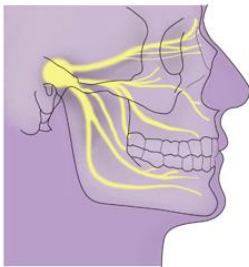


Efficacy of Acupuncture Treatment for Trigeminal Neuralgia

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Abstract:

A 47-year-old Caucasian female has been suffering from TMJ on right side of her face for 3 years. Three years ago, the patient had sudden pain on the right side of her face, which she believed was due to overworking. Initially, it occurred 2-3 times a year, lasting about two weeks each time. Patient occasionally took OTC medication for her pain. Patient stated that her pain disappeared and felt relieved by sweating. Her pain came back a year ago when she dealt with very stressful circumstances at work. Since then, the symptoms gradually increased and the progression in pain increased 4 months ago. 20 acupuncture treatments were performed over a three month period and the pain almost disappeared.



【삼차 신경병증】

Back ground: The trigeminal nerve is the cranial nerve that conveys the sensation and temperature from the face and head to the brain. The pathological changes in the trigeminal nerve are accompanied by facial sensory abnormalities and weakness of the chewing muscles, which is called trigeminal neuropathy¹. When pain is the main symptom, it is called trigeminal neuralgia. Trigeminal neuralgia is a relatively common cranial nerve disease and is a unilateral electric shock or knife-like pain occurring in one or more branches of the trigeminal nerve which occurs in 4.5 per 100,000 population per

year and is relatively common in post-menopausal women. Modern neurosurgical treatment for TGN began in 1925 with the introduction of the concept of vascular compression.²

Cause: The most common cause of generalized trigeminal neuropathy is trauma. When a severe impact is applied to the base of the skull by trauma, the trigeminal nerve passing through the complex base often becomes damaged along with other cranial nerves and related structures. The most common cause of trigeminal neuropathy in infectious diseases is herpes zoster, which may involve the otitis media or petrous bone apex infection spreading to the ganglia or nerve roots to invade the trigeminal nerve and abducens nerve at the same time. Other neuropathy may be caused by the compression of the trigeminal nerve by various tumors of the brain base, or by the pathological change of the cavernous sinus or superior orbital fissure through the trigeminal nerve.

Symptoms: General trigeminal neuropathy begins with a decrease in facial sensation and weakening of chewing muscles. The trigeminal neuralgia is mostly unilateral in the dominant region of the second and third branches of the trigeminal nerve. Severe pain, such as a sharp spike or a knife, suddenly appears as if a strong electric current is present, and the pain persists for a few seconds to a few minutes. The pain is so severe that it cannot be tolerated, causing the face to suddenly flicker. This is called "tic douloureux". Pain can occur spontaneously and can also be caused by speech or chewing food. Also, touching any part of the face can cause pain. These areas are known as trigger points. It may occur in the maxilla and mandibular basin and may be located in a completely different position from the actual pain site. Other sensory functions are usually normal.

Diagnose: Practitioners should be aware of the characteristics of trigeminal neuralgia precisely because they depend on the patient's symptoms and pain patterns, not through objective tests

such as imaging or blood tests. Pain is caused by innocuous stimuli such as eating, watering, frowning, speaking, etc., and the pain of a throbbing pattern occurs along the trigeminal nerve distribution area, and pain duration is from a few seconds to several minutes. If the stimulus disappears, the pain disappears. If practitioners cannot find any anomalies to explain the pain, perform a neurological examination. If head and neck examination is normal and there is no neurological abnormality, trigeminal neuralgia may be suspected if periodic unilateral facial pain complaints of painful stimulation. Differential diagnoses include periodontal infection, sinus disease, otitis media, acute glaucoma, and shingles etc.

Treatments by Western Medicine:

1. Carbamazepine (Tegretol)

- 1) Start with 100mg twice daily and increase to three times a day.
- 2) It can be increased from 100mg / day to 1200mg / day.
- 3) Complete blood count and liver function tests on a regular basis.

2. Additional treatment

phenytoin, baclofen, valproate sodium, lamotrigine and gabapentin.

3. Surgical treatment

- 1) Peripheral approach: Temporary drug infusion at the peripheral branch of the trigeminal nerve and cryotherapy or permanent resection
- 2) Pivotal procedures
 - Percutaneous ganglion destruction: radiofrequency ablation, thermal ablation, glycerol

injection, balloon microcompression.

- Gamma Knife³

Case Presentation

Chief Complaint:

A 47-year-old Caucasian female has been suffering from TMJ on the right side of her face for 3 years, and her symptoms have been more aggravating for the past four months.

Medical History:

Three years ago, the patient had sudden pain on the right side of her face, which she believed was due to overworking. The pain developed in the maxillary and mandibular region and started to spread to her mouth, teeth, as well as the corner of the patient's tongue. Patient said she experienced a stabbing and choppy like pain, which suddenly developed and lasted for a few seconds. The patient stated that this type of pain occurred when she talked, chewed, moved her tongue and brushed her teeth. Initially, it occurred 2-3 times a year, lasting about two weeks each time. Patient took OTC medication for her pain. During the summer, patient stated that her pain disappeared and felt relieved by sweating. Patient mentioned that pain recur about a year ago when she dealt with very stressful condition at work. Since then, the symptoms gradually increased and the progression in pain increased 4 months ago. The symptoms continued 5-10 times a day, every few second to 2 minutes, and the interval of pain gradually became faster. Patient said that she started taking 200 mg of Carbamazepine every day for about a year and gradually increased the dosage to 800 mg. However, the pain was so severe that the patient could

not open her mouth and she only ate a small amount of semi-liquid diet. Patient mentioned that she also had difficulty falling asleep and took 10 ml of diazepam, but still had only 3-4 hours of sleep on average. The effects of the prescription drugs were small, however there were side effects such as weakness, dry nose, lethargy and dizziness due to long - term use of the medication. The doctor recommended surgery to the patient, but the patient decided to take acupuncture treatment.

Past Medical History:

Patient suffered from hepatitis in 2011, and since then she has had constipation once every 2-3 days, and once a week since 2014, so she took laxatives to help her bowl movements.

Diagnose: She was depressed and in pain, unable to speak, and occasionally covered her face with her hand. The pain started from the medial side of the lacrimal gland and extended from the ear to the mouth. Facial muscles and masseter muscle are symmetrical. Pain on the right was slightly more sensitive, corneal reflex was normal, and blood pressure was at 130/85mmHG. The neck was soft and the lymph nodes were normal. The lung, liver, heart and spleen were all normal.

Tongue: Yellow thick coating in lower jiao, red tongue body.

Pulse: Thready and deep on both sides.

Bowl Movement: Once every three days. **Sleep:** Poor

Western diagnosis: Primary Trigeminal neuralgia

TCM diagnosis: Facial pain due to wind attacking the network vessels, especially Yang ming channels.

Treatment principal: Taking the related meridian points and distance points from the face, expel the wind, extinguish internal wind, harmonizes the Qi and Blood, to connect organs and reduce the phlegm heat in the organs.

Points: St 7, insert perpendicularly 1.5 cun. From the Taiyang, insert the needle in the direction of the SJ 21, insert the needle 0.5cun lateral to the Ren Meridian, on the affected side, towards Ren 20 obliquely, LI 4, 20 min. of a 100hz E-stim, connect Taiyang to Ren 20, even method apply.

Progress:

20 acupuncture treatments were performed over a three month period.

At 2nd treatment, the pain intensity was reduced by 20%. The dosage of Carbamazepine can be reduced from four to one pill per night.

At 5th treatment, the pain was reduced by 50% and pancakes could be eaten painlessly at breakfast. However, she said, when talking, the tongue could not be relieved at well.

At 8th treatment, patient stated that she was eating spicy Mexican food, and the pain recurred, her bowels were very constipated. Therefore, the mother point of LI (St 25) is chosen to regulate LI, and St 28 to circulate the San Jiao channel. SJ6 to circulate the San Jiao Qi, Kid 6 for reducing the heat and treat constipation due to Jing ye consumption.

At 12th treatment, patient mentioned having a good daily bowl movement without the use of laxatives. Symptoms of dry nose and heat sensation were improved, facial pain was reduced by 70%, and patient stated that normal eating was better.

At 20th treatment, patient said the pain was almost gone. She said she has no feeling of any pain when she ate, drank and talked, but only a little bit of pressure under her nose was mentioned.

Remark: This case diagnosis was confirmed as Primary Trigeminal Neuralgia due to the characteristic of pain, development of the disease, and diagnosis of a hospital. Modern medicine assumes that this cause is a viral, hereditary, central nervous system disorder, allergy, or physical stimulation of the trigeminal nerve⁴. In Oriental medicine, the trigeminal neuralgia is called a “Facial pain”. This disease is characterized by the involvement of three yang meridians, Yang ming meridians are especially invaded by external wind cold/wind heat. In particular, principle is applied which illustrated, “if circulation is block then the pain and the pain is eliminated by the good circulation method.” In this case, the results were remarkable during the treatments. High-frequency electrical stimulation was performed to communicate Yang Ming channel of the face and then select points were chosen for communication involving the Yang and Yin related organs, also to reduce the heat in the middle jiao.

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