

A Case Report On The Acupuncture Treatment Of Whiplash Associated Disorder

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Abstract

While pregnant, the wife of a medical practitioner had a car accident and developed whiplash associated disorder (WAD). In the 23 years that followed, she tried many treatments to relieve the resulting headache and neck pain that radiated to her shoulders. Relief, however, was only temporary. With traditional Chinese medicine (TCM) pattern diagnosis and treatment, she had remarkable results and achieved full recovery in six visits to our clinic within a period of three months.

Introduction

Car accident can easily cause whiplash associated disorder (WAD), a post-concussion syndrome that manifests in a range of symptoms following neck injury, and often recovers spontaneously (Rosted & Jorgensen, 2010). The treatment of WAD using conventional medicine is often difficult and unsatisfactory, with short-term relief often only obtained with analgesics and exercise

February 2016 complaining of constant neck and shoulder pain and intermittent headaches that were unbearable and affected her sleep. She had experienced a car accident 23 years previously when she was pregnant with her youngest son. While she was stationary at a traffic light, another car hit her from behind. Because of her pregnancy, her neck injury was not assessed by x-ray and no treatment was given except for analgesics. A nodule then developed from the sixth cervical down to second thoracic vertebrae. After delivery of her baby, she visited a physiotherapist and did some recommended exercises, but in vain. Her chief complaints were neck pain radiating to her shoulders and intermittent headaches. Her husband, a general practitioner, told her that she had whiplash, for which conventional medicine could only prescribe pain-killers and therapeutic exercises.

Whiplash is often associated with sprains that involve overstretching and tearing of the soft tissues. As indicated by Wilson (2013), nerve symptoms associated with whiplash are likely to be referred symptoms resulting from damage to surrounding ligaments and joint capsules that press against the nerves, as well as direct damage to the nerves themselves. From a Chinese medicine point of view, Wilson (2013) summarised whiplash into:

- a) Ten types of soft tissue injury, according to form (stretching/tearing), degree and depth of the injury;
- b) Three patterns of tendon injury identifiable through palpation: (i) jin wei (筋萎, deviated tendon due to

Her chief complaints were neck pain radiating to her shoulders and intermittent headaches.

This paper presents the case of a patient who developed a nodule following a car accident that was associated with neck pain and intermittent headaches. Conventional medical treatment was only temporary (using pain killers) and could do very little to relieve her signs and symptoms. Through the diagnostic methods of TCM, namely observation, auscultation and olfaction, inquiry, pulse-taking and palpation, we ascertained that the cause of the neck pain and headache was blockage of the channels (as discussed more fully later) due to qi stagnation, leading to qi and blood deficiency in the local tissues. With the patterns properly differentiated, appropriate TCM treatment could be given.

Description of the case

A woman in her late 50s came to the clinic on 17

malnourishment of the tendons); (ii) jin zhong (筋腫, soft swollen tendon due to inflammation) and (iii) jin jie (筋結, hard knotted tendon due to blockages); and,

c) Three divisions of physical involvement, which are named after pattern diagnosis - as defined by Chen (2005) and Chen et al. (2015) - based on the ancient theory of the channel sinews (经筋, jingjin, see *Ling Shu*, Ch.13) and modern anatomical knowledge: Yangming (inability to turn the head with stiffness and pain during neck movement); Shaoyang (difficulty in lateral flexion with pulling sensation when turning the head and discomfort holding the head up) and Taiyang (problems extending and flexing the neck with tightness and spasm of the muscles of the neck). Chen et al. (2015) further added Shaoyin (tenderness at the lower edge of the occiput and on the transverse processes of C3-6) to the divisions of physical involvement.

Chen et al. (2015) proposed that adopting the channel sinew syndromes model (comprising the four patterns mentioned above) could be beneficial to the proper pattern identification and treatment of WAD. They further point out that through positive identification of the 'knotted sinew points' (or tender jin jie points) and symptoms from different channel sinews, practitioners could easily diagnose the channel sinews involved before applying the appropriate acupuncture techniques, modalities and manipulations. It is imperative that the 'knotted sinew points' be identified with palpation so that the tender spots in whiplash-injured patients can be treated accordingly.

Pattern diagnosis

The nodule on the neck along the Du Mai (Governing Vessel) was palpated. It was hard and tender. The patient felt it sore but could rotate her head freely. Because of the tightness and spasm of the muscles of her neck and the fact that she could rotate her head freely, this case showed signs of Taiyang channel sinew syndrome with qi stagnation. Qi stagnation had caused qi and blood deficiency in the local tissues, causing headache and neck pain (Legge, 2011). Such blockage could have been due to soft tissue damage and the nodule might have been the result of jin jie (knotted tendon) or inflammation. However, as the patient had headache and neck pain that radiated to her shoulders, it also indicated that the Yang Qiao Mai (Yang Motility Vessel) might have been affected as well.

Treatment principles

The treatment principles were to resolve the tenderness along the Taiyang channel sinew and to move the qi and blood using points on the Taiyang channel and Yang Qiao Mai.

Treatment

Tuina and cupping were applied to open up the Taiyang channel. Acupuncture (including auricular acupuncture) was used to move qi and blood, and to reduce pain and headache. Encircling acupuncture was used around the nodule to help it to resolve (Fig. 1).

Due to the prolonged duration of this WAD, it was difficult to treat and we expected it might take some time for the treatment to be effective. To enhance the therapeutic effect, scalp therapy and moxibustion were also applied to acupoints to assist in moving the qi and blood.



Fig. 1. Cupping was used to open the Bladder channel and needles were inserted to encircle the nodule

Acupuncture prescription

The acupoints chosen were mainly used to move qi and blood, and to reduce pain and headache. They were:

Dazhui DU-14	The crossing point of the yang channels (Zong & Cheng, 2006). Indications include headache and stiffness of the neck (Zhao, 2002).
Dazhu BL-11	One of the eight confluent acupoints; associated with the bones. Indications include stiff neck, pain in the back and shoulder, and headache (Zhao, 2002).
Shenmai BL-62	One of the eight convergent acupoints; associated with the Yang Qiao Mai. It connects the 12 channels to the Eight Extraordinary Vessels. Indications include headache and dizziness (Zhao, 2002).
Houxi SI-3	The shu-stream acupoint of the Small Intestine channel and one of the eight convergent acupoints associated with the Du Mai.

Houxi SI-3 (cont.)	It connects the 12 channels to the Eight Extraordinary Vessels. Indications include stiff neck, acute lumbar muscle sprain and spasmodic pain in the elbow and arm. Together with Shenmai BL-62, it is used for treating the neck and scapular region (Zhao, 2002).
Huatuojiaji M-BW-35	The Extraordinary Points running 0.5 cun bilateral to the lower border of the spinal processes. Indications include disorders of the upper limbs and chest (Zhao, 2002).
Bailao M-HN-30	Treats neck rigidity, transforms phlegm and reduces nodules (Kuoch, 2007).
Fengchi GB-20	An acupoint on the Yang Qiao Mai. Indications include headache, vertigo, stiffness and neck pain (Zhao, 2002).
Jianjing GB-21	Indications include stiffness and pain of neck, back and shoulder (Zhao, 2002).
Ashi points	These points were used to encircle the nodule to hasten its resolution (Zhao, 2002).
Auricular points were also needled, as follows:	
Shenmen	Indicated for stress, anxiety and excessive sensitivity (Kuoch, 2007).
Sympathetic nerve	Balances the sympathetic and parasympathetic nervous systems and promotes blood circulation (Kuoch, 2007).
Cervical vertebrae	Indicated for neck stiffness and headache (Kuoch, 2007).
Occiput	Indicated for pain (Kuoch, 2007).

After the first treatment the patient's headache disappeared.

Due to her prolonged suffering from WAD, scalp therapy was also used, to stabilise the patient's nervous system and reduce her headaches. Shuaigu GB-8 (indicated for headaches) was needled transversely along the vertigo-auditory zone of the scalp.

Needles were inserted transversely to encircle the nodule, to draw blood to the affected site. Fresh blood supply

would bring along antibodies (an aspect of wei-defensive qi) to treat the inflammation and hasten the healing process. Wilson (2013) has reported that acupuncture may induce anti-oedemic activity, which can reduce pressure on the posterior roots of the cervical nerves.

Theoretically, reinforcing method should have been used on the main points to reduce pain (Zong, 2006). Instead however, needles were inserted in the aforementioned points and manipulated until de qi was obtained, and moxibustion was used instead of the reinforcing method. The rationale here was to calm the patient (as this was her first experience of acupuncture) and to move her qi and blood. Wilson (2013) reports that this treatment method of 'warming [the] governor vessel (Du Mai) and dredging yang' not only improves circulation but also regulates the functions of the spinal and sympathetic nerves.

Therapeutic outcomes

After the first treatment the patient's headache disappeared. She felt emotionally relieved and thought the treatment was helpful. However, she had minor pain in her back as she found the tuina a little harsh.

The same treatment was repeated at her second visit (one week later). The nodule had softened and when the needles were removed from the nodule, blood appeared, indicating qi and blood movement.

On the third visit, the patient complained that her headache had relapsed the day before the visit. This could have been due to the fact that acupuncture had modified reflexes and various ascending and descending pathways between the cerebellum and the proprioceptors causing establishment of neural transmission (Wilson, 2013). In addition to the aforementioned treatment, Weizhong BL-40 was needled as a distal point to move qi and blood systemically. Upon removal of needles, blood was elicited at the lower Huatuojiaji acupoints, indicating movement of qi and blood along the channel.

On the fourth visit (9 March, 2016), the nodule had softened and flattened substantially and the patient did not have any more pain or headaches. Because the underlying blood stasis had been softened and pushed to the surface, a bruised spot was found at the surface of the nodule. Repeated treatment (without Weizhong BL-40) was given and when the needles were removed, tiny droplets of blood came from the ashi points surrounding the bruised spot, indicating further release of blockage.

Because of the prolonged duration of her WAD, the patient had to come back for further treatment. After six treatments and within three months of starting treatment, her WAD was completely resolved.

Conclusion

It seemed that our diagnosis of this WAD patient as having Taiyang channel sinew syndrome (with possible damage to her Yang Qiao Mai) with qi stagnation leading to local

qi and blood deficiency was correct. The patient was responsive to our TCM treatment aimed at moving her qi and blood through tuina, cupping, auricular acupuncture, scalp acupuncture, body acupuncture and moxibustion. Most importantly, her condition improved after each treatment and her nightmare of 23 years was gone after only six treatments over a period of three months.

As TCM practitioners, we are bound to come across difficult cases in our clinic, cases that have been misdiagnosed or mistreated elsewhere. Through the four diagnostic methods in TCM, we took note of the patient's medical history. We then eliminated the possible causes in the list of differential diagnosis, identifying that her neck pain and intermittent headache could have arisen from qi stagnation due to soft tissue damage and the nodule might have been the result of jin jie (knotted tendon) or inflammation. Using pattern differentiation, we identified the patient as having Taiyang channel sinew syndrome (with possible damage to her Yang Qiao Mai) with qi stagnation, resulting in qi and blood deficiency that caused the neck pain that radiated to her shoulder and her intermittent headache.

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