

Brief introduction to Professor Gao Wei-bin's needling technique of 'Ten Acupuncture Skills'

高维滨教授“针刺十绝”针法简介

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Abstract

'Ten Acupuncture Skills' refers to ten types of needling techniques for difficult and intractable neurological diseases. It has been summarized by Prof. Gao Wei-bin, a famous traditional Chinese medicine expert in China, based upon his clinical experience for years, including neck acupuncture for bulbar palsy, neck acupuncture for laryngeal muscular paralysis, stuck needling technique for ocular muscular paralysis, electric field therapy at Jiaji (EX-B 2) points for incomplete spinal paraplegia, electroacupuncture (EA) for urination disorder, electric neck acupuncture for waking up and treating various cerebral and nuchal diseases, EA at Jiaji (EX-B 2) points for intractable hiccup, EA at Jiaji (EX-B 2) points for cervical and lumbar spondylopathy, antagonistic EA for post-apoplectic hemiplegia, and EA for facial paralysis. The ten acupuncture skills are summarized in order to guide the clinical application.

Keywords: Acupuncture Therapy; Electroacupuncture; Nervous System Diseases; Bulbar Palsy; Paraplegia; Poststroke Syndrome; Famous Doctor's Experience; Gao Wei-bin

【摘要】“针刺十绝”是全国名老中医药专家高维滨教授多年临床实践总结的10种治疗神经内科疑难病的针刺方法,包括项针治疗延髓麻痹、项针治疗喉肌麻痹、滞针动法治疗眼肌麻痹、夹脊电场疗法治疗不完全性脊髓性截瘫、电针治疗排尿障碍、电项针疗法促醒及治疗多种脑颈项部疾病、夹脊电针治疗顽固性呃逆、夹脊电针治疗颈腰椎病、电针拮抗法治疗中风后偏瘫和电针治疗面神经麻痹。对10种针法进行总结,以指导其临床应用。

【关键词】针刺疗法;电针;神经系统疾病;延髓麻痹;截瘫;中风后遗症;名医经验;高维滨

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Prof. Gao Wei-bin is a famous traditional Chinese medicine (TCM) expert in China. His 'Ten Acupuncture Skills' has summarized the objective rules of acupuncture treatment for neurological diseases and also reflected the new progress in academic and technical levels of acupuncture science. Now, Prof. Gao Wei-bin's 'Ten Acupuncture Skills' are briefly introduced as follows.

1 Neck Acupuncture for Bulbar Palsy

Bulbar palsy can be pseudo or true. Pseudobulbar palsy is also termed motor neuron bulbar palsy^[1]. True bulbar palsy is also termed motor neuron bulbar palsy. Both conditions are manifested by choking cough in drinking water, swallowing disorder, and hoarse voice. Swallowing disorder in pseudobulbar palsy mainly occurs in the oral stage and swallowing disorder in true bulbar palsy mainly occurs in the pharyngeal stage.

Acupuncture treatment for bulbar palsy is mostly based upon the principle to select the adjacent

acupoints, by selecting the acupoints at the nape. Therefore, it is termed 'neck acupuncture therapy'. Prof. Gao found out that Fengchi (GB 20), Yiming (EX-HN 14), Lianquan (CV 23), Waijinjin (Extra) and Waiyuye (Extra) are effective in treating bulbar palsy and furthered his anatomical study and analysis on motion of the muscles at the nape, and suggested different acupoints to deal with the symptoms and causative factors of bulbar palsy^[2]. The acupoints for dealing with the causative factors are Fengchi (GB 20), Gongxue (Extra, a new point) and Yiming (EX-HN 14). The acupoints for dealing with the symptoms are Lianquan (CV 23), Waijinjin (Extra), Waiyuye (Extra), Tunyan (Extra, a new point), and Tiyan (Extra, a new point). The former is able to improve blood circulation and the latter is able to improve and restore the swallowing function. Among them, Gongxue (Extra), Tunyan (Extra) and Tiyan (Extra) are the new acupoints created by Prof. Gao^[3]. Gongxue (Extra) locates at 1.5 cun below Fengchi (GB 20), at the level of the lower lip, with the vertebral artery underneath. Tunyan 1 (Extra) locates between the hyoid and Adam's apple, 0.5 cun lateral to the midline, with the pharyngeal constrictors underneath and controlled by the superior laryngeal nerve. Tunyan 2

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(Extra) is at the level of the mentolabial sulcus, in the depression of the anterior border of the third cervical vertebra, with the laryngeal constrictor inside. Tiyan (Extra) locates at the posterior border of the mandible and lower border of the mastoid process, with the stylopharyngeal muscle inside^[4]. The above-mentioned new acupoints are punctured obliquely by the elongated needles in diameter of 0.35 mm and in length of 75 mm. After the needle is inserted about 0.5-1.0 cun and the needling sensation is obtained by twisting technique, the needle is taken out immediately^[5]. The swallowing reflex activity is mainly to roll up the tongue muscle backward to push food to the epiglottic part, and at the same time contract the pharyngeal elevator for raising the soft palate, and making the epiglottic part to cover the throat backward, and then the pharyngeal constrictors spread downward by turns to send the food through the esophagus to the stomach. In neck acupuncture, the relevant acupoints and muscles in relation to the swallowing reflex activity are stimulated, in order to realize the goal to rebuild the swallowing reflex^[6]. By the comparative study on 100 cases before and after the treatment, it is found out that the total effective rate can reach 96% in the treatment of bulbar palsy by neck acupuncture therapy.

2 Neck Acupuncture for Laryngeal Palsy

The laryngeal palsy is manifested by vocal cord paralysis, and could be induced by recurrent laryngeal nerve paralysis, with clinical symptoms of hoarse voice, inserted into the attachment of the ocular muscles (termed muscular tendon in Chinese medicine), to pull its motion and induce contraction of the ocular muscle, able to promote the motion of the eyeball and reduce bleeding. In this method, the filiform needle in diameter of 0.20-0.25 mm is inserted, with an angle of 45°, into the lateral rectus of the outer canthus to treat paralysis of the abducent nerve, or inserted toward the superior oblique muscle to treat paralysis of the trochlear nerve, or inserted toward the medial rectus of the inner canthus, or inserted perpendicularly toward the levator palpebrae muscle of the upper eyelid, or inserted perpendicularly toward the inferior oblique muscle, to treat various types of paralysis related to the ocular nerve. In accordance with the findings from the case observation in the outpatient in the recent years, it has been found out that the total effective rate reaches over 35% in the treatment of abducens paralysis, and over 65% in the treatment of paralysis of the oculomotor nerve by the stuck needling technique. Prof. Gao's clinical practice of this method has proved that acupuncture treatment of the paralysis of ocular muscle is really advantageous^[8].

and unclear articulation, etc. In the treatment of bulbar palsy, Prof. Gao finds out that Fayin (Extra, a new point) has an obvious effect to treat low voice^[7]. Therefore, this method is used. Fayin (Extra) locates 0.5 cun below Adam's apple, 0.2 cun lateral to the midline, between the thyroid cartilage and cricoid cartilage, with the external branch of the superior laryngeal nerve underneath the acupoint in dominating the cricothyroid muscle and interior constrictor of the pharynx. The elongated needle in diameter of 0.35 mm and in length of 75 mm is inserted for about 0.5-1.0 cun and taken out immediately after the needling sensation is obtained by the twisting needling technique. In the needling technique, Prof. Gao notices that the slow lifting, thrusting, twisting and rotating techniques could be beneficial to the restoration of the motor functions of the nerves and muscles. For example, a patient sick with acute aphonia for one month, induced by cerebral infarction, showed instant effect after treatment and was cured after three sessions. Another case with aphonia for 12 years was able to pronounce and express clearly after six sessions of treatment.

3 Stuck Needling Technique for Ocular Muscular Palsy

The stuck needling technique refers to a needling technique to promote the eyeball to move in coordination with the needle by lifting and thrusting technique after the needle is inserted into the acupoint around the eye. The needle tip is i

4 Electric Field Therapy on Jiaji (EX-B 2) Points for Incomplete Spinal Paraplegia

The incomplete spinal paraplegia includes spinal cord injury, myelitis, myelodysplasia, etc. It has been proven by the basic research that the spinal nerves can regenerate under the functions of electric field produced when the electric current flows through^[9]. Being enlightened by this knowledge, Prof. Gao uses the electric field therapy on Jiaji (EX-B 2) points, by selecting a pair of Jiaji (EX-B 2) points respectively and bilaterally on the upper and lower ends of the injured spinal segments, with the needle handle connected to the wire of electroacupuncture (EA) apparatus, and with another group of wire connected to a pair of Jiaji (EX-B 2) points on the same side, positive electrode above the negative electrode^[10], by KWD-808 pulse EA apparatus, with dense wave and output intensity inducing the muscular contraction in the two paralyzed lower limbs. By this method of acupuncture plus electric field stimulation, many patients with spinal cord disorders could stand and walk independently or dependently, and could restore or improve the functions of defecation and urination.

5 EA for Urination Disorder

The urination disorders include neurogenic urination disorder, urination disorder and sexual debility induced by prostatic hyperplasia, and urination disorder induced by spinal cord problems, manifested by the symptoms of frequent urination, incontinence of urination, frequent nocturnal urination, difficult urination, and retention of urine. The EA is given by the acupoints selected from the head, back and sacral region, and usually the therapeutic effects could be obtained after 1-3 treatments. In Sishencong (EX-HN 1), the scalp where the acupoint is located corresponds to the paracentral lobule of the brain, an advanced micturition center. Under Shenshu (BL 23), there is the sympathetic nerve, which could control the contraction of the detrusor of the bladder to contract the sphincter muscle of the urethra. Underneath Huiyang (BL 35) is the pudental nerve, which could contract the sphincter muscle of the urethra to inhibit urination^[11]. Underneath Zhongliao (BL 33) and Ciliao (BL 32) are the parasympathetic nerves, which could dominate the detrusor of the bladder to discharge urine. Based upon the therapeutic mechanism of urination disorders and same therapeutic modality for different problems, Prof. Gao uses this method of acupoint combination in the treatment of urination disorders and sexual debility induced by prostatic hyperplasia, or mild paralysis of the two lower limbs and urination disorder caused by poor development of the spinal cord and obtains the satisfactory therapeutic results. In puncturing Ciliao (BL 32) and Zhongliao (BL 33), the needles are not inserted into the posterior sacral foramen and just reach the sacral bone. The therapeutic effects are more satisfactory while the electric current is transmitted by bone conduction^[12].

6 EA on Neck for Awakening and Treating Various Cerebral and Neck Diseases

The EA on neck refers to the therapeutic method in which pulse current is conducted through the acupoints on the neck. In accordance with the theories of anatomy, physiology and pathology, the operating method is that in puncturing Fengchi (GB 20) and Gongxue (Extra), electric stimulation is connected after the needling sensation is obtained by twisting needling technique, with positive electrode on Fengchi (GB 20) and negative electrode on Gongxue (Extra), with sparse wave and the intensity within the patient's tolerance. EA has the effects to excite the reticular formation of the brain stem for activating the system, activate the cortical brain cells, improve blood circulation of the brain,

cerebral circulation, and loosen the cervical vertebral joint, etc^[13], and is satisfactorily effective in the treatment of problems of the brain and neck, such as insomnia, tinnitus, dizziness, vertigo, hydrocephalus, increased intracranial pressure, and cognitive disorder in the early stage. This therapeutic modality used to wake up a patient in decorticated status, and clinically cure seven patients with high intracranial pressure and hydrocephalus, instead of surgery. The findings indicate that this therapeutic modality is a new and effective therapy for diseases of the brain and neck^[14].

7 EA at Jiaji (EX-B 2) Points for Intractable Hiccup

Intractable hiccup is often seen in the critical patients in the neurological clinic. The hiccup center is in the medulla and its nervous fibers come out from the vertebral foramen of C₃-C₄ and C₄-C₅, through the mediastinum downward to the diaphragm. Stimulation to any of its part would induce spasm of the diaphragm^[15]. The therapeutic mechanism is to use electric stimulation on Jiaji (EX-B 2) points at C₃, C₄ and C₅, so as to interfere with the excitement of the phrenic nerve for stopping hiccup by micro electric current from sparse wave.

8 EA at Jiaji (EX-B 2) Points for Cervical Spondylosis, Lumbar Spondylosis, Lumbar Disc Herniation and Relevant Neuropathy of the Spine

EA at Jiaji (EX-B 2) points is supposed to use the mechanical function of the traction of EA with sparse wave. The muscle of the neck can be relaxed by external force, and to pull the vertebrae with rhythmical contraction of the muscle, so as to adjust the position of the intravertebral joints, reset the intravertebral disc and alleviate the compression on the nerve root or spinal cord^[16]. The principle of EA at Jiali (EX-B 2) points can be interpreted to circulate qi first (mechanical stimulation of EA produces the rhythmical contraction of the muscles), and then circulate blood (the muscular contraction squeezes the blood vessels to increase blood supply). Therefore, EA at Jiaji (EX-B 2) points for cervical spondylosis is a concrete reflection of 'qi circulation promoting blood circulation' of Chinese medical philosophy in modern application^[17]. By pulling the muscles and vertebrae with pulse current of EA, the intravertebral joints could be relaxed and the herniated discs could be restored. Usually, the therapeutic effects can be achieved in 1-3 treatments. As a result, many patients can be freed from surgery.

9 Antagonistic EA for Hemiplegia After Apoplexy

Hemiplegia is a major mode of abnormal motion, caused by simultaneous decline of the muscular strength and muscular tension of the antagonistic muscle, failing to antagonize the increased muscular strength and muscular tension of the paralyzed agonistic muscle. In accordance with Brunnstrom's theory about division of hemiplegia into six periods of three stages^[18], the EA is applied to the acupoints of the antagonistic muscle, with sparse wave, in order to increase the muscular strength and muscular tension of the antagonistic muscle, and simultaneously reduce the muscular strength and muscular tension of the agonistic muscle^[19]. The agonistic muscle is flexor muscle and the antagonistic muscle is extensor muscle in the upper limb. The agonistic muscle is extensor muscle and the antagonistic muscle is flexor muscle in the lower limb. The antagonistic EA can quickly accelerate the termination of the shock period of paralyzed muscles, beneficial to the restoration of the muscular strength and muscular tension of paralyzed muscles, and is a perfect combination of the traditional acupuncture and medical theory of modern rehabilitative medicine.

10 EA for Facial Paralysis

The facial nerve dominates the superficial facial muscle. The acupoints are selected from the trunk of the facial nerve. In the insertion of the needle, the needle is inserted along the path of the nerve branch superficially or penetratingly. Yifeng (TE 17) locates at the stylomastoid foramen, from where the facial nerve comes out of the cranium. Qianzheng (Extra) locates at the nerve trunk after the facial nerve comes out of the cranium. The branch along the pathway of Shangguan (GB 3) to Sizhukong (TE 23) dominates the frontal muscle and orbicularis oculi muscle. The branch along the pathway of Xiaguan (ST 7) to Sibai (ST 2) dominates the zygomatic muscle and orbicularis oculi muscle. The branch along the pathway of Dicang (ST 4) to Jiache (ST 6) dominates the cheek muscle and orbicular muscle of mouth. After the needle insertion, the three pairs of acupoints are connected with the wire, with the positive electrode close to the acupoints near the ear and negative electrode linked with the acupoints remote from the ear. In the early stage, sparse wave is used, and sparse and dense wave is used 1 week later, for mild rhythmical contraction of the muscle, 30 min for each session, suitable for early stage and middle stage of facial paralysis. The electric current flows and conducts along the facial nerve, which can produce electric field. The electric field can regenerate the facial nerve, so as to relieve the mutagenicity of the myelin sheath and

axon in the facial nerve. Therefore, the therapeutic effects are better^[20].

The above is a brief summary of Prof. Gao's needling technique of 'Ten Acupuncture Skills', in a hope to guide clinical practice in a certain way. Academically, Prof. Gao suggests to study the therapeutic effects of acupuncture and Chinese herbal drugs by modern scientific and technical methods, and to select the acupoints in reference to anatomy and origins and insertions of the nerves and muscles. His needling methods are simple and easy and his selection of acupoints is fewer and precise. He also creates some new acupoints and new needling techniques. In his treatment, he emphasizes pathogenesis and therapeutic mechanism, especially in the treatment of bulbar palsy, a worldwide difficult issue. Constantly, Prof. Gao explores and sums up the effective acupuncture therapy for neurological diseases, positively significant for development of TCM.

Conflict of Interest

The authors declared that there was no potential conflict of interest in this article.

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