

Buccal acupuncture plus exercise therapy for scapulohumeral periarthritis

颊针结合运动疗法治疗肩关节周围炎

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Abstract

Objective: To observe the clinical efficacy of buccal acupuncture plus exercise therapy in treating scapulohumeral periarthritis (SP).

Methods: Sixty-three SP patients were intervened by buccal acupuncture plus exercise therapy. The treatment was given once every day, 5 sessions as a course, with a 2-3 d interval between two courses. The therapeutic efficacy was observed after 3 courses of treatment.

Results: Thirty-five patients were recovered, 23 cases were improved, while 5 cases showed ineffective, and the total effective rate was 92.1%.

Conclusion: Buccal acupuncture plus exercise therapy can produce a significant efficacy in treating SP, and thus is worth promotion in clinic.

Keywords: Acupuncture Therapy; Buccal Acupuncture; Frozen Shoulder; Periarthritis; Shoulder Pain

【摘要】目的: 观察颊针结合运动疗法治疗肩关节周围炎的临床疗效。**方法:** 颊针结合运动疗法治疗肩关节周围炎 63 例。每日治疗 1 次, 5 次为一个疗程, 疗程间休息 2-3 d。治疗 3 个疗程后观察疗效。**结果:** 临床治愈 35 例, 好转 23 例, 未愈 5 例, 总有效率 92.1%。**结论:** 颊针结合运动疗法治疗肩关节周围炎疗效显著, 值得在临床推广应用。

【关键词】 针刺疗法; 颊针; 肩凝症; 关节周围炎; 肩痛

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Scapulohumeral periarthritis (SP) refers to the extensive nonbacterial inflammation resulting from chronic strain and degenerative changes. Patients usually suffer from pain and motor dysfunction of the glenohumeral joint^[1]. Scapulohumeral muscular atrophy may occur in long-term cases and seriously affect the patient's quality of life. So far, the cause of this disease yet remains unclear. Various methods showed different treatment results in treating SP^[2-7]. The symptoms of SP are hard to recover and easy to recur, hence, it's essential to shorten the course of treatment and alleviate patients' sufferings in clinical research. As a type of micro-needle therapy, buccal acupuncture has been developing for over 2 decades and shown outstanding analgesic effect. It can effectively improve the symptoms and quality of life. Between March of 2012 and December of 2014, we treated 63 cases of SP with buccal acupuncture. The study is summarized and reported as follows.

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1 Clinical Materials

1.1 Diagnostic criteria

The diagnosis was confirmed according to the diagnostic criteria of SP in the *Criteria of Diagnosis and Therapeutic Effects of Diseases and Syndromes in Traditional Chinese Medicine*^[8]: Resulting from injury, chronic strain or the attack of wind, cold, dampness, and deficiency of qi and blood; usually happens around the age of 50; the morbidity is higher in women than in men, and SP affects the right shoulder more than the left one; most patients are manual workers; the onset is generally chronic; the pain gets worse at night and is always triggered by fatigue or change of weather; there is motor dysfunction of glenohumeral joint; scapulohumeral atrophy can be observed; the tenderness points exist on the anterior, posterior and lateral sides of the shoulder; the abduction is significantly restricted, presenting the typical sign of 'carrying shoulder'; the result of X-ray examination is usually negative while osteoporosis can be detected in patients with a long disease course.

1.2 Inclusion criteria

Met the above diagnostic criteria of SP; aged 40 to 60

years old; the course of this disease is within 1 year; other diseases causing pain and motor dysfunction of shoulder are excluded; without using any analgesics or discontinued using the drugs in the last 2 weeks.

1.3 Exclusion criteria

Those who didn't meet the above diagnostic and inclusion criteria; mental disorders or fatal primary diseases involving liver, kidney, hematopoietic system and cardiocerebrovascular system; women in pregnancy or lactation; tumor or tuberculosis of the shoulder joint, or unrecovered dislocation or fracture of shoulder; being under other treatments which may affect the result of this research.

1.4 General data

Sixty-three cases were recruited from Acupuncture Clinical Center of the Affiliated Hospital of Gansu University of Chinese Medicine between March of 2012 and December of 2014, and all of these patients were diagnosed with SP. Of the subjects, there were 27 male patients and 36 female patients, aged from 40 to 60 years old at the average of 51.8 years old, and their disease durations ranged from 15 d to 1 year at the average of 3.3 months. Fifty-eight cases were affected unilaterally, while 7 cases got both sides affected simultaneously. There were more cases got affected on the right side (35 cases) than the left side (28 cases).

2 Treatment Methods

Acupoints: Shoulder Point (0.5 cun anterior to the center of antilobium), Arm Point (at the midpoint of the line connecting the Shoulder Point and Elbow Point), and Elbow Point (at the highest point of zygoma) on the affected side; Pelvis Point [one finger-breadth anterosuperior to the mandibular angle on masseter, the ridged point masseter when biting and depression when pressed, i.e. Jiache (ST 6) on the healthy side. The locations of the points are shown in Figure 1.

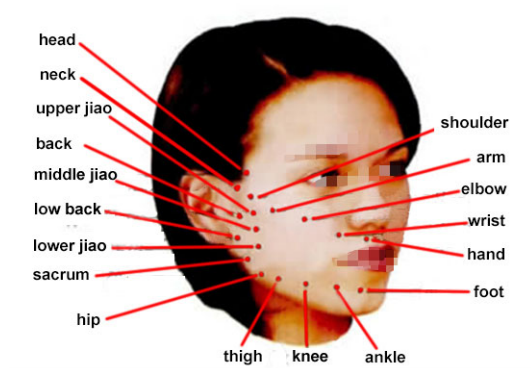


Figure 1. Location of buccal acupoints

Operation: The patient took a sitting position. After standard sterilization for the patient's cheek, the

acupuncture needles of 0.30 mm in diameter and 10 mm in length were perpendicularly inserted by 0.2-0.5 mm into the Arm Point, Shoulder Point, Elbow Point of the affected side, and Pelvis Point of the healthy side. Each needle was twirled for 10 s to produce tolerable stimulation till the arrival of qi. The needles were manipulated once every 5 min and retained for 15 min. During the retention of the needles, the patient was asked to exercise the affected shoulder joint by flexion, adduction, abduction and backward extension. After the removal of the needles, the pinholes were immediately pressed by sterilized dry cotton ball to prevent bleeding. The treatment was given once every day, 5 sessions as a course, with a 2-3 d interval between two courses. The therapeutic efficacy was observed after 3 courses of treatment.

3 Observation of Therapeutic Efficacy

3.1 Criteria of therapeutic efficacy

The criteria of therapeutic efficacy were drawn up by referring the *Criteria of Diagnosis and Therapeutic Effects of Diseases and Syndromes in Traditional Chinese Medicine*^[8].

Recovery: The shoulder pain disappears, and the function of glenohumeral joint is completely or basically recovered.

Improved: The shoulder pain alleviates and the function of glenohumeral joint improves.

Failure: The symptoms have no improvement.

3.2 Treatment result

After 3 courses of treatment, 35 cases were recovered, 23 cases were improved, 5 cases failed in the treatment, and the total effective rate was 92.1%.

3.3 Case study

A female patient, 51 years old, paid her first visit on 14th of March, 2013.

Chief complaints: Pain in the right shoulder over 4 months. It had been alleviated after treatment, but then aggravated because of the overexertion in doing housework. The pain was worse at night and after movement, and it didn't respond to rest or acesodynes such as Nabumetone. The pain showed no alleviation.

Examination: The tenderness was detected on deltoideus triangularis, the anterior and the posterior sides of right shoulder. The right shoulder can lift by 80°, abduct by 70°, and extend by 30°. The X-ray examination showed normal. Her tongue was pale with a petechial border, and the coating was thin and white. Her pulse was wiry.

Diagnosis: SP.

Treatment: The above points were punctured. Each needle was twirled for 10 s, and manipulated once every 5 min during the 15 min retention. During the retention of the needled, the patient was asked to

exercise the affected shoulder joint by flexion, adduction, abduction and extension. The patient was back on the next day for the second treatment, telling that the pain was significantly mitigated. After 3 courses of treatment, the pain around her right shoulder disappeared and the function was generally recovered. No relapse occurred in the follow-up of half a year.

4 Discussion

SP usually affects the people around the age of 50, more females than males, and there is usually a history of chronic strain. In the theory of traditional Chinese medicine (TCM), SP belongs to the category of shoulder Bi-impediment, also known as *Lou Jian Feng* (wind attacking shoulder), *Wu Shi Jian* (shoulder of the fifty years old), or *Dong Jie Jian* (frozen shoulder). SP is mainly characterized by pain, coupled with limited motor function of the shoulder, which impairs daily activities such as eating, dressing, combing, and washing face. In traditional acupuncture therapy for SP, the stimulation to the local area is usually strong in order to reach the goal of 'inducing qi to the affected location'. For patients who are in acute stage and suffer from serious pain, strong stimulation may aggravate the pain and thus cause unsatisfying treatment result, that's why intensive reinforcing- reducing manipulations should be avoided. Therefore, it's important for doctors to explore new methods causing less pain but more significant effect.

Buccal acupuncture therapy is a micro-needling system based on the theory of bio-holography by puncturing specific points on bucca. It was initially discovered by Dr. Wang Yong-zhou, when he used acupuncture at Jiache (ST 6) to treat toothache but accidentally relieved pain in the leg. Inspired by this coincidence, Dr. Wang started his exploration of buccal acupoints. Since then, together with Prof. Fang Xiao-li, he finally found out the regular pattern of buccal acupoints and its relation to the human body through numerous practices and theoretical study for over 20 years, under the guidance of the theory of bio-holography and thousands of human experiments. There is a micro-needling system on human bucca, which contains a miniature bio-holography of the whole body. The doctors also confirmed the name, location and indications of each buccal acupoint. After plenty of clinical tests, it's verified that buccal acupuncture can produce a stable and prominent analgesic effect. Moreover, it's safe, convenient to locate points, efficient in ceasing pain, easy to master, and has a wide range of indications^[9].

In this study, Shoulder Point, Arm Point and Elbow Point on the cheek of the affected side were selected according to the principle of corresponding parity in the theory of buccal acupuncture; Pelvis Point on the cheek

of the healthy side was taken according to the principle of cross corresponding acupoint selection in the theory. Buccal acupuncture therapy treats the diseased region through irritability adjustment, not only alleviating pain of the shoulder but also improving the motor function of shoulder joint. It takes fewer points and renovates the traditional way of selecting local tender points as the acupoints. As it brings less pain and fear, it's easy for patients to accept the treatment and cooperate positively^[9]. Ren CZ, *et al*, proved good analgesic effect of both conventional acupuncture therapy and buccal acupuncture therapy; meanwhile, buccal acupuncture is better in instant analgesic effect compared to the conventional one and it can up-regulate the contents of cholecystokinin-octapeptide (CCK-8) and β -endorphin (β -EP) in cerebrospinal fluid to the normal level, which could be one of the central action mechanisms of buccal acupuncture in producing analgesic effect^[10]. Wang W, *et al*, found that the analgesic effect of buccal acupuncture is good in treating cervicobrachial syndrome through clinical observation^[11].

Acupuncture can produce a more significant effect when combined with exercise therapy, which has been well proved via clinical practices^[12-13]. For patients who suffer from terrible pain and dysfunction of the shoulder joint, the treatment can be quite effective once the differentiation of syndromes is accurate. During the treatment, it is pivotal to ask the patient to exercise the affected shoulder joint by rotation, abduction, extension, lifting, and adduction, which can relax tendons and unblock collaterals, activate blood circulation and cease pain, release spasm and adhesion. Thus it can release the adhesion of the capsule, tendons and ligaments, relax muscle spasm, and improve local blood circulation to alleviate shoulder pain and promote the recovery of shoulder function. Buccal acupuncture plus exercise is easy to operate, and doctors only need to obtain the arrival of qi by twirling manipulation rather than performing strong stimulation or reinforcing- reducing manipulations. It is easier for patients to accept and more convenient for doctors, hence this new effective therapy should be applied generally in clinical practice.

Conflict of Interest

There was no potential conflict of interest in this article.

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Statement of Informed Consent

All of the patients in the study signed the informed consent.

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