10 Whiplash injury

Whiplash injury, also known as acceleration-deceleration injury or hyperextension-hyperflexion injury, usually occurs as a result of a motor vehicle accident when sudden impact at the front or rear of the vehicle causes the head to jerk backward or forward on the neck without the muscles having time to provide adequate support. Whiplash injury is a common cause of chronic neck pain, although most of those affected usually recover within a few weeks to a few months.

The bodies of adjacent cervical vertebrae are joined by a fibrocartilaginous intervertebral disk, whereas the articular processes are linked by facet joints. Various longitudinal ligaments connect the cervical vertebrae – the anterior and posterior ligaments connect the bodies of the vertebrae, the interspinous ligaments connect the spines of the vertebrae, and the ligamentum nuchae, which extends from the external occipital crest to the 7th cervical vertebrae, is attached to all the cervical spinous processes. It is a very strong triangular elastic fibrous membrane, whereas the interspinous ligaments are thin and weak. The major muscles of the neck involved in rotation, flexion and extension include the sternocleidomastoid, trapezius, splenius capitis, and semispinalis capitis. Any of these structures, which are shown in Figures 10-1 to 10-3, may be damaged by violent movement involving the neck, particularly hyperextension and hyperflexion.

In mild cases of whiplash injury, only ligaments in the neck are sprained, but in more serious cases there may be damage to the vertebrae, intervertebral disks or other cervical structures causing pressure on cervical spinal nerves. In the most severe cases with cervical fracture, quadriplegia or paraplegia may result depending on the vertebrae involved. Under certain predisposing circumstances, prolapse of a cervical intervertebral disk may occur, usually lateral protrusion of the disk between C5 and C6. Damaged disks may undergo progressive degeneration.

Clinical manifestations

- Patients present with a history of vehicular accident or other acute cervical trauma.
- In *mild cases*, there is a gradual increase in pain over 48 hours, followed by persistent pain and discomfort in the neck, aggravated from time to time, and alleviated by rest; neck movement may induce non-radiating local pain.
- A tender point can sometimes be found over the muscles and ligaments in the affected area.
- In *more serious cases*, severe and persistent pain and significant tenderness occur in the cervical vertebral region.

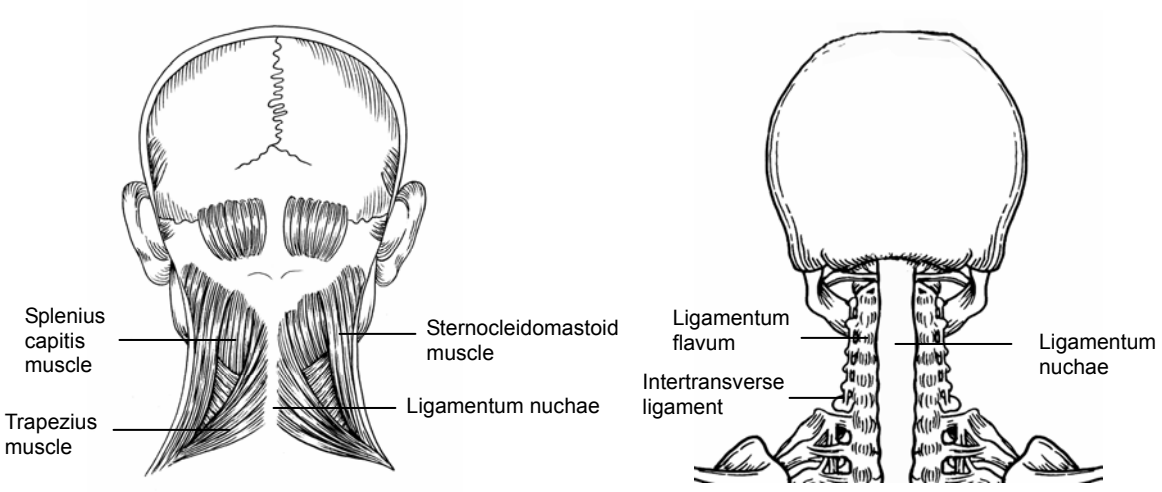

Figure 10-1 Selected muscles and ligaments of the neck

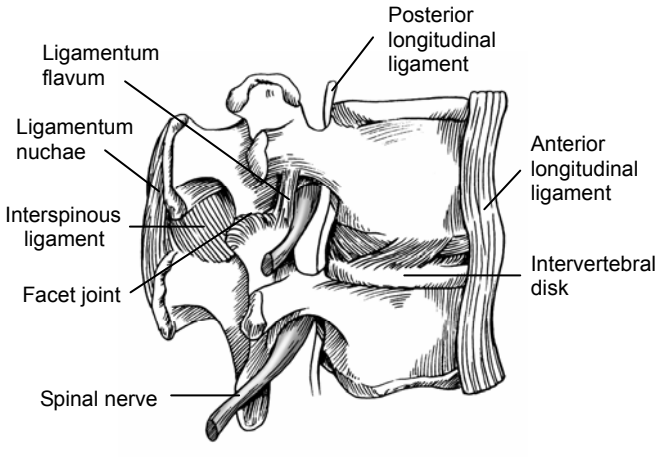

Figure 10-2 Vertebral ligaments

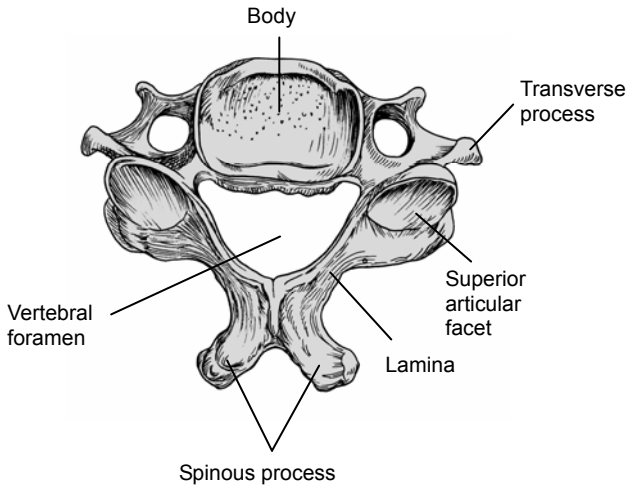

Figure 10-3 A typical cervical vertebra viewed from above

- Voluntary movement or rotation of the head and neck is limited and the patient usually attempts to retain the head and neck in a fixed position; pain is aggravated by flexion and extension of the neck.
- An obvious tender area is generally found in the central region of the back of the neck, with muscular spasm; in chronic cases, thumb palpation may find a hard or calcified mass.
- In patients with *complications of cervical intervertebral disk prolapse*, lower cervical pain may radiate to the ipsilateral shoulder and upper limb with paresthesia along the radial side of the forearm and hand; pain may be aggravated by moving the neck, coughing or sneezing, and sleep may be disturbed.
- A tender point often occurs between the affected spinous processes lateral to the cervical spine.

Etiology and pathology

Based on the location of the disorder and its clinical manifestations, whiplash injury (although a "modern" phenomenon) can be classified in TCM as damage to the neck region (*jing bu shang*), damage to the sinews of the neck and nape (*bo xiang shang jin*) or Bi syndrome pain (*bi tong*).

Its occurrence is primarily related to sudden rapid forward and backward movement of the neck after violent external trauma. External injury not only damages the flesh and sinews, but also affects the channels and network vessels, leading to disturbance of the functions of the Zang-Fu organs and inhibited movement of Qi and Blood, resulting finally in Qi stagnation and Blood stasis. Any external force that violently disturbs the sinews of the neck muscles leads to local Qi stagnation and Blood stasis and abnormal changes in the structure of the sinews and bones. As well as being a primary pathological product, Blood stasis is also a secondary pathology, obstructing the circulation of Qi and Blood in the channels and network vessels, thus depriving the sinews and bones of nourishment and causing further degeneration of the sinews of the neck.

In addition, in patients with depletion and Deficiency of Vital Qi (Zheng Qi), as may occur if other serious injuries were sustained at the time of the accident or where the injuries have taken a long time to heal, Vital Qi is not strong enough to move Qi and Blood properly, thereby causing stasis and stagnation in the Blood vessels.

The Liver and Kidneys are of a common source, indicating that the generation of Liver-Blood and Kidney-Essence is mutually dependent. Depletion of and damage to Kidney-Essence may lead to insufficiency of Liver-Blood and vice versa. Deficiency of Qi and Blood deprives the sinews and flesh in the neck of nourishment. Liver and Kidney Deficiency may be a predisposing factor to neck injury in certain patients involved in an accident and is also likely to occur where the condition persists.

The disorder may be aggravated by invasion of external pathogenic Wind-Cold-Damp, which obstructs the channels and vessels and inhibits movement of Qi and Blood, leading to lack of nourishment of the sinews and vessels and causing pain, stiffness and a heavy sensation in the neck and shoulders.

Pattern identification

Qi stagnation and Blood stasis

Main symptoms

Obvious history of trauma following violent movement of the neck, with pain rarely felt at the time of the injury, but gradually increasing in intensity during the subsequent 48 hours, followed by severe persistent pain at a

fixed location in the neck, possibly radiating to the ipsilateral shoulder and arm, pain aggravated by pressure, swelling of the involved area, contracture of the neck muscles, and inability to move the neck freely; a fixed tender point can usually be found at the nape. The tongue is dark with stasis marks and the pulse is deep and tight.

Treatment principle

Move Qi and eliminate Blood stasis, free the network vessels and relieve pain.

Point prescription (affected side)

Tender points (located 0.5 cun lateral to the midline of the involved cervical vertebrae), Luojing (located at the midpoint of the line connecting SI-17 Tianrong and SI-16 Tianchuang on the upper part of the sternocleido-mastoid muscle, see Figure 10-5), BL-10 Tianzhu, GB-20 Fengchi, SI-15 Jianzhongshu, SI-11 Tianzong, SI-3 Houxi, GB-39 Xuanzhong, and BL-60 Kunlun.

Explanation

- Taiyang channel points BL-10 Tianzhu, SI-11 Tianzong and SI-15 Jianzhongshu dredge the channels and free the network vessels to relieve pain.
- GB-20 Fengchi and GB-39 Xuanzhong soothe the sinews and invigorate the network vessels, move Qi and free the Blood to relieve pain.
- Application of the reducing method at BL-60 Kunlun and SI-3 Houxi moves Qi in the Taiyang channel and, when combined with the points in the tender area, eliminates Blood stasis, soothes the sinews and invigorates the network vessels to relieve pain in the neck, shoulder and arm.
- Luojing frees the channels and invigorates the Blood to relieve pain in the neck.

Liver and Kidney Deficiency

Main symptoms

Difficulty in moving the neck backward, forward or to the side, persistent aching, pain and stiffness of the neck usually relieved by massage, numbness in one or both shoulders, arms and hands, and extensive tenderness at the back of the neck. Accompanying symptoms and signs include dizziness, blurred vision, tinnitus, poor memory, insomnia, aching in the lower back and knees, lassitude, night sweating, a red tongue with a scant coating, and a thready and rapid pulse.

Treatment principle

Supplement Liver and Kidney Qi and strengthen the sinews and bones to relieve pain.

Point prescription

Tender points (located 0.5 cun lateral to the midline of the involved cervical vertebrae), GB-20 Fengchi, BL-10 Tianzhu, SI-15 Jianzhongshu, SI-11 Tianzong, and GB-39 Xuanzhong (affected side); BL-18 Ganshu and BL-23 Shenshu (bilateral)

Explanation

- Taiyang channel points BL-10 Tianzhu, SI-11 Tianzong and SI-15 Jianzhongshu dredge the channels and free the network vessels to relieve pain.
- GB-20 Fengchi and GB-39 Xuanzhong soothe the sinews and invigorate the network vessels, move Qi and free the Blood to relieve pain.
- Tender points soothe the sinews and invigorate the Blood to relieve pain.
- BL-18 Ganshu and BL-23 Shenshu supplement Liver and Kidney Qi to strengthen the sinews and bones.

Invasion of pathogenic Wind-Cold-Damp

Main symptoms

This type is characterized by discomfort, stiffness and pain in the nape of the neck, possibly with numbness and a heavy sensation in the shoulders and upper limbs; these symptoms, which fluctuate in intensity, may be aggravated by exposure to cold and alleviated by massage and sometimes by exposure to warmth. The tongue is pale with a white coating and the pulse is floating and slow or floating and tight.

Treatment principle

Dispel Wind, dissipate Cold and eliminate Dampness, invigorate the Blood and free the network vessels to relieve pain.

Point prescription (affected side)

Tender points (located 0.5 cun lateral to the midline of the involved cervical vertebrae), GB-20 Fengchi, BL-10 Tianzhu, GV-14 Dazhui, GB-21 Jianjing, SI-15 Jianzhongshu, SI-11 Tianzong, SI-3 Houxi, GB-39 Xuanzhong, and BL-60 Kunlun.

Explanation

- Taiyang channel points BL-10 Tianzhu, SI-11 Tianzong and SI-15 Jianzhongshu dredge the channels and free the network vessels, and diffuse and dissipate pathogenic Cold to relieve pain.
- GB-20 Fengchi and GB-39 Xuanzhong soothe the sinews and invigorate the network vessels, move Qi and invigorate the Blood to relieve pain.
- GV-14 Dazhui and SI-3 Houxi regulate the Governor Vessel and free Yang Qi to dissipate pathogenic Wind-Cold.
- Combining affected channel point BL-60 Kunlun with BL-10 Tianzhu and applying cupping therapy warms the channels and dissipates Cold-Damp, soothes the sinews and invigorates the network vessels.

- Tender points invigorate the Blood and free the network vessels locally to relieve pain.
- GB-21 Jianjing dispels Wind to relieve pain.

Treatment

Points and techniques

Combination of points	Needles used	Insertion technique	Needling sensation
GB-20 Fengchi (Figure 10-4)	No. 30 filiform needle, 50mm in length	Medial oblique insertion toward the spine for 1.0-1.3 cun (Plate 36)*	Distending pain in the neck and/or pain radiating toward the ipsilateral occipital and parietal regions
BL-10 Tianzhu (Figure 10-4)	No. 30 filiform needle, 40mm in length	Perpendicular insertion to a depth of 0.5-1.0 cun (Plate 30)†	Local distending pain
Tender point(s) (Figure 10-4)	No. 30 filiform needles, 25mm in length	Oblique insertion for 0.3-0.5 cun toward the body of the cervical vertebra(e) involved (Plate 36)	Local distending pain, radiating to the ipsilateral 3rd thoracic vertebra
GV-14 Dazhui (Figure 10-4)	No. 30 filiform needle, 40mm in length	Perpendicular-oblique superior insertion for 0.5-1.0 cun (Plate 35)‡	Local distending pain
Luojing (Figure 10-5)	No. 30 filiform needle, 25mm in length	Perpendicular slightly posterior insertion toward the spine for 0.5-0.8 cun (Plate 21)	Distending pain in the neck
BL-18 Ganshu (Figure 10-7)	Two no. 30 filiform needles, 40mm in length	Medial oblique insertion toward the spine for 0.5-1.0 cun (Plate 54) §	Local distending pain
BL-23 Shenshu (Figure 10-7)	Two no. 30 filiform needles, 50mm in length	Perpendicular insertion to a depth of 1.0-1.5 cun (Plate 61) ¶	Local distending pain or pain radiating to the ipsilateral buttock or popliteal region
SI-15 Jianzhongshu (Figure 10-6)	No. 30 filiform needle, 40mm in length	Medial oblique insertion toward the spine for about 1.0 cun (Plate 67) #	Local distending pain
GB-21 Jianjing (Figure 10-6)	No. 30 filiform needle, 25mm in length	Oblique posterior insertion for about 1.0 cun toward the spine of the scapula (Plate 67) ††	Local distending pain in the neck
SI-11 Tianzong (Figure 10-6)	No. 30 filiform needle, 50mm in length	Perpendicular-oblique insertion toward the spine of the scapula for 1.0-1.5 cun (Plate 76)	Local distending pain or pain radiating to the elbow along the middle of the upper arm
SI-3 Houxi	No. 30 filiform needle, 50mm in length	With the fist lightly clenched, perpendicular insertion for 1.0-1.5 cun toward LI-4 Hegu (Plate 99)	Local distending pain
GB-39 Xuanzhong	No. 30 filiform needle, 40mm in length	Perpendicular insertion to a depth of about 1.0 cun (Plate 122)	Local distending pain
BL-60 Kunlun	No. 30 filiform needle, 40mm in length	Perpendicular insertion to a depth of 0.5-1.0 cun (Plate 129)	Distending pain in the heel and/or pain radiating to the dorsum of the foot

* Deep superior insertion may damage the upper spinal cord or the lower part of the medulla oblongata.
† Deep medial superior insertion may damage the medulla oblongata.
‡ Deep perpendicular needling is contraindicated, since the spinal canal may lie as near as 1.25 cun to the skin surface.
§ Perpendicular insertion is contraindicated to avoid causing pneumothorax.
¶ Deep perpendicular insertion may damage the kidneys.
# Deep inferior insertion carries a risk of inducing pneumothorax, especially in thin individuals.
†† Deep perpendicular or anterior medial oblique insertion is contraindicated to avoid causing pneumothorax.

Method

- Patient position: seated.
- For the *Qi stagnation and Blood stasis pattern*, apply the reducing method at all the points.
- For the *Liver and Kidney Deficiency pattern*, apply the reinforcing method at BL-18 Ganshu and BL-23 Shenshu and the even method at the other points.

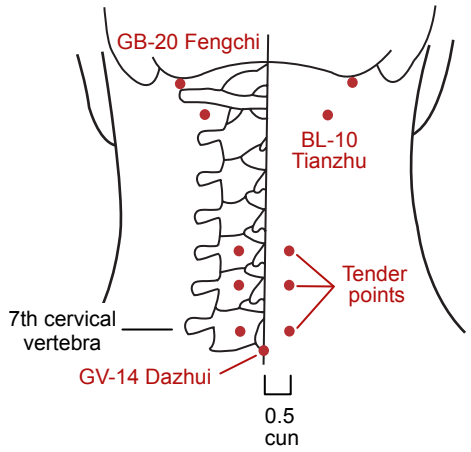

Figure 10-4

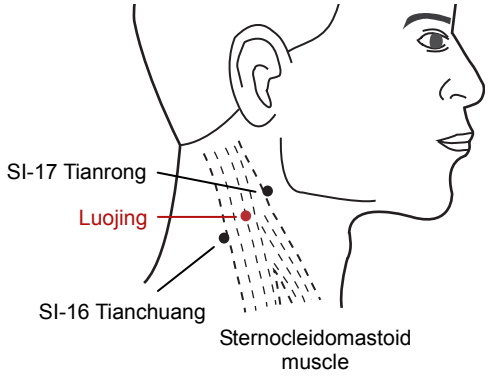

Figure 10-5

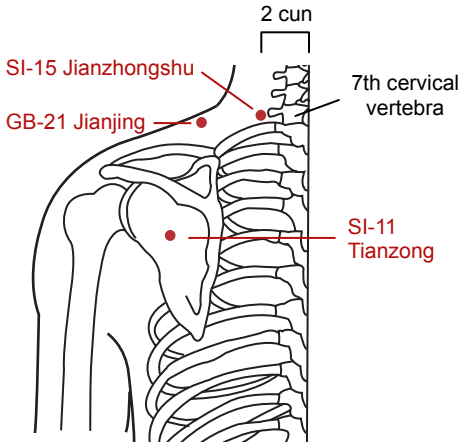

Figure 10-6

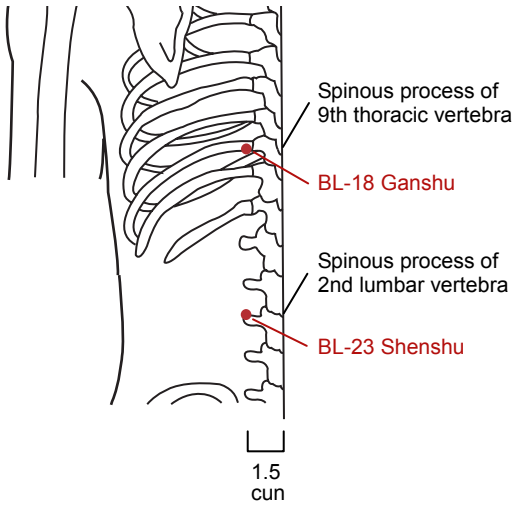

Figure 10-7

- For the *Wind-Cold-Damp pattern*, apply the even method at all the points.
- For all the patterns, retain the needles for 40 minutes; after withdrawing the needles, apply cupping therapy for one minute.
- Acupuncture should be performed once a day on consecutive days; one course of treatment consists of six sessions for mild cases and ten sessions for more serious cases.
- An interval of three to five days is required between two courses of treatment. Discontinue the treatment if there is no significant improvement.

Clinical notes

In acute cases, the duration of treatment depends on the severity of the initial damage. Although mild cases of whiplash injury usually respond relatively rapidly to acupuncture treatment, more serious cases are likely to require two or more courses of treatment to relieve the symptoms. After the initial injury, the neck should be immobilized in a soft cervical collar until inflammation is controlled. Acupuncture treatment can then be combined with acupressure at GB-20 Fengchi, GV-14 Dazhui, GB-21 Jianjing, and SI-11 Tianzong or with physical therapy (physiotherapy).

If the condition has become chronic or is complicated by prolapse or degeneration of a cervical intervertebral disk, acupuncture has a satisfactory effect in alleviating the symptoms. It can also be used after traction on the intervertebral disks to relieve residual symptoms and enhance recovery.

Patients should be advised to maintain a proper neck posture, to avoid fatigue, not to sleep on a pillow that is too high, and to keep the neck warm and prevent exposure to wind, cold or damp. In addition, once the pain has been alleviated, exercises to strengthen the cervical muscles can help to prevent relapse.

97 Trigeminal neuralgia

The trigeminal nerve, the fifth and largest cranial nerve, arises from cells in the pons, mid-brain and trigeminal ganglion, where the nerve splits into three divisions – the ophthalmic, maxillary and mandibular nerves, which in turn subdivide into a number of branches (see Figure 97-1).

The sensory fibers of these three divisions innervate the skin of the face and scalp (see Figure 97-2), the conjunctiva, the auricle, the tongue, the gums, and the mucous membranes of the nose and mouth, while the motor fibers of the mandibular nerve supply the muscles involved in mastication. The trigeminal nerve, particularly its ophthalmic division, is a common location of herpes zoster.

Trigeminal neuralgia (also known as tic douloureux) is a recurrent spasmodic facial pain syndrome of unknown cause that develops in middle to late life. In many instances, it is believed that the traumatic formation of a short circuit between the demyelinated fibers of the sensory root of the trigeminal ganglion and its adjacent motor axons may cause the disorder. Instances of arteriosclerotic change or displacement of the nutrient artery of the nerve, thickening of the meninges, and microvascular compression of the nerve are considered as other etiologic factors.

This disorder may also be triggered by lesions of the trigeminal nerve or pathological changes of adjacent tissue damaging or compressing the nerve, such as tumors, inflammation or trauma of the ear, nose or teeth or other areas along the distribution of the nerve; other local symptoms may also be evident.

Clinical manifestations

- Trigeminal neuralgia occurs more often after middle age without marked gender predilection.
- The condition is usually unilateral, mainly involves the maxillary and mandibular nerves, and seldom involves all three divisions of the nerve simultaneously.

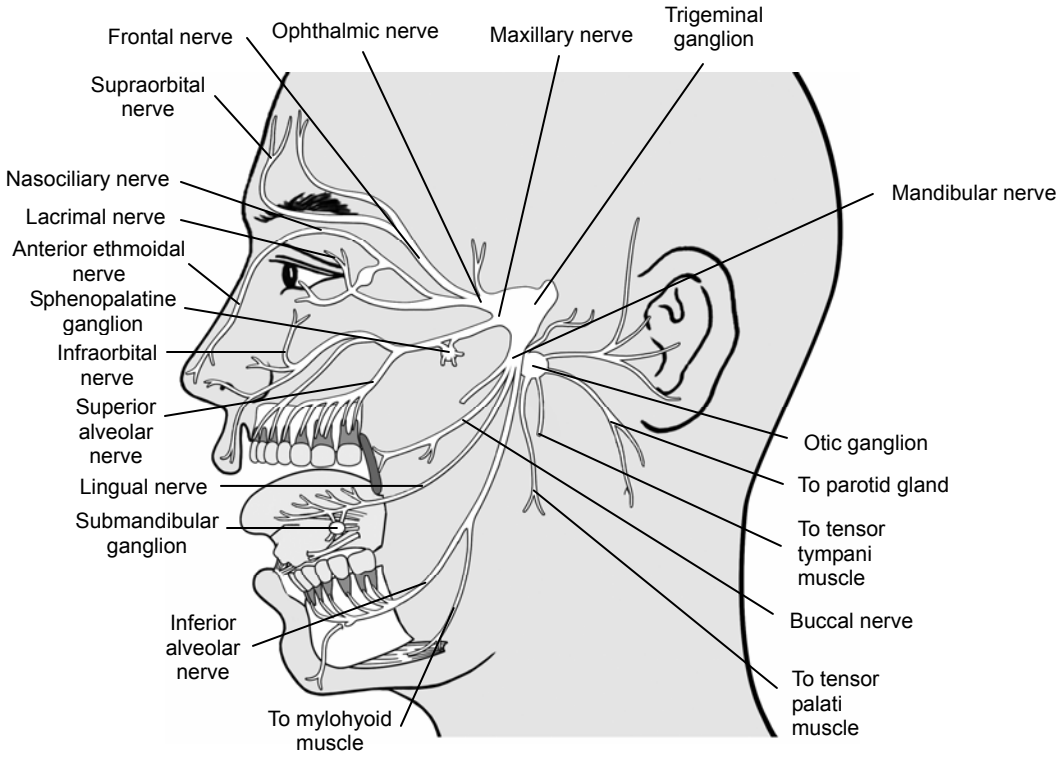

Figure 97-1 Distribution of the trigeminal nerve and its ophthalmic, maxillary and mandibular divisions

- Sudden pain is experienced without predisposing symptoms.
- Mild stimulation of a key trigger point around the cheek, nose or mouth by touch, a cold wind, talking, or eating may elicit excruciating pain.
- Recurrent piercing and lightning-like bouts of pain occur in the region along the nerve, with short episodes of a few seconds or one to two minutes and accompanied by reflex convulsion of facial muscles, facial flushes, conjunctival suffusion, lacrimation, and salivation.
- Occurrence during sleep is rare.
- Pain abates spontaneously and pain-free intervals may last for minutes to several weeks; long-term spontaneous remission is rare.
- In secondary trigeminal neuralgia, the pain will disappear once the disease focus is eliminated; other local symptoms may include facial infection, depression of corneal reflex, hearing loss, or abducent paralysis.

Etiology and pathology

In Chinese medicine, trigeminal neuralgia can be classified as cheek pain (*jia tong*), facial pain (*mian tong*), wandering facial Wind [pain] (*mian you feng*), or alveolar Wind [pain] (*chi cao feng*). When pathogenic Wind, Cold or Fire attack the three Yang channels in the face, they can rise to the top of the head. Only Wind can reach everywhere and it is easy for it to invade the face and head; Cold is a Yin pathogenic factor and is congealing and stagnating in nature; Fire can flame upward along the channels to congest the Yang channels in the face and obstruct the functional activities of Qi. When Qi and Blood are impeded by these pathogenic factors, facial pain will result.

The face is the meeting-place of all the Yang channels, the sinews of the foot Yang channels (the Stomach, Bladder and Gallbladder channels) bind at the cheek and the sinews of the hand Yang channels (the Large Intestine, Small Intestine and Triple Burner channels) meet on the side of the head. When the Spleen is Deficient, Phlegm is generated; repeated attack by Wind-Heat or Wind-Cold results in pathogenic Wind binding with Phlegm to obstruct the channels and network vessels, and when movement is obstructed, pain will occur (in this condition, affecting the sinews of the face). Wind is a Yang pathogenic factor, moving swiftly and changing frequently and when it is complicated by Phlegm, Wind-Phlegm is constantly accumulating and dissipating, resulting in intermittent pain.

In addition, emotional damage affecting the Liver disturbs the Liver's function of ensuring the orderly movement of Qi, with Qi Depression then transforming into Fire and Liver-Fire attacking upward to cause facial pain.

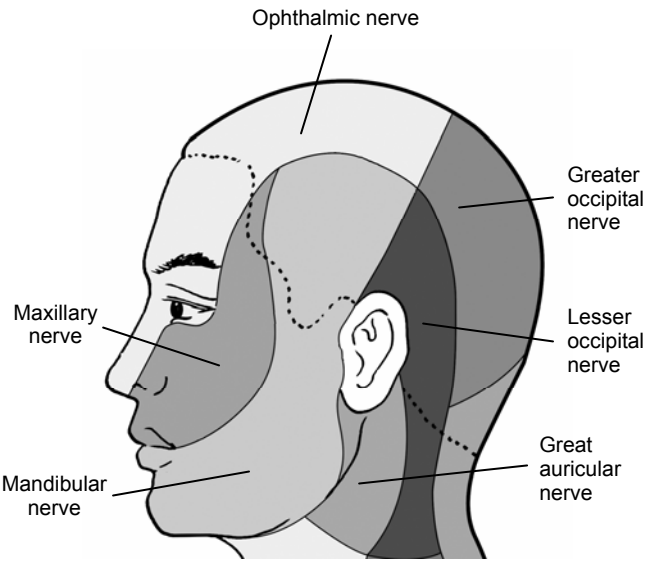

Figure 97-2 Innervation of the skin of the head and neck

In an enduring illness, Qi and Blood are depleted and Body Fluids are consumed to result in Yin Deficiency and Yang hyperactivity; disease pathogens can then enter the Blood and network vessels to cause Qi stagnation and Blood stasis, subsequently leading to facial pain.

Pattern identification

Wind-Cold obstructing the network vessels

Main symptoms

Intense, paroxysmal, stabbing or piercing unilateral pain, aggravated by exposure to cold and alleviated by exposure to heat; pain is also often triggered by exposing the face to cold and the painful area cannot be touched. The tongue coating is thin and white, the pulse is floating and tight.

Treatment principle

Dispel Wind and dissipate Cold, free the channels and relieve pain.

Point prescription (affected side)

EX-HN-5 Taiyang, ST-2 Sibai, ST-7 Xiaguan, and LI-4 Hegu.

Explanation

- ST-2 Sibai, EX-HN-5 Taiyang and ST-7 Xiaguan are selected as adjacent points to dredge the channels and network vessels of the face and free the movement of Qi and Blood.
- LI-4 Hegu, the *yuan*-source point of the Large Intestine channel, assists these points by dispelling Wind and dissipating Cold to release the exterior, and freeing the channels and invigorating the Blood to alleviate pain.

Exuberant Fire in the Yangming channel

Main symptoms

Intense paroxysmal burning or scorching pain in the face, worse on exposure to wind or heat; accompanying symptoms include thirst, bad breath, irritability, restlessness and irascibility, constipation, reddish urine, a yellow and dryish tongue coating, and a surging and large or slippery and rapid pulse.

Treatment principle

Clear Heat and drain Fire from Yangming, dispel Wind and free the network vessels to alleviate facial pain.

Point prescription (affected side)

EX-HN-5 Taiyang, ST-2 Sibai, ST-7 Xiaguan, ST-6 Jiache, LI-4 Hegu, and ST-36 Zusanli.

Explanation

- EX-HN-5 Taiyang, ST-2 Sibai and ST-7 Xiaguan are selected as adjacent points to dredge the channels and network vessels of the face and regulate the movement of Qi and Blood.
- Application of the reducing method at Yangming channel points LI-4 Hegu, ST-6 Jiache and ST-36 Zusanli bears Heat and Fire downward and frees the Stomach channel.

Qi Deficiency and Blood stasis

Main symptoms

Constantly-recurring intense stabbing or piercing facial pain lasting for several minutes in each episode and occurring at the same location each time; the pain is sometimes paroxysmal. Accompanying symptoms and signs include aversion to wind, spontaneous sweating, shortness of breath, reluctance to speak, speaking in a low and faint voice, a dull complexion, a pale white tongue, possibly with stasis spots or marks, and a thready and weak pulse.

Treatment principle

Supplement Qi and invigorate the Blood, transform stasis and free the network vessels.

Point prescription

EX-HN-5 Taiyang, ST-2 Sibai, ST-7 Xiaguan, ST-4 Dicang, and ST-6 Jiache (all on the affected side); LI-4 Hegu, ST-36 Zusanli and SP-6 Sanyinjiao (all bilateral).

Explanation

- EX-HN-5 Taiyang, ST-2 Sibai, ST-7 Xiaguan, ST-4 Dicang, and ST-6 Jiache are selected as adjacent points to dredge the channels and network vessels of the face and regulate the movement of Qi and Blood; once movement in the channels is free, pain can be relieved.
- LI-4 Hegu, the *yuan*-source point of the Large Intestine channel, assists these points by freeing the channels and invigorating the Blood to alleviate pain.
- ST-36 Zusanli and SP-6 Sanyinjiao fortify the Spleen and supplement Qi.

Liver Depression transforming into Fire

Main symptoms

Scorching heat and pain in the face, generally precipitated by emotional factors and aggravated by heat. Accompanying symptoms and signs include a bitter taste in the mouth, dry throat, irritability and irascibility, oppression in the chest, fullness in the hypochondrium, frequent sighing, disturbed sleep, yellow or reddish urine, constipation, a red tongue with a dry yellow coating, and a wiry and rapid pulse.

Treatment principle

Clear the Liver and drain Fire, free the channels and relieve pain.

Point prescription

ST-2 Sibai, ST-7 Xiaguan, ST-4 Dicang, and ST-6 Jiache (all on the affected side); LI-4 Hegu and LR-3 Taichong (both bilateral).

Explanation

- ST-2 Sibai, ST-7 Xiaguan, ST-4 Dicang, and ST-6 Jiache are selected as adjacent points to dredge the channels and network vessels of the face and regulate the movement of Qi and Blood.
- LI-4 Hegu, the *yuan*-source point of the Large Intestine channel, which is a key point for relieving pain throughout the body and in particular facial pain, assists these points by freeing the channels and invigorating the Blood to alleviate pain.
- LR-3 Taichong, the *yuan*-source point of the Liver channel which ascends to reach the face, regulates the Blood and relieves pain in the face, clears Heat and drains Fire in the Liver.
- The combination of bilateral LI-4 Hegu and LR-3 Taichong, located in the upper and lower body respectively, is known as the four gates; it has the function of regulating Qi and Blood and dredging and freeing the channels and network vessels to relieve pain.

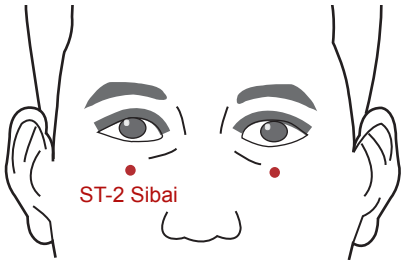

Figure 97-3

Treatment

Points and techniques

Combination of points	Needles used	Insertion technique	Needling sensation
ST-2 Sibai (Figure 97-3)	No. 30 filiform needle, 25mm in length	Perpendicular insertion along the infra-orbital foramen to a depth of 0.3-0.5 cun (Plate 7)*	Local distending pain
EX-HN-5 Taiyang (Figure 97-4)	No. 30 filiform needle, 40mm in length	Transverse inferior insertion toward ST-6 Jiache for 1.0-1.3 cun (Plate 14)	Local distending pain
ST-7 Xiaguan (Figure 97-4)	No. 30 filiform needle, 25mm in length	Perpendicular insertion along the articular cleft to a depth of 0.3-0.5 cun (Plate 15)	Distending pain around the temporomandibular joint
ST-4 Dicang (Figure 97-4)	No. 30 filiform needle, 50 mm in length	Transverse insertion toward ST-6 Jiache for 1.5-1.8 cun (Plate 14)	Local distending pain
ST-6 Jiache (Figure 97-4)	No. 30 filiform needle, 50mm in length	Transverse insertion toward the tip of the nose for 1.0-1.5 cun (Plate 14)	Local distending pain
LI-4 Hegu	No. 30 filiform needle(s), 50mm in length	Perpendicular insertion to a depth of 1.0-1.5 cun toward SI-3 Houxi (Plate 95)	Distending pain in the palm
ST-36 Zusanli	No. 30 filiform needle(s), 50mm in length	Perpendicular insertion to a depth of 1.5-1.8 cun	Local distending pain and/or pain radiating to the dorsum of the foot
SP-6 Sanyinjiao	Two no. 30 filiform needles, 50mm in length	Perpendicular insertion to a depth of 1.0-1.5 cun toward GB-39 Xuanzhong	Local distending pain and/or pain radiating to the sole of the foot and the knee
LR-3 Taichong	Two no. 30 filiform needles, 40mm in length	Perpendicular-oblique proximal insertion for about 1.0 cun (Plate 130)	Local distending pain

* Deep insertion along the infra-orbital foramen may damage the eyeball.

Method

- Patient position: seated or supine.

Wind-Cold obstructing the network vessels

- Apply the even method at all four points.
- Retain the needles for 40 minutes; during retention, needle manipulation is repeated once at all the points for 1-2 minutes.

Exuberant Fire in the Yangming channel

- Apply the reducing method at all six points.
- Retain the needles for 40 minutes, with no manipulation during retention.

Qi Deficiency and Blood stasis

- Apply the even method at EX-HN-5 Taiyang, ST-2 Sibai, ST-7 Xiaguan, ST-6 Jiache, ST-4 Dicang, and LI-4 Hegu and the reinforcing method at ST-36 Zusanli and SP-6 Sanyinjiao.
- Retain the needles for 40 minutes, with no manipulation during retention.

Liver Depression transforming into Fire

- Apply the even method at ST-2 Sibai, ST-7 Xiaguan, ST-6 Jiache, ST-4 Dicang, and LI-4 Hegu and the reducing method at LR-3 Taichong.

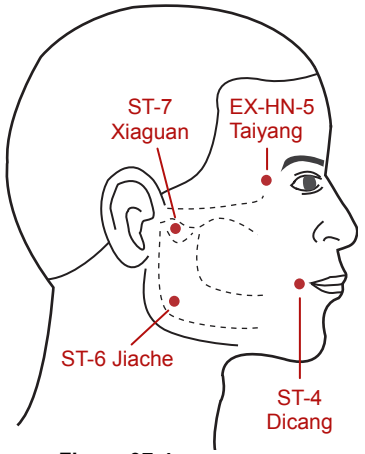

Figure 97-4

- Retain the needles for 40 minutes; during retention, needle manipulation as stated above is repeated once at all the points for 1-2 minutes.
- For all patterns, acupuncture is performed once a day for ten consecutive days (one course of treatment).
- Recommence the treatment after an interval of five days, if necessary. Discontinue the treatment if there is no significant improvement.

Addendum: Retention of intradermal needle at tender point(s)

- Select one or two tender or trigger points in the area of distribution of the trigeminal nerve and insert one or two sterilized skin needles in the center of the point after routine disinfection of the skin.
- Keep the needle in the subcutaneous tissue for two to three days and protect the needle puncture with an alcohol-steeped cotton ball the size of the external needle shaft ring; the ball is kept in place by an adhesive plaster. If this treatment is effective, repeat the procedure after an interval of one day until a cure is obtained.

Case histories

Case 1

Patient

Female, aged 52.

Main complaint

Pain in the left side of the face for ten days.

Clinical history and manifestations

Three weeks ago, the patient caught a cold and two days after the symptoms disappeared, she suddenly felt pain in the left side of her face and lips. The pain was episodic, but increased in intensity as time passed. Her local hospital diagnosed trigeminal neuralgia (of the mandibular division) and prescribed painkillers. However, as soon as she stopped taking the medication, the pain worsened; she was referred for acupuncture.

At the consultation, the patient was experiencing bouts of excruciating piercing, stabbing and scorching pain at the left lower lip, where obvious tender points could be found; pain at the left upper lip was not as intense. The paroxysmal pain occurred once every ten minutes, lasting for five minutes each time before four to five pain-free minutes followed by another bout. Pain was aggravated by touching the affected area and when opening or closing the mouth and chewing; the patient spoke in a low and faint voice and would not speak loudly for fear of precipitating an episode. The patient found it difficult to fall asleep because of the pain. Accompanying symptoms and signs included tinnitus, pain in the left temporomandibular joint (the patient had a history of this type of disorder), poor appetite, reddish urine, slight constipation, a yellow tongue coating, and a tight and rapid pulse.

Pattern identification

Exuberant Fire in the Yangming channel.

Point prescription

LI-20 Yingxiang (see Figure 97-5), CV-24 Chengjiang (see Figure 97-5), ST-4 Dicang, ST-7 Xiaguan, TB-17 Yifeng, and tender points on the upper and lower lips (affected side); TB-5 Waiguan and LI-4 Hegu (bilateral).

Method and outcome

- The needles were inserted quickly without stimulation. The reducing method was then applied to obtain Qi, with the patient feeling a cool sensation in the tender areas at the lips. As a result of the frequent recurrence of the pain, the needles were retained at the first session for one hour, with manipulation every time that the pain recurred.
- At the second session, the patient told us that her pain was not as excruciating as before and the interval between bouts had increased to 20-30 minutes. The same treatment method was applied.
- By the sixth session, there was an interval of three hours between bouts of pain and the pain was more bearable. However, opening the mouth wide or chewing hard would bring on an attack.
- By the tenth session, the pain was only occurring twice a day, was much less intense than before and was less likely to be triggered by opening or closing the mouth.
- After 15 sessions, the pain had disappeared and the patient could move her mouth and chew normally. At a follow-up visit six months later, the patient reported no further recurrence.

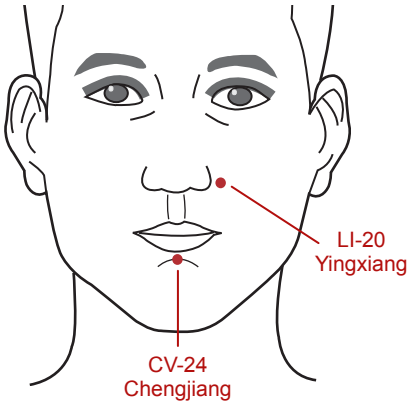

Figure 97-5

Case 2

Patient

Male, aged 51.

Main complaint

Pain in the right side of the face intermittently for two years, exacerbated in the last week.

Clinical history and manifestations

Originally, an irregular lifestyle and dietary habits led to aching and discomfort in the patient's right teeth in the region of the lower right molars. One day, when eating lunch, he suddenly felt intense lightning-like pain shooting from his right gum to the right side of his face; he could not open his mouth or wash his face. The pain would be triggered by cold or heat, with each attack usually lasting for 2-3 minutes but longer in more severe episodes. The stomatology department of his local hospital diagnosed his condition as trigeminal neuralgia. Alcohol injection into the nerve branches reduced the pain and the frequency of attacks, which generally occurred three to five times a month and were controlled by oral administration of phenytoin. Seven days ago, the patient was exposed to cold when tired after overwork and the pain recurred with

lightning-like piercing pain in the right cheek. After admission to our hospital, the pain did not respond to Western medication and the patient was referred for acupuncture.

At the consultation, a tender area could be found at the angle of the right mandible, sensitivity to pain in the right side of the patient's face was reduced, his throat was red, and his tonsils swollen. His tongue was pale with a white and greasy coating and his pulse was rough.

Pattern identification

Qi stagnation and Blood stasis due to invasion of pathogenic Wind

After suffering from this condition for a long time, Vital Qi (Zheng Qi) had become debilitated, Qi and Blood were insufficient and Defensive Qi (Wei Qi) was not consolidated, thereby allowing pathogenic factors to invade and penetrate into the interior to reach the Blood vessels, obstruct the movement of Qi and Blood and block the channels and network vessels to cause pain in the cheek.

Treatment principle

Dredge Wind and free the network vessels, invigorate the Blood and transform stasis.

Point prescription

ST-2 Sibai, ST-7 Xiaguan, ST-4 Dicang, ST-6 Jiache, GB-20 Fengchi, and LI-4 Hegu (all on the affected side).

Method and outcome

- At the first session, the even method was applied at all the points, the needles were retained for one hour and cupping therapy was applied at ST-6 Jiache and ST-7 Xiaguan after the needles were withdrawn. Since the patient was hospitalized, it was possible to carry out two sessions of acupuncture per day with the same point prescription.
- After one week, piercing pain in the right cheek had improved significantly, attacks were shorter and there was a longer interval between attacks. Acupuncture was given once a day from then on.
- After three weeks, the pain had disappeared and the patient could be discharged. Six month follow-up indicated no further recurrence.

Clinical notes

Trigeminal neuralgia is an obstinate condition to treat and recurrence rates are high after initial recovery. As the first choice for non-surgical treatment, acupuncture can have a satisfactory effect in mild cases at an early stage (see Case 1 above), but in more obstinate cases with frequent daily attacks, it is less likely to be so effective and will require a longer course of treatment (see Case 2 above). The point prescription may be modified to take account of the areas most affected by the pain.

In our experience, trigeminal neuralgia in the maxillary or mandibular divisions of the nerve occurring subsequent to dental problems usually responds well to acupuncture, whereas intradermal needles inserted into tender areas are effective for neuralgia of the ophthalmic division. However, conditions involving both the ophthalmic and maxillary or the ophthalmic and mandibular divisions or cases of longer duration are more difficult to treat and acupuncture may need to be combined with referral for alcohol injection into the trigeminal ganglion or other Western medication.

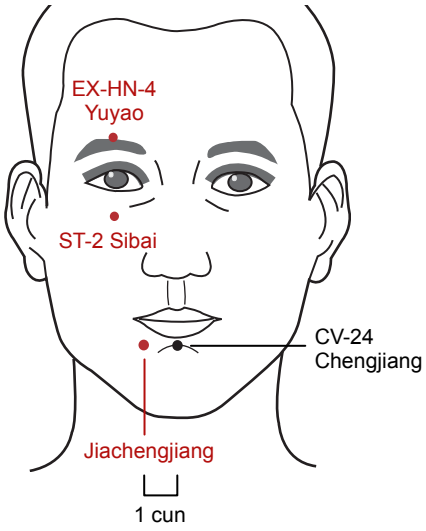

Figure 97-6

As an alternative if distinctive pattern identification is difficult, we sometimes adopt the method formulated by Dr. Ge Shuhan from Shenyang Air Force Hospital, who advocates stimulating a point on the affected nerve or nerves to treat primary trigeminal neuralgia (Figure 97-6):

- For neuralgia of the ophthalmic division, needle obliquely inferiorly at EX-HN-4 Yuyao (in the middle of the eyebrow, directly above the pupil when looking straight ahead) on the affected side for 0.3-0.5 cun and retain the needles for 20 minutes. A needling sensation of distending pain or an electric shock-like sensation is experienced.
- For neuralgia of the maxillary division, needle obliquely superiorly (at an angle of 45°) at ST-2 Sibai on the affected side for 0.5 cun; after the patient experiences an electric shock-like sensation extending to the upper lip, gently lift and thrust the needle 10-20 times, then retain the needle for 20 minutes.
- For neuralgia of the mandibular division or the maxillary and mandibular divisions, needle ST-7 Xiaguan on the affected side to a depth of 1.5 cun; after the patient experiences an electric shock-like sensation extending to the tongue or mandible, gently lift and thrust the needle 10-20 times, then retain the needle for 20 minutes. If the required effect is not achieved, combine with needling of Jiachengjiang (located 1 cun lateral to CV-24 Chengjiang), inserting the needle obliquely (at an angle of 30°) and inferiorly for 0.3 cun; after the patient experiences an electric

shock-like sensation extending to the lower lip, retain the needle for 20 minutes.

For all these methods, acupuncture treatment should take place daily for a course of ten sessions, with five days between courses. Obtaining the needling sensation is vital to the success of the treatment; if it cannot be obtained or the patient feels that it is too painful, the treatment will not be successful.

In the author's experience, the pain will improve after one course and will be significantly alleviated after two courses, but three to four courses will normally be required for full pain relief. Some patients will give up after two courses, but the pain will recur in many of these cases.

If the above methods are still unsatisfactory, the patient should be referred to a Western medical specialist for consideration of surgical measures such as trigeminal rhizotomy.

For trigeminal neuralgia with a clear underlying cause such as tumor or intracranial hypertension, the first measure is to deal with the primary cause. Thereafter, residual trigeminal neuralgia can be treated by acupuncture and relatively satisfactory therapeutic effects obtained.