which causes pain suppression and other beneficial effects of increased blood flow and relief of muscular spasm [10].

CONCLUSION

The patient had been receiving medications and physical therapy sessions as and when required for his neck pain. He was very keen to undergo acupuncture and other traditional Chinese techniques as an alternative therapy which could alleviate his chronic neck pain and discomfort. This case study shows definite evidence of the strengths of authentic Chinese acupuncture and other traditional Chinese techniques in treating chronic neck pain and stiffness. However, longitudinal and cross-sectional studies are needed to study the long term efficacy of traditional Chinese techniques.

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Conflicts of interest: None

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