

Clinical Report 1 (Japan)

Acupuncture Treatment for Chronic Plantar Pain – One Case Report

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1. Introduction

Pain associated with numbness of the extremities is indicative of constriction of central nerves or nerve roots and diagnostic imaging is often performed in medical facilities for the lumbar and cervical regions. However, frequently any clear organic diseases are absent and causes remain unknown, so that local symptomatic treatment is performed. Many of the patients receiving acupuncture treatment in Japan underwent treatment in medical facilities but without resulting in any improvement and came our clinic in the hope for some relief. This article presents one case report, where acupuncture treatment was markedly effective.

2. First visit

Born in July 1936, aged 74 years, female, housewife

First visit: November 1, 2010 (Monday)

Chief complaint: plantar pain

1) Anamnesis

Three months earlier without any causes the patient can think of the left heel became swollen upon rising in the morning, subsequently developing severe pain and resulting in the disability to walk. An orthopedist took an x-ray picture of the foot but could not identify any anomalies and therefore gave the patient cold compresses. Yet, the pain was not alleviated and starting one month ago she ceased seeing the orthopedist and started instead to visit an osteopathic clinic. The treatment there resulted in some improvement of the symptoms, but she still had to walk on the toes because of the pain during walking. The pain was of a tingling nature and grew worse when walking. During rest she felt some discomfort, but not strong pain. As concurrent symptoms she complained about marked shoulder

stiffness and occasional headaches. The headache occurred frequently in the right parietal area and was a continuously squeezing pain. She was easily susceptible to stress and irritation during daily life.

2) Acupuncture treatment experience

She had no previous acupuncture treatment experience and since this was her first visit, she felt somewhat frightened. A friend of hers was commuting to this clinic and because this friend took the patient by car, she could visit our clinic, although she lived rather faraway.

3) Past history

Surgery for varices near the 4th digit of the left foot. Surgery of the left eye, resulting in a recovery of left visual acuity to 1.2. (right: 0.3)

The timing of the surgeries for both symptoms is unclear.

4) Examination findings

(1) Observation upon entering the room

The upper half of the body leaned forward and a painful gait protecting the left foot could be observed.

(2) Observing the patient in a sitting position

I Static observation

I instructed the patient to sit at rest in the most comfortable position with eyes closed, facing straight forward and observed this posture. This showed that the right shoulder was elevated, the neck tilted to the right and slightly rotated to the left.

II Dynamic observation

I instructed the patient to bend the neck forward, backward, sideways and rotate it. Retroflexion of the neck caused a sensation of dull pain extending from the cervical to the back region, while upon anteflexion the patient reported a feeling of traction in the posterior region of the neck, bending to the left caused a feeling of traction in the right shoulder region, while rotation to the right was restricted.

(4) Observation in face-down position

I Observation

Protuberances on both sides of the erector spinae muscle region between Th4 and Th7 could be observed.

II Palpation

I observed a very strong tension from the cervical region towards both shoulders, in particular within the right trapezius muscle in the vicinity of GB 21 (Kensei, Jianjing) a string-like induration and tenderness was observed. In the same location pressure induced ischemia triggered in the right posterior cervical region a dull pain, so that I considered this area to be a trigger point.

The triceps surae muscles were overall very tense and a slight swelling and reddening of the heel region could be observed. Lightly touching the same region or compression causes the patient to complain of a numbing pain.

(4) Observation in face-up position

II Palpation

On the outside of both lower legs an increased tension of the long peroneal muscle and the peroneus brevis muscle was observed and particularly marked on the left. Moreover, on the medial side of the left lower leg, the muscle along the medial marginal region of the tibial bone was flaccid. Passive movement of the ankle joint showed that the restriction of the mobility (resistance) was more marked on the left side. A mild degree of edema was also noted for the left lower leg, so that pressure against the tibia left a finger impression. In the center of the right sternocleidomastoid muscle belly a strong tension could be observed and the patient complained about tenderness of the same site and parietal discomfort upon compression, so that this site too was identified as a trigger point.

5) Comprehension of the pathologic condition

Excessive tone of the muscle groups stabilizing the ankle joint could conceivably be a factor for the

restricted joint movement. Since the patient could not recall any contusion of the left heel possibly responsible for the symptoms, the condition was probably not caused by a trauma. For some reason circulatory problems in the left heel region developed and the resulting swelling caused a local compression neuropathy, so that during walking the compression conceivably led to the manifestation of pain.

The author thought, that the excessive tension of the muscle groups located around the ankle joint and the tension of the erector spinae muscles caused by the patient's stooped posture were related to the muscle tone of the neck and shoulder region and thus possibly contributed to the headache. Because the disturbance of the trunk balance shifted the center of gravity and thus put an increased stress on the antigravity muscles, the patient shifted her center of gravity forward, so that the muscle tension in the posterior crural muscles increased and the tone of the triceps surae muscles responsible for plantar flexion of the ankle joint led to a tensing of the long peroneal muscle, peroneus brevis muscle, posterior tibial muscle and this in the end probably led the development of an increased tonus of the flexor hallucis longus muscle. While these muscle groups caused a shortening of the ankle joint and thus a limitation of the mobility, at the same time they probably also adversely affected the flexibility of the plantar arch. Accordingly, the increased muscle tension in the lower legs conceivably developed in this patient because of the abnormal posture assumed during daily living, resulting in an abnormal center of gravity.

6) Treatment plan

Purpose of the treatment was to achieve relaxation of the structural muscles of the ankle joint to promote mobility of the ankle joint and relaxation of neck and shoulder region muscles. Tension of the lumbar and back muscles too should have been adjusted to improve the posture, but because this

was the patient's first acupuncture treatment, this was omitted in order to reduce the stimulus dose. Further, from a point of view of meridians the condition was considered to be a lesser yang disease, where an increased tension was observed along the gallbladder meridian, while on the medial side of the lower leg along the reverting yin liver meridian some edema could be noted, allowing the conclusion that the greater yin spleen meridian is weakened and thus relevant therapeutic points were selected on the various muscles. For the acupuncture treatment 40 mm No.18 needles manufactured by Seirin were used. Since the patient underwent acupuncture treatment for the first time, obtaining de qi was either not necessary or kept to a mild degree.

7) Treatment

I Treatment for the heel pain

Left GB34

Purpose: Reduction of the long peroneal muscle tension, stimulation of the common fibular nerve, adjustment of the lesser yang gallbladder meridian.

Method: Perpendicular insertion, 1 cm insertion depth, obtaining de qi is not necessary after thrusting and lifting with little stroke.

Left BL60

Purpose: Stimulation of the fibular nerve, adjustment of the greater yang bladder meridian.

Method: BL60 was needled perpendicularly in a fashion of "penetrating insertion" towards KI3, where the movement of the tip of the needle could be felt underneath the skin, meaning that the needle had passed beneath the Achilles tendon. Obtaining de qi is not necessary.

BL57 (bilateral)

Purpose: Reduction of the triceps surae muscle tension, adjustment of the greater yang bladder meridian.

Method: Perpendicular insertion in the region of muscle-tendon transfer region from the

gastrocnemius to the Achilles tendon, insertion to depth of more than 2 cm until the needle reached the transitional region of the soleus muscle. Obtaining de qi is not necessary.

Left SP6

Purpose: Relaxation of the posterior tibial muscle and freeing the three leg yin meridians.

Method: Perpendicular insertion, insertion for more than 2 cm. Obtaining de qi is not necessary.

LR3 (bilateral)

Purpose: Relaxation of plantar muscles, adjustment of the liver meridian.

Method: Slightly oblique insertion towards the base of the first and second metatarsal bones. Insertion to a depth of more than 1 cm and obtaining de qi.

II Treatment of the neck and shoulder region symptoms

Induration in the center of the right sternocleidomastoid muscle belly.

Purpose: Calming the trigger point

Method: Presence of strong tenderness, by compressing the area of blood deficiency for 5 seconds a perpendicular vertical insertion was made in the area of the discomfort reported in the parietal region, and after thrusting and lifting several times de qi was obtained.

GB20 (bilateral)

Purpose: Relaxation of the semispinal muscle of the head and the greater posterior rectus capitis muscle, freeing of the lesser yang gallbladder meridian.

Method: Markedly oblique insertion toward the occipital bone, after confirmation that the needle tip touched the bone the needle was slightly retracted and thrusting and lifting performed. Obtain only a mild degree of de qi.

Hyakuro (bilateral)

Purpose: Reduction of the tension of the erector

spinae muscles in the center of the border between the semispinal muscle of neck and the semispinal muscle of thorax to alleviate the dull pain triggered by retroflexion of the neck.

Method: Perpendicular insertion, insertion for more than 2 cm until resistance is felt.

GB21 (bilateral)

Purpose: Relaxation of the trapezius muscle, calming the trigger point and freeing of the lesser yang gallbladder meridian.

Method: Grip the trapezius muscle as thinly as possible and twist it forward, after confirmation of a strong pain and referred pain extending towards the occiput, directly prepare the pressing hand and insert the needle. Obtain a mild degree of de qi.

III Stretch exercises and joint mobilization techniques

Mobilization techniques for the ankle joint

Passive performance of dorsal flexion, plantar flexion, plantar flexion and inversion, plantar flexion and eversion. At this time the techniques are performed consciously imagining the sliding direction of the joint. Finally perform traction towards the heel in a dorsiflexed position.

Mobilization techniques for the neck and shoulder region

The head and neck were bend to the left, while the jaw was moved in three directions to the right, front and left side, the muscle groups of the neck were stretched in general, on the sides and in the back. After performing the same procedure for the right side, a passive traction of the cervical vertebrae is performed.

IV Other

The patient was instructed to rotate both ankles at home and assume a proper erect posture.

8) Immediate effects

The stiffness of the neck and shoulder region was markedly alleviated and movement of head and neck easier. The patient felt the pain in the left heel while walking, but she reported it being less than when she visited the clinic. I told the patient: "Since the muscles stabilizing the ankle joint are now softer, the overall circulation has improved and if the swelling decreases with time, I think the pain will go down too." and instructed her to go home and observe the course.

3. Second treatment session

Day of visit: November 8, 2010, 1 week after the first visit

1) Course

The pain of the foot had disappeared completely by the day following the treatment. It has not recurred until now. The condition of the neck and shoulder regions too is good.

2) Examination

Swelling and reddening of the left heel had disappeared. Tension of lower leg muscle groups had decreased. The tension of the right trapezius muscle had decreased too. In the neck and shoulder region on the left side externally from C7 a dull pain remained, that grew worse upon rotating the neck.

Treatment

The pathologic condition anticipated during the first visit was thought to have improved, but the patient treated to alleviate the remaining mild degree of muscle tension and free the meridians. I added some more acupoints for the purpose of systemic regulation.

Points removed from the first visit regimen.

GB20, Hyakuro, BL57

Newly added treatment points

SP9, induration at BL20, induration at BL21, left BL10

4. Subsequent course

Since the patient lived at a considerable distance

from the clinic another patient commuting to our clinic suggested giving the patient a ride, but for certain reasons that other patient stopped visiting our clinic, so that the appointment made for 2 weeks later was canceled. At that point I inquired by telephone and was told that there were no recurrences and she felt fine. I instructed the patient to visit my clinic again, if the symptoms should recur or other symptoms develop and initiated my follow-up.

5. Discussion

This patient had consulted medical facilities over a period of 3 months without experiencing any improvements, while the pain was markedly relieved by a single acupuncture treatment, which clearly shows the effectiveness of the acupuncture treatment. I discussed that the treatment included meridian therapeutic elements, but it was considered mainly as an attempt at correcting the body's balance anomalies thought to cause local stress and thus led to the development of the symptoms. While the patient presented with the chief complaint of left heel pain during walking, the author considered the usually poor posture and the unbalanced tension of the antigravity muscles as the etiologic factors. These caused heavy strain on one leg, where the muscles groups stabilizing the ankle joint developed an abnormally high tone, so that the shock absorbing properties of the plantar arch decreased, increasing the load on the heel and thus resulted in the development of inflammation. The influence on the nervous innervation and circulation of the heel is not clear, but since the inflammation of the heel became chronic, it therefore probably led to the development of hyperalgesia and at the same time caused the swelling conceivably some compression of the peripheral nerves. Accordingly, improvement of the local muscle tension also improved the mobility of the ankle joint and in conjunction with ensuring the circulation treatment of the neck and shoulder symptoms helped to reduce

the load on the left lower leg. If the patient would have had experience with acupuncture treatment, some additional treatment of the back and lumbar regions to improve the tension of the antigravity muscles in general. In case an imbalance in muscle power were observed, additional treatment to increase muscle power should be considered.

Concepts applicable to this patient showed, that local symptoms apparently relate to the entire body and a generalized unbalance in turn may lead to local manifestations. Moreover, regional symptoms or generalized unbalance may sometimes be triggered by anomalies of internal organs caused by viscerosomatic reflexes. Otherwise stress or other psychologic factors can possibly result in anomalies of the autonomic nervous or endocrine systems. I believe, these concepts do not represent the oriental traditional medical views on pathophysiology, but rather discuss acupuncture treatment as the connection between oriental and western medicine.