Acupuncture in Japan - Clinical Applications

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Introduction

The skills and theory of acupuncture and moxibustion are based on experience. Both contain many things that cannot be verified through case series studies or randomized controlled clinical trials. The clinical abilities of a single excellent acupuncturist may exceed the clinical experiences of 100 people. Attempts at imitating the therapy performed by really outstanding acupuncturists often do not yield the same results. Follow-up studies have revealed that the skills of acupuncturists are very important. In contrast to the application of drugs, with acupuncture and moxibustion, the skills of the individual therapist plays an extremely important role. Clinical trials are an effective method to verify the efficacy of acupuncture and moxibustion. Although certain aspects defy verification using this methodology, they should not be considered ineffective.

Acupuncturists in command of outstanding skills may be called masters (sensei). It should be noted that the clinical practice of masters in this art cannot be elucidated using research methodologies[Note1)].

Following the Meiji restoration in 1968, the new government decided to adopt German medicine. Subsequently, acupuncture and moxibustion were entrusted to acupuncturists and not to physicians. Yet, for this very reason the influence of western medicine decreased, so that the original form of the tradition was handed down and provided the foundation for its present status.

This situation prevailed for about half a century, during which time the search for a new perspective was pursued. The new government, with its policy of national prosperity and defense, prepared the ground for the cultivation of folk medicine in its attempt to maintain the health of the people and provide a means of improving the health of the young. Acupuncture is considered to be an extremely powerful tool for this purpose.

In the 1920s, a sudden burst of new activities occurred in the field of acupuncture and moxibustion. Even though it was based on tradition, a Japanese form of acupuncture and moxibustion integrating new concepts emerged. Continuing to the present, this was the time in which the foundations of modern acupuncture and moxibustion were laid.

Compared with today, western medicine at that time had not yet achieved a satisfactory level of proficiency. This allowed for an abundance of experiences with acupuncture and moxibustion for the treatment of many different diseases. Today, acupuncture and moxibustion are used mainly for the treatment of pain, but are used as an excellent therapy applicable to disease in all fields of medicine. The fact that it is not only described in the literature, but proven in practice as well, demonstrates its value in today's health care system. These experiences have not lost their validity to the present day.

Similar to China, Japan produced a number of acupuncture and moxibustion masters and the work of these people has been driving the development of Japanese style acupuncture and moxibustion. Verification of the methodology of these masters, as well as an analysis of their clinics, are a task for future research. What follows is a review of modern medical research, including case studies that are representative examples of the original characteristics of Japanese acupuncture and moxibustion.

Note 1)

Genzo Kanbe had been a master of needle manufacturing during the latter half of the 20th century in Japan. He needled each individual using carefully hand-made needles. These were used by outstanding acupuncturists of the age who achieved excellent therapeutic results.

When Kanbe lost his home during a bombardment of Tokyo by the American army during World War II in December 1945, he stayed temporarily at the house of relatives in the suburbs of Tokyo. His intense work schedule led to the development of acute pneumonia. At that time, antibiotics, like penicillin, had not yet found widespread application in Japan. Before he lost consciousness due to the high fever, he fortunately told the famous acupuncturist Sodo Okabe about his condition. Hearing about this emergency, Okabe rushed to Kanbe, but his consciousness had already

become so clouded that he could not answer Okabe's questioning. Okabe observed the symptoms, checked the pulse and then started his treatment.

Kanbe describes his recollections of the event in his state of clouded consciousness as follows.

"Each individual needle placed by master Okabe was very effective. I was under the impression that a thick needle had struck an evil lump that made me cough up phlegm. Next, more phlegm came up. Following the expectoration of the phlegm I started to feel better and the fever fell. I was told that he had used 50 mm gold needles with a diameter of 0.2 mm, but to me they had felt like very thick needles. This event made me painfully aware that with increasing skill, even application of very thin needles can evoke the feeling of thick needles. After my complete recovery I asked master Okabe where exactly he had needled me. He said he had been so absorbed in the treatment that he did not remember. Yet, he said, that under similar circumstances, he would not needle the trunk. Deducting from this statement, I presume that he had carefully tonified and sedated the relevant command points on the arms and legs.

The clinical practice of masters frequently takes this form. The skills of master Okabe could not be reproduced by anybody else, so that a large number of artists and politicians of that time became his patients. He also went to Moscow to treat General Zukov of former Russia. The famoues Japanese painter, Taikan Yokoyama loved his needles throughout his life.

The clinical applications in other specialized fields than those discussed here are also reported in the Journal of Kampo, Acupuncture and Integrative Medicine.

Clinical Application: Stress and Shoulder Stiffness

I. Introduction

Modern man is subjected to a wide variety of stress, and regardless of whether he recognizes this or not, will suffer from stress induced mental and physical fatigue. Stressors are influenced by both the physical and mental aspects of our living environment, where a somatic reaction to stress could be the development of gastric and duodenal ulcers, gastrointestinal discomfort, or similar symptoms related to the digestive organs, hypertension and similar cardiovascular symptoms, headache, shoulder stiffness, dizziness, easy susceptibility to catching cold and similar indefinite complaints, cerebral stroke or intracerebral hemorrhage, myocardial infarction, and like problems. Moreover, diabetes or obesity and similar lifestyle-related diseases are also included in this category and considered to be possible etiologic factors or exciting causes.

While under stress many people also suffer from psychological troubles. Motivation, vitality and perseverance may be reduced. Afflicted persons could tend to brooding and often develop depressive moods. A marked feeling of exhaustion is then experienced on a daily base.

Thus, psychosomatic problems develop when under stress. Actually, oriental medicine tends to detect the close correlation between mind and body. The seven emotions: joy, anger, worry, anxiety, sadness, fear, and fright may become causative factors for the development of human diseases. They affect the functioning of both the internal organs as well as physical functions and may lead to physical problems. The reverse also holds true. That is the basis for the concept of mind-body unity.

The term "stress" (stressed conditions) induced by a variety of stressors is often used in the sense of being under "mental pressure". Yet, the original meaning of this term is "distorted condition" and would be better understood if interpreted as the outward manifestation of "physically strained conditions" in response to negative stimulations affecting both mind and body. Specifically, this refers to physical tension or stiffness, or on the contrary, may also mean the lack of tension. This represents the conditions of deficiency or excess as they are identified by palpation in oriental medicine. The stress concept put forward by Selye may, in fact, be considered to be very close to the oriental medical concept of mind-body unity.

If a person becomes stressed, the site where this person feels to be afflicted. (i.e., where the stress finds its physical manifestation), differs among people and countries. In Japan, these conditions generally become manifest in the form of "shoulder stiffness" marked mainly by tensioning of the shoulders (trapezius muscles). The shoulder stiffness the Japanese complain about should be understood in this context as a distorted condition characterized by both physical and mental problems.

1. What is shoulder stiffness?

"Kata-Kori, or shoulder stiffness" refers to an increased tension and therefore hardening of the shoulder muscles that is felt as pain or discomfort. Anatomically, this is the shoulder region around the shoulder joint. The oriental medical term also refers to this region around the shoulder joint. Yet, in Japan the term "shoulder stiffness" generally refers to a region centering on the central fibers of the trapezius muscles on top of the shoulders. The term "koru = become stiff, suffer stiffness", expressed by the character "凝る" usually meaning a stiffening and thus hardening of the muscles (sometimes also involving the skin and connective tissue). Accordingly, shoulder stiffness refers mainly to symptoms of tensioning of the trapezius muscles and their vicinity.

However, the patients who actually come for treatment of shoulder stiffness complain about a feeling of distension, stiffness or tension over a region extending from the neck to the shoulders, the

interscapular region, the anterior chest, and sometimes the upper portions of the arms. In severe cases, symptoms may even be associated with headache, tinnitus, dizziness, and a general feeling of fatigue or marked weariness, so that patients may become unable to lead a normal daily life or work

Considering the above described scope, the muscles included in the category of shoulder stiffness may be all the muscles of the neck, interscapular region, scapular region, anterior chest, and upper arm. They may give rise to pain or tension causing the development of a feeling of heaviness that will then lead to the complaint of "shoulder stiffness".

Scrutinizing the classics reveals that the term "shoulder stiffness" is not mentioned in the *Su Wen* or *Ling Shu*. Yet, in the section "Gyokuki Shinzo Ron", section No. 19 in the *Su Wen*, expressions like "internal pull on shoulder and neck" or "shoulder neck heat" are found that indicate symptoms involving the region from the neck to the shoulders

Wind cold has been cited as a cause for this condition. This is derived form the latter half of a famous passage stating, "Wind is the chief of many diseases." In the chapter on the channels in the *Ling Shu*, section 10 under "greater yang of the leg bladder channel ... in the primary disease of the channel, the disease penetrates to the head and causes pain, it is as if the eyes would fall out, the nape might fall off and the back hurts. In this section, the phrase "like the nape might fall off" could partially coincide with the modern concept of shoulder stiffness. In the *Shang Han Lu,*in the section on differential diagnosis of pulse patterns for the greater yang diseases (section five), it says: "In case of a greater yang disease the pulse will float, there is stiffness and pain of head and neck and chills." The phrase seems to indicate the development of shoulder stiffness during the early phase of a cold. Incidentally, in the *Sun Wen*, the character for shoulder is found 37 times, the character for nape 38 times and the combination shoulder – nape three times; and the combination neck - nape once. The neck - shoulder is not found at all. Moreover, in the *Ling Shu* the respective number of appearances of these characters is 54, 39, 1 and 1 time. In the Shang Han Lun the term nape - back appears 4 times, neck - nape seven times and head - nape six times. The term neck seems to refer to the anterior neck, while nape means posterior neck. Further, the terms shoulder and nape in expressions describing pathological conditions appears in the *Sun Wen* and *Ling Shu* in the form of diseases are located in the shoulders and back, shoulder - back pain, internal pulling pain on shoulder and nape, shoulder - nape heat, interscapular pain, nape - shoulder pain, etc., while in the *Shang Han Lun* terms like strong pain, strong tension, or simply strong are found.

In Japan during the Edo period, expressions close to the modern term shoulder stiffness, are found that were based on the etiologic factors cited in the *Sun Wen* and *Ling Shu*. The book *Shinkyu Choho Ki* (1718, by Masatoyo Hongo) cites: “When the shoulders hurt, it may be due to phlegm, or else to cold wind, but often indicates an stagnation of Qi and Blood and in acupuncture and moxibustion therapy for various diseases, under the heading 'genpeki'.” Pain in the shoulders certainly refers to shoulder stiffness and the relevant passage is followed by a detailed explanation of the treatment for shoulder stiffness.

It should be noted in particular that phlegm and wind cold are cited as causes for shoulder pain. Moreover, the pathologic condition is considered to be a stagnation of Qi and Blood. The term 'genpeki' resembles aggregation-accumulation and is a general term referring to either a mass in the hypochondrial or umbilical region or a lump in the chest and shoulder and nape stiffness (either of which are derived from the *Lexicon of Kampo Terminology*), but here the Choho Ki adopts only the latter meaning.

Thus, 'kata-kori = shoulder stiffness' is not only a feeling of tension and stiffness in the region around

the shoulder joint, but may also be a symptom resulting from Qi and Blood stagnation caused by wind, cold, dampness and phlegm. In this case the stagnation of Qi and Blood often results in the simultaneous development of the entire body involving fatigue or suffering. Severe shoulder stiffness may thus lead to systemic problems.

Yet, when Japanese people complain about shoulder stiffness there are in addition to the physical symptoms of shoulder stiffening, associated depressive moods, stress of human relationships, feelings of social entrapment, etc. that often serve as supplementary means of complaining about one's personal condition to others. For example, within social groups formed by companies, fatigue caused by human relationships may be expressed as, "I have stiff shoulders". In particular, when people are keenly aware of other in cases where the human relationship is not going well, the expression "I get stiff shoulders whenever A is around," used by the affected people clearly, shows this. A representative expressions used for the complaining is, "I am tired" or "I have had enough." In addition to that, the term "shoulder stiffness" is a skillful way of expressing the physical and mental fatigue not restricted only to the physical fatigue and is usually well understood in this sense by the listener.

In this way various psychosomatic signs are interlaced in a complex way and kata-kori, in its sense of both physical and mental fatigue, seems to be an expression unique to the Japanese society that is not observed elsewhere abroad. However, the mental feeling of depression, interpersonal relations induced stress and a feeling of social entrapment are also known in other cultures outside Japan. They too will most probably have some forms of expression that correlate people's complaints of physical discomfort to these psychological aspects. For example, in the final analysis, the term headache may in American and European societies possibly assume the meaning of kata-kori = shoulder stiffness. Yet, even if this is said to be so, the depressive moods and fatigue etc. that Japanese people experience may still depend on the background formed by the characteristic Japanese natural environment, social structure, and human relationships. These factors relate to the moods when experiencing muscle tensioning associated with feelings of fatigue accompanying the daily work or study, so that for Japanese people the expression kata-kori seems to be most suitable. The typical Japanese communication technique where a word meaning physical fatigue should be used to express mental problems is very intriguing.

2. The condition of shoulder stiffness

This refers to what the therapist can objectively feel (beginning with the muscles) and the pathological condition of the patient's soft tissues. Classifying these findings into excess and deficiency, they would indicate a state of excess. The patient may feel the condition of stiffness himself, but s/he may also just feel some localized pain or discomfort. Yet, if that feeling intensifies, it does not remain a localized subjective feeling of discomfort, but may develop into a feeling of fatigue, loss of motivation or similar feelings of discomfort affecting the entire body. The following table shows what patients and therapists feel from their respective point of view when faced with kata-kori (Table 1).

Table 1

Patient's subjective experiences and therapists objective findings in the presence of shoulder stiffness

(1) Subjective symptoms in patients with shoulder stiffness

Local ..... pain, tenderness, feeling of distension, heaviness, stiffness, fatigue, discomfort etc.

Systemic ..... generalized fatigue and discomfort, fatigue, weariness, physical heaviness, lack of motivation, irritability, difficulties rising in the morning, depressive moods, hopelessness etc.

(2) Conditions the therapist can objectively identify in

the presence of shoulder stiffness (classified into excess and deficiency)

Excess ..... tension, swelling, indurations, distension, hardness, etc.

Deficiency ..... skin or connective tissue, muscles lack elasticity, chilliness, getting moist etc.

3. Sites of shoulder stiffness

The locations where patients complain about stiff shoulders include, as stated already above, not only neck and shoulders, but may also extend over the entire back. The condition could affect a wide area, including a region of the neck,the trapezius, semispinal, splenius, sternocleidomastoideus, scaleni, levator scapulae muscles, in the scapular and interscapular regions the supraspinatus, infraspinatus, teres major, teres minor, latissimus dorsi, greater rhomboid, lesser rhomboid muscles, the crector muscles; or else in the anterior thoracic region the pectoralis major, pectoralis minor, triceps brachii muscles, etc. Figure 1 illustrates this. Moreover, in the treatment of shoulder stiffness, general acupoints are selected by palpating the affected region or specific therapeutic acupoints that may include many local points like GV20, BL10, GB20, GB21, TE15 etc. Moreover, points on the arms include LI11, LI10, TE5, LI4, HT3, LIV3, KI6, GB40. The acupoints lying within the range indicated in the figure may conceivably serve as therapeutic points, when they have been identified as such through palpation in the presence of relevant complaints.

4. Causes for shoulder stiffness

What kind of factors cause shoulder stiffness?

The first cause that comes to mind is:

(1) Fatigue of the muscles forming the shoulder belt or poor posture, resulting in excessive or continuous exertion of the muscles of the neck, shoulders and arms that will lead to problems with the local muscles of the shoulder.

(2) Cervical spondylosis or cervical sprains, intervertebral discitis, periarthritis humeroscapularis (frozen shoulder) and similar conditions, deformations, injuries, sprains, inflammation, etc. of the cervical and thoracic vertebra as well as the shoulder joint as the skeletal elements forming the neck, shoulders and chest may be either directly cause or conceivably lead secondarily to the development of shoulder stiffness.

Yet, shoulder stiffness is not solely due to the muscles and skeletal elements comprising the shoulder locally.

(3) In the presence of headache, eyestrain, astigmatism, dental caries, inflammation of the temporomandibular joint, malocclusion, throat pain, tinnitus, hardness of hearing and similar problems of the various organs of the head (in particular organs related to the special senses) patients often complain simultaneously also about shoulder stiffness. While these causes undoubtedly may lead to shoulder stiffness, the etiologic factors causing these conditions may at the same time also induce shoulder stiffness directly. Conversely, shoulder stiffness may also be a causative factor in the development of these symptoms and possibly also modify the said symptoms.

(4) Shoulder stiffness caused by problems of the various internal organs. Patients with asthma or cardiac diseases, digestive organs like the gastrointestinal tract or liver, gynecologic or urologic problems and the like affections of internal organs may simultaneously cause one to complain about shoulder stiffness.

(5) Anxiety, anger, stress and similar mental problems can cause shoulder stiffness as well.

(6) From a characteristically oriental medical point of view wind, cold or damp evil and similar external affections, or else shoulder stiffness caused by phlegm are also conceivable.

7) The presence of chilling, hot flashes or dizziness,

listlessness or heaviness of the legs, edema, insomnia and similar indefinite complaints patients may simultaneously lead patients to complain of shoulder stiffness. An imbalance of the autonomic nervous system considered to be a causative factor for indefinite complaints, has also been suggested as a possible cause for shoulder stiffness.

II. Approach to the determination of therapeutic points for shoulder stiffness

1. Identification of painful or stiff regions

For the treatment of shoulder stiffness it is first of all necessary to identify the painful or stiff regions. These may be found by: (1) instructing the patient to flex the neck anteriorly, posteriorly or laterally, rotate it or flex it obliquely, assume a position of the limp(s) that usually induces the pain or stiffness in order to clearly identify the painful or stiff regions; (2) when there is pain or stiffness of the muscles, it is necessary to identify the involved muscle(s). Clearly define, which of the above mentioned muscles of the neck, shoulder, chest, and arm are involved. Pain, swelling or tenderness may also be observed in other tissues than the muscles; and (3) for example tendons, ligaments, connective tissue, skin etc., in which case the respective painful or stiff regions need to be identified. Among these (2) and (3) are achieved through palpation, but in particular, (3) requires very careful palpation in order to identify the affected regions.

2. Search for sites of swelling or pain in the local area (above, below, left, right, anterior, posterior).

Once the site of the complaint has been clearly identified, its vicinity has to be palpated for swelling and pain. Again, not only swelling and pain, but also indurations or indentations, and areas of decreased sensitivity are checked. This is required in order to identify the areas to be treated.

Figure 1 shows that the head, neck, interscapular region and anterior chest are conceivable adjacent regions.

3. Examine the upper and lower extremities for swelling and tender spots with reference to the channels.

Check through palpation of the shoulder region, its vicinity and more distant areas with reference to the course of the channels and the muscles along the channels and the nervous system for sites showing signs of deficiency or excess. The most distant regions are the upper and lower extremities.

4. Palpate the abdomen, lumbar and sacral vertebrae for tension and tenderness.

Due to the correlation with the autonomic nervous system and the inner organs' reactive sites of the abdomen, lumbar and sacral vertebrae may be related to shoulder stiffness and thus serve as sites for therapeutic stimulation. Palpate these regions and check for relevant reactions.

III. Basic concepts of acupuncture, moxibustion and massage treatment

1. Most basic concepts during the identification of pathologic musculoskeletal conditions to be treated:

(1) Is it solely a problem of the locomotor system?

(2) Should an involvement of various organs, distant organs and tissues be considered?

(3) Is the condition due to extrinsic pathogenic factors?

(4) Is there a strong influence of mental, psychologic problems?

The treatment will differ depending on these considerations.

2. Establishing the therapy

(1) Treatment of local pain or stiffness

Perform an anamnesis of local pain or stiffness, or ask the patient to assume the painful posture to identify the relevant regions and then treat the involved sites directly.

A major portion of the current acupuncture and moxibustion treatment is directed locally at the

shoulder stiffness and needling of the tensioned muscles. In the book *Shinkyu Chouho Ki* of the Edo period, the following passage is found.

"First, massage and twist the shoulder with the hands, stroking downwards and open the flow of Qi before needling. Deep needling may be a mistake. In other words, indiscriminate needling may injure the patient. For the needling the needles should be retained between skin and muscles. At least, the muscles should not be needled. Do not use needle twirling on the shoulders and back. Stone needles should be used. Use a needling tube and flick the needle in, so that it drains Qi and Blood. This will have a quick effect. Also, the tube should be thrust. This will inevitably lead to bleeding and thus eliminate the pathogenic Qi. In ancient times they used the tip of stones to pierce sites of pain or numbness, disrupt the channels, eliminate the evil influences, and thus the acupuncture classics stated the use of stone needles to drain pus and blood." (cited from the *Shinkyu Chouho Ki*).

The intent is not to pierce the muscles, but rather insert the needles shallowly, or else perform blood letting for cases, as described above where wind evil has invaded Qi and Blood and thus led to their stagnation.

(2) Treatment of related but not local sites

(therapies exploiting the somato-visceral reflex, back shu and anterior mu points)

When pain in muscles, and the like connective tissues or referred pain, has been induced via the somato-visceral reflex, the site of the pain is treated locally, but at the same time, the organs and other causative factors of the condition are also treated.

(3) Treatment of distant sites

Treatment follows the pathologic condition.

Treatment according to disease pattern

* Performed referring to the course of nerves, channels, the muscles along the channels, special effect points, clinical experience etc.
* Selection of points based on the identification of the oriental medical disease pattern, performance of tonification and sedation.
* In general clinical practice, the filiform needle and manual stimulation are used.
* Intradermal or press-needles are often used, if after the above described treatment pain remains, in order to prolong the therapeutic effects.
* Network vessel pricking is also effective, but in Japan it is not generally used.

Clinical Application: Cerebrovascular Disorders

Cerebrovascular disorders were quite prevalent in Japan, but with the medical progress in recent years, their incidence began to decrease after 1965. Currently, they rank third as the cause of death, after malignant neoplasms and heart diseases. Yet, their prevalence is rising. Annually, one in 400,000 people have the disease in some form, and among these, 130,000 die from it. The number of patients with sequelae is approximately 1.4 to 1.5 million. Previously, the cause for stroke was often cerebral hemorrhage, but today the incidence of cerebral infarction increases[1,2].

This disease, regardless of whether it has been caused by hemorrhage or infarction, is an indication for acupuncture treatment. During the acute phase, modern western medicine is currently used for the treatment and acupuncture is not considered to be an indication. This treatment modality is administered in a small number of special cases.

However, in times when medical care was not as good as it is today, treatment during the early stages, often had to rely on acupuncture. Diagnosis had not been as exact as it is today so that the treatment of stroke was based on clinical symptoms. Patients, only a few days after their attack, presented an indication for acupuncture treatment. Before the concepts of rehabilitation were generally acknowledged, acupuncture had already been applied for such purposes[Note1]. The methodology applied at that time was a traditional Japanese one. Subsequently, therapies based on unique new views, were added. Concepts of modern medicine of the day were also integrated and thus a fairly coherent treatment proposed. Later, due to treatment increasingly centered on western medicine, the application of acupuncture gradually declined.

Completely new developments in the treatment of stroke occurred in the 1990's when Chinese "Xing Nao Kai Qao Fa" (activating the brain and opening the orifices method - Note2 and Zhu's scalp acupuncture - Note3) were introduced in Japan. At the same time, a renaissance of the application of acupuncture and moxibustion for diseases already being treated with western medical methods and rehabilitation, heightened the interest in this therapeutic modality.

A brief introduction to the treatment of these diseases with acupuncture and moxibustion as performed in recent years in Japan is presented below.

1. Acute stage

Western medical treatment receives priority during the acute stage of stroke. During this stage there will be almost no occasions to use acupuncture and moxibustion treatment, but Prof. Akao at the Gifu University Hospital, has treated many stroke patients during the acute stage and also performed acupuncture and moxibustion treatment when western medical treatment alone did not produce sufficient effects. He reported that he has observed comparatively quick improvement in consciousness among these patients[3]. For this purpose, the "Xing Nao Kai Qao Fa" method, in particular for GV26, appeared to be effective for people with impaired consciousness and blood letting performed at the well points traditionally performed in Japan, has also been found to be effective.

Bunshi Shirota (1900-1974), who had a great deal of experience with treating stroke patients during the acute stage, stated: "perform minimal blood letting at GV20 , BL7 , and additionally at the well points of both hands and feet. When patients feel irritated, the healthy side should not be moved, micropuncturing performed for blood letting at GB12 of the healthy side and the use of cupping to drain some blood should be performed. Many patients will calm down after this treatment." He indicated needling at GB20, GB12, LI10, LI4, GB34, ST36, LI3 (single insertion, depth 1-2 cm)[4]. The beneficial effects of blood letting performed at the well points during the acute stage has been pointed out by many acupuncturists, one of whom spent half of his life on research into the effects of blood letting, Kunimasa Kudo (1918-1889). He also recommended this method based on a wealth of clinical experience[5]. Generally this treatment form is not used.

2. Transition from the acute to the chronic stage

During this stage, one usually waits for the condition to stabilize and then initiates rehabilitation therapy, but it is also an indication for acupuncture and moxibustion treatment.

Shirota used the same treatment as applied during the acute stage several days after the attack and added his "Doshi" technique. He also described the application of moxibustion on GV20, CV12, LI10, GB34 and the Sawada style KI3[4].

Yet, the most efficient treatment during this stage appears to be the "Xing Nao Kai Qao Fa" method developed by Prof. Xue-Min Shi. This treatment should be initiated as early as possible and it is desirable to begin with the acupuncture and moxibustion treatment as soon as symptoms have been stabilized through western medical treatment. Prof. Shi frequently visits Japan and has instructed many Japanese acupuncturists in this technique. In several hospitals he has actually treated patients himself. Direct observation of the dramatic improvement has surprised Japanese acupuncturists. After receiving his tutelage, many acupuncturists in Japan perform this treatment.

Since the introduction of this treatment, the method today is applied in facilities with experienced acupuncturists. People observing for the first time how hemiplegic patients with complete paralysis of either an arm or a leg start moving the affected arm or leg immediately after the treatment cannot conceal their astonishment.

However, among Japanese rehabilitative medical societies and academic societies of acupuncture and moxibustion, a consensus has not been reached as to when acupuncture and moxibustion treatment should be started.

3. Chronic stage

Currently, treatment of this disease with acupuncture and moxibustion is restricted in Japan almost entirely to this stage. The introduction of rehabilitation concepts is a comparatively recent event and up to that time no such concepts had been available. Among them, acupuncture and moxibustion as well as shiatsu, were the only treatment forms that fulfilled this role. Rehabilitation is an independent therapeutic system and not related to acupuncture and moxibustion, but a combination of these treatment forms produces even better effects. Today, efforts are made to propose even better therapies achieved by a combination of these different modalities.

Methodologically there is no way that acupuncture and moxibustion can be applied to the site of the stroke lesion itself, and in practice, this is not possible either. Nevertheless, when symptoms typical for the affected region are observed, the therapy may be directed at those symptoms. In particular the "Xing Nao Kai Qao Fa" explains in detail the treatment of symptoms including impairment of consciousness, hemilateral motor or sensory paralysis, central facial paralysis, dysphasia, articulation disorders, disorders of deglutition, disturbances of vision (visual field defects), and urinary incontinence. Practical application of this method allows for treatment of these symptoms. The basic points used for the "Xing Nao Kai Qao Fa" method are as follows. On these points, lifting-thrusting, twirling, reinforcement or reduction techniques are used for the needling. For other associated symptoms, other necessary points may be added[6].

Main points: PC6, GV26, SP6
Supplementary points: HT1, LU5, BL40, GB20, GB12, BL10
Other points added depending on the presence of associated symptoms:

* central facial paralysis: GB20, EX-HN5, ST7, penetrating needling from ST4 to ST6, LI4 on healthy side
* pes equinovarus: ST41, penetrating needling from GB40 to KI6
* motor aphasia: blood letting at EX-HN12, EX-HN13
* receptive aphasia: penetrating needling from GV23 to GV20, GB20, HT7
* disturbances of vision: GB20
* hearing impairment (hearing loss): GB20, TE21, SI19, GB2

* disorders of articulation or deglutition (pseudobulbar paralysis): GB20 or TE176, GB12
* urinary incontinence: PC6, GV26 or EX-HN3, penetrating needling from GV23 to GV20, KI3, CV2.

Shirota reported increasing the number of therapeutic points used for acupuncture and moxibustion following the 10th day after the attack, also including important points on the paralyzed side. In patients with dysarthria, he added GV15 or GV16. Continued performance of micropuncturing for blood letting is also said to be beneficial. He further reported puncturing areas on the back of the neck or shoulders marked by blood congestion and the application of cupping to drain some of the blood, as well as the suitability of the use of well points GV20, or the "clearing of nutrient" method etc.

The treatment for the chronic stage recommended by Shirota is as follows[4].

Acupuncture: GV20, GB12, LI10, LI4, GB34, ST36, LR3, BL2, BL10, TE15, BL15, BL18, BL25, BL32, GB30 on the affected side
Moxibustion: CV12, CV9, GV12, TE15, BL25, LI11, GB34, GV20
Only on the affected side: LU1, ST27, SI11, SI10, LI15, LI10, LI4, TE4, PC7, GB31, Kampu, ST36, LR4, GB40 (half rice grain size, 3 to 5 cone on each point)

During this stage, moxibustion is also effective. Isaburo Fukaya (1900-1974), who dedicated his entire life to the research and clinical application of moxibustion, has written his treatment records in the form of a diary and published this as a book entitled *Stories About Healing Diseases with Moxibustion*. In this book, he recommended the application of moxibustion on the fingertips for stroke induced hemiplegia. For example, apply moxa for paralysis of the arm using points at the fingertips on the affected side (approximately 3-4 mm on the midline proximal to the edge of the nail). If the patient feels the heat, use only one moxa cone. If he/she does not feel the heat, use several cones. This treatment reportedly resulted in a comparatively quick recovery of motor function. However, at some point in time, the effectiveness of this method decreases and requires moxa treatment of specific points on the entire body. At that time, the use of 5 half grain sized moxa cones each on GB21, LI15, BL10, LI11, LI10, LI8, PC5, GB31, ST36, ST41 is indicated. The description includes records of the progress in stroke patients actually treated in this way including patients from one week to several years after the attack. These records contain descriptions that are noteworthy even today[7].

Many experiences with acupuncture and moxibustion treatment have been gathered and the above described example is definitely not unique.

Yamada stated that the three main purposes of acupuncture and moxibustion treatment during that stage are: (1) recovery of basic functions as a part of the rehabilitative measures like exercise therapy, (2) prevention of various complications, and (3) alleviation of pain[8].

The chronic stage is often associated with pain and patients frequently experience extremely severe pain. Acupuncture is effective for central pain like thalamic pain, but its efficacy for the various forms of peripheral pain on the paralyzed side in patients with hemiplegia, are an even better indication. In particular, pain of the shoulder joint is encountered frequently and many patients stop walking because of the pain that is triggered during walking. For this condition, Prof. Shi states that he needles LI15, Kengairyo and Kennairyo in order to promote the flow in the local channels and punctures painful spots for blood letting in attempts to dissolve blood stasis and alleviate pain. Kitamura needled "ashi" (tender) points to treat pain upon elevation of the arm and subsequently achieved an improved ROM through active and passive exercise. He did not treat just the shoulder simply because it is painful, but also needled points like BL62 or GB26, ST36, SP9 and GB34; and thus reportedly achieved alleviation of the shoulder pain[8].

Spasticity too is a great problem. Prof. Xue-Min Shi has pointed out that slightly stronger stimulation of LI14 for flexion and contractures of hands and

fingers induces instant relaxation[6]. Moreover, in case of spasticity of the biceps muscle, Kitamura also used motor points of that muscle and applied electric current of an intensity that does not induce joint movements and a frequency of 30 Hz for a period of 5 minutes, followed by 2 minutes of rest and then repeated these cycles three times. Thus he reportedly achieved, although only temporarily, some relief of the spasticity. Based on the principle of reciprocal innervation, he stated that stimulation of the antagonist is also beneficial[8]. These therapies are effective immediately after their application, but the effects do not last very long and thus require repeated treatment and exercise therapy should preferably be performed while the therapeutic effect lasts. It is important that the patient remembers the relevant sensations.

Although the number of case reports describing stroke patients is not small, the number of such reports coupled with reports on detailed western medical examination is not high. Acupuncturists like Shirota of about one generation ago, published a large number of case reports, attesting to the abundance of clinical experiences, but many of these records are nevertheless incomplete by modern medical standards. Yet, in recent years, the number of reports providing findings of both medical systems has been increasing. For example, Yukimachi, et al. started to treat a 72-year old woman and a 76-year old man (both of which were diagnosed with lacunar infarction based on MRI findings) with acupuncture and moxibustion from the first week of hospitalization. Patient management was performed based on western medicine and these patients reportedly healed without any late effects[9].

There are not yet any clear statements regarding the long-term prognosis when acupuncture and moxibustion therapy are used for the treatment of patients with this disease. Shirota reported that persistent treatment resulted in patients regaining the power to power to write, and patients who had difficulties to walk, found it easier to walk. Also, treating patients with contractures and fixed joints in the same way as patients with RA or neuralgia, has reportedly led to an amazing degree of alleviation[4].

In the collection of essays by Shirota, *Records of Clinical Acupuncture and Moxibustion,* he emphasizes the importance of persistent and careful treatment, describing it as follows. "After a long time after a stroke, local treatment of the late effects is particularly important. The muscles, nerves and blood vessels that supply the affected area need special attention. In order to improve their function, careful treatment should be given. Treatment of the arms is important when the goal is to regain the ability to use a brush or chopsticks. Yet, treatment of the legs is also required. Even minor improvements in the condition of the legs help to make walking easier. When walking becomes easier, the maintenance of equilibrium improves and thus stabilizes the entire body. Even if 1 or 2 years have passed since the attack, treatment will gradually lead to improvements. Although it may not be possible to expect a full recovery, it should be sufficient to achieve a certain degree of improvement. The patient's joy will thereby be increased."[10]

Note 1:

The concepts of rehabilitation were clarified in Japan in the 1950s. Later, after many deliberations, the Japanese Association of Rehabilitation Medicine (JARM) was founded in 1963. In the same year, the first school for the training of physiotherapists and occupational therapists was opened. Three years later, in 1966, the first graduates left that school and the first state examination was held. This created the first generation of physiotherapists and occupational therapists and led to the foundation of the Japanese Physical Therapy Association and the Japanese Association of Occupational Therapists. Later, rehabilitation was integrated into medical care and played an important role in the various fields of medicine. Since acupuncture and moxibustion on the other hand remained outside the framework of medical care, the treatment of late effects of stroke that used to be an indication for acupuncture and moxibustion, fell into the category of rehabilitation, so treatment by acupuncturists decreased.

Note 2:

The **Xing Nao Kai Qao Fa** ("Xing Nao Kai Qiao" = XNKQ, activating the brain and opening the orifices) method was developed by Professor Xue-Min Shi at the First Teaching Hospital of Tianjin University of TCM. This therapy, which adds new views to the traditional theories and is applied from the acute stage of a stroke to the sequelae developing during the chronic stage, is an epoch-making technique allowing dramatic improvements immediately after the treatment. Professor Shi himself introduced this technique in Japan and there is a Japanese textbook which describes this method. It is being practiced in many medical facilities.

Note 3:

Zhu's scalp acupuncture is a therapy that has been developed by Professor Ming-Qing Zhu at Beijing University of Traditional Chinese Medicine (which has absorbed the former Beijing College of TCM). Various therapeutic areas are used on the scalp and stimulated by needling, applying a unique technique. The technique is applied not only for the treatment of stroke, but also for a wide spectrum of other neurological diseases. Professor Zhu himself has introduced this technique in Japan and there is a Japanese textbook which describes this method. It is being practiced in a number of medical facilities.

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(The section of clinical applications continues on page 67)

Clinical Application: Trigenimal Neuralgia

Trigeminal neuralgia is a lancinating pain occurring in the area innervated by the trigeminal nerve that continues for short periods of time and is frequent in the elderly. The pain usually lasts only a few seconds, occurs suddenly and then disappears suddenly. Western medical approaches include pharmacotherapy, surgical treatment and nerve blocks; but neither of these treatment forms is 100% effective. Acupuncture and moxibustion treatment is effective, but the condition still remains intractable. Nevertheless, when various treatments have been tried without providing any relief, it may be possible to induce some relief, or in some cases, even cure the condition. Several treatment forms have been tried.

Bunshi Shirota recommended and performed the following treatment[1].

First, treat the acuppoints CV12, BL20, GV12, TE15, LI11, GV34, etc. with acupuncture and moxibustion for the purpose of adjusting the general body condition.

For the treatment of the first branch, the ocular nerve (causing pain of the upper eyelid, forehead up to the vertex; eye socket, eye bulb, tip of the nose, nasal cavity), the acupoints BL2, GB14, TE23, GB3, GB16, BL10, etc. on the affected side are needled, while the point BL2 is also needled on the healthy side.

Moxibustion: GB16, GB5, TE22, GB12, TE17, BL10, Sawada style LI4 and similar points are treated with moxibustion. In case of a neuralgia of the first branch in particular acupuncture and moxibustion treatment of the point BL10 should not be forgotten. This may induce a sudden relief of the pain.

For the treatment of the second branch, the maxillary nerve (pain in the lower eyelid, buccal region, upper lips, nasal wings, anterior portion of the parietal bone, upper row of the teeth. Pain of the pallate, nasal cavity etc.) on the affected side GB3, ST7, SI18, ST3, LI20, etc. are needled, TE22, SI19, GB5, TE17, LI10, etc. are treated with moxibustion. Furthermore, if there are any fine visible vessels micropuncturing in the buccal region, it could be beneficial to attempt letting blood from these vessels by puncturing them with the tip of No. 4-5 needles. This kind of blood letting frequently induces a sudden relief of the pain.

For the treatment of the third branch, the mandibular nerve (pain in the mental region, mandibular region, inferior dental alveoli, external ear, parietal region etc.) ST7, ST6, ST5, ST4, Ikoten, GB2, etc. are needled on the affected side, while moxibustion is applied to GB2, TE17, L97, Sawada style LI4, etc.

For the treatment of the second and third branch, needling of SI18, ST7, ST5, etc. on the healthy side or somewhat strong manipulation on the affected side can provide some relief of the pain.

In Meridian Therapy (channel based treatment) deficiency and repletion of the various channels are adjusted and reactive points treated with acupuncture and moxibustion. Sodo Okabe reported the following. The first branch of the trigeminal nerve is governed by the bladder and stomach channels, the second branch by the stomach, gallbladder and tripple heater channels and the third branch by the large intestine and stomach channels. Reactive points for the first branch include BL2, for the second branch ST1 AND ST2, Shihaku and for the third branch ST5, ST6 AND CV24. Needle retaining is probably most suitable for the treatment of trigeminal neuralgia. From the affected painful regions stiffness and muscle tension spreads over the parietal region, covering neck, shoulder and back. Searching these areas for indurations and tenderness allows to select the treatment points and needles have to be retained here until the pain disappears[2].

Okabe determined the basic acupoints required for the treatment of this disease and conducted his treatment following the relevant pattern. He stated the following "Select reactive points from among the basic points including GB14, ST1, BL2, GB3, ST7, LI20, ST6, SI18, CV24, Iko, ST9, LI18, BL10, GB20, GB21, BL12, GV14, BL11, BL43 and LI15 for the treatment."

The relevant patterns can be divided into two types. The first type is the greater hand yin pattern, for which SP4, ST44, LI10, LI11, ST36, LI4, LU7 and

similar points are selected. The second type, the lesser foot yin pattern, for which KI10, KI7 and KI3, etc. are needled. The point LI15 is effective for facial edema and should be treated with a large number of moxa cones.

Okabe also stated the following. "Even for diseases of the upper half of the body the conditions will not improve properly unless the patterns for liver, kidney, lung and spleen deficiency are adequately identified. Local treatment alone certainly does have some effect, but will not lead to a general improvement. Both in cases of trigeminal neuralgia as well as paralysis, the channels on both the affected and healthy side have to be needled in order to adjust them, even if the affected area is limited to one side of the body."[3)]

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Okabe was invited in February 1973 to the (former) Soviet Union and went to Moskow to treat General Zhukov, who suffered from trigeminal neuralgia. At that time his patient was about 77 years old. The trigeminal neuralgia reportedly affected the entire left side of the face and neck the patient had been in pain for about 5 years. Okabe needled important points for the first, second and third branch of the nerve to a depth of about 2-3 mm while tonifying both kidney and liver channels. He said that in these cases the area from the neck upwards is extremely important and believes, based on personal experience, that needling of the neck can provide considerable relief of the facial pain. Thus, the condition of General Zhukov improved constantly day by day and Okabe returned to Japan three months later. In September he went again to the Soviet Union, spent about 2 weeks there and the treatment resulted in an almost complete recovery[4)]. This story was derived from an essay collection written by Okabe himself. It shows, that he apparently diagnosed a foot lesser yin pattern, tonified the correlated liver channel, and needled important points on the face.

Clinical Application: Facial Palsy (Bell's Palsy)

Bell's palsy is a good indication for acupuncture and moxibustion treatment. In this condition the severity of the paralysis symptoms during the first few days of the disease are an indicator of the prognosis. Yet, in about 60% of the cases it heals without any treatment, so that even if acupuncture and moxibustion is effective, it would be difficult to express the degree to which this treatment modality contributes to the recovery. Nevertheless many patients seek acupuncture and moxibustion treatment, when western medical therapy have been ineffective. Currently, in the absence of therapies based on hard evidence, acupuncture and moxibustion treatment has been proven worth a try during all stages of the disease.

The earlier the treatment with acupuncture and moxibustion starts, the better the prognosis. In particular daily treatments should be administered over several days following the onset. In many cases in which a certain degree of paralysis remains even after a course of several months, complete recovery many not be possible.

Bunshi Shirota recommended mainly adjusting the general physical condition with moxibustion and the use of acupuncture as a local treatment. Patients were instructed to perform daily moxibustion at home.

Acupuncture:

BL2, GB14, TE23, GB3, SI18, ST3, ST4, Ikoten, ST6, ST5, ST7, TE17, BL10, GB20, TE15, BL18, LI11.

Moxibustion:

CV12, GV12, BL12, BL18, BL20, LI10, GV34, GB2, TE22, GB2, GB16.

For the face thin No. 2-3 needles are used and inserted superficially (to a depth of up to 1 cm). Occasionally, threadlike moxibustion is also performed[1].

Sodo Okabe made the following statement "Considering that the face is the affected body part suggests the occurrence of anomalies in the brighter yang channels of both foot and hand. For this reason, essential points on these channels should be added for the treatment of the roots. For the face, acupoints of the bladder channel like BL2, gallbladder channel GB6 and EX-HN5, small intestine SI18, stomach channel ST1, ST4, ST5, ST7 and LI20, large intestine channel Geiko, etc. are selected depending on the symptoms. At the same time stiffness of the neck and shoulder on the affected side and tenderness should be noted. In particular, the region in front of and behind the sternocleidomasteiod muscle should be checked for indurations and tenderness. Selecting points here is important in order to relieve increased tension and stiffness over the shoulders and back.

Needles should be inserted superficially to a depth of 1 to 2 mm and retained for a while. Hemorrhage is particularly likely to occur on the face, so that shallow needling should be a matter of course, while indurations and tender areas on the neck allow somewhat deeper needling. In general, if the limbs are cool, care should be taken to warm them. The face is particularly related to both arms and legs, so that warming arms and legs can be considered an important point for a successful treatment."[2]

Isaburo Fukaya did not use any needles, but only moxibustion for his treatment. He chose his therapeutic points not on the face, but mainly on the back, including GV14, GV12, SI14, BL18, BL15, BL14, GB20, BL20 and similar points and applied three extremely small moxa cones (half the size of a rice grain) each on these points. Targeting tender acupoints the disappearance of tenderness or indurations during the treatment decreased the relevance of those points for the treatment. The point Saninko on the leg was always selected. Usually moxibustion is not done on the face, but when palpation revealed a reaction, points like SI19 or GV20 were treated with moxibustion. Sometimes it is necessary to apply moxibustion several dozen times until its heat is felt[3]. He reported several cases in which he achieved a complete cure with this method.

Besides ordinary acupuncture and moxibustion treatment, electroacupuncture is also frequently used for this disease. Umeda reported that strong electric stimulation in new cases within 2 weeks after onset may lead to nerve degeneration and thus may aggravate the condition, so that for the treatment during this period only shallow needling should be

used[4]. Tsukayama also reported that during the early phase mostly needle retaining was used, while electroacupuncture was often used once the paralysis had become fixed to a certain degree[5]. Arai et al. reported they achieved improvements in various evaluation scores treating patients suffering from sequelae of facial paralysis with asynchronous transdermal low frequency electrization (AET)[6].

Moreover, micropuncturing to let blood is also very effective for this disease. In particular, if there are any fine visible vessels micropuncturing in the buccal region on the affected side should always be used to let blood. Even a minimal amount will be effective. Ordinary needles would be sufficient for this purpose, but there are only very few reports on this form of micropuncturing.

Among the diseases causing facial palsy there is also a viral infection of the geniculate ganglion with the herpes zoster virus, causing the Ramsay Hunt syndrome marked by poor prognosis. Acupuncture and moxibustion treatment is effective, but compared to Bell's palsy the effectiveness is insufficient.

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Clinical Application: Low Back Pain

Low back pain can have various causes, and depending on the cause, requires the corresponding specific treatment. Acupuncture and moxibustion treatment is suitable for low back pain of any origin.

Shirota frequently used the following treatment points for both acupuncture and moxibustion.
CV12, ST27, BL20, BL23, GB25 (Sawada style), BL25, GV3 (waist), BL32, Onodera's gluteal point, Kampu, GV34, LR4.

Occasionally BL18 may be required. GB26 or GB28 can also be required. In either case, spots of marked tenderness or induration are needled. In case of a strained back (acute myofascular low back pain), application of acupuncture and moxibustion close to the vertebra at the level of BL26 can be very effective. Generally, needles need to be inserted to a depth of 3 to 5 cm, but when the patient has a fever like during a cold or immediately thereafter, needling for low back pain to a depth of 1.5 to 2 cm will be sufficiently effective. If in these cases the entire back musculature is tender, scatter pricking targeting the muscles along the second line of the bladder channel from top to bottom often elicits a needle sensation (Hibiki) and produces an immediate, marked effect.

Among the forms of low back is also one that originates from neurasthenia and requires the use of the acupoints GV20, BL10, BL11, GV12, etc. Without calming the central nervous system in this way, improvements are rather unlikely. Subdermal needles may be unexpectedly effective for pain of the lumbar myofasciae causing pain while lying in bed. In case blood network vessels are visible in the lumbar region, blood letting from these can be markedly effective[1].

Keiraku Chiryo (meridian therapy) is performed in accordance with the descriptions in the classics. For example, the text *Shinkyu Choho Ki* (1718), published about 300 years ago in Japan, states that "greater yang low back pain is pain extending from the nape of the neck to buttocks, rendering the back heavy. Brighter yang low back pain prevents the patient from looking to the sides and suffer from stiffness. Lesser yang low back pain feels like a needle piercing the skin and prevents the patient from assuming a supine position. Greater yin low back pain feels feverish and like a tree in the back, leading to leakage of urine. Lesser yin low back pain is like a bent bow, causing silent discomfort." Currently, acupuncture and moxibustion therapists perform their treatment referring to this description.

Sodo Okabe said, "The waist is the pivot of the entire body. Here six channels are involved. Among these, treatment of the lesser yang channel is of central importance. In case of a strained back not overly long after the onset of the symptoms, strong reactions are found along the bladder channel, but in prolonged cases the condition will be difficult to cure unless the lesser yang channel is treated. Immediately after the onset of the pain, when the patient is unable to move, treatment of the acupoint Chufu of the liver channel is beneficial."[2)]

The "Taikyoku Therapy" developed by Ken Sawada and further improved by Shirota is currently practiced in Japan. Kase, et al. used Taikyoku Therapy and conducted the following research.

A total of 64 patients with low back pain were divided into four groups:

Group A: receiving Taikyoku Therapy + low frequency electroacupuncture;

Group B: only Taikyoku Therapy;

Group C: only low frequency electroacupuncture;

Group D: sham acupuncture.

The results were evaluated based on VAS, and according to the JOA score, superior improvements were observed in the groups A, B and C, but not in group D[3)]. This showed that either therapy is effective so some degree, while further studies will be required to determine which of these is superior.

As in this study, low frequency electroacupuncture is currently widely used in Japan and produces considerably good therapeutic results. The use of various other new therapies for the treatment of low back pain have also been reported. A therapy using trigger points is one of those and has already developed in Japan into an established treatment form. Research showed that it yields better results than simply the treatment of tender points[4)].

Moxibustion, warming needle, intradermal needles, pricking of the network vessels and Ryodoraku and many other treatment forms are also practiced, but there are few publications in the form of case reports.

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Clinical Application: Osteoarthrosis of the Knee

Osteoarthrosis of the knee is a disease that rarely required treatment in Japan until 1950. Two reasons for this are conceivable. The first was the rarity of progressive aging of the population, where increasing age is associated with the development of degenerative diseases. The other reason was that the Japanese people at that time spent a major part of their daily life on tatamis (mats) and had the habit of sitting with their legs tucked under. This life style required simultaneously maximum bending and stretching of the knee joints, the use of the muscles around the knee joint in order to stand up from the sitting position. In other words, they were training themselves. Later, the incidence of this disease increased in association with the westernization of the life style of the Japanese people. In conjunction with the expected, even more advanced aging of the population, its incidence will probably continue to increase in the future. Patients usually consult orthopedists and undergo a variety of therapies, but currently there is still no decisive treatment. Acupuncture and moxibustion is one extremely valuable therapy and recommended in particular during the early stages of the disease.

Bunshi Shirota has used acupuncture and moxibustion to treat this disease and reported to have achieved a cure within a period of 2-3 months. This claim does not apply to cases with progressive deformation. He recommended the following acupoints: ST34, SP10, EX-LE5, LR8, ST36, GB34, BL55, etc.; but in actual practice he often applied acupuncture locally to the knee and performed whole body treatment with moxibustion and thus obtained his results[1].

Sodo Okabe selected points above and below the painful area on channels passing through it. If the painful area itself was warm (feverish), he drained the pathogenic heat, while if the region was cool, he applied a large number of moxa cones. Since improvements often cannot be obtained by local treatment alone, he treated the patients according to the presenting pattern. The knees tend to be prone to collecting fluid, in which case he reportedly applied a treatment generally promoting water management[2].

Currently, the therapy for this disease is based on the experiences of leaders in this field like the above mentioned therapists. Nakao asserts that it is necessary to pay careful attention to the point selection depending on the painful or injured area in order to obtain correspondingly good therapeutic results[3].

Ochi expresses his view that representative acupoints for the treatment of this disease would be ST36, SP9, GV34, GV31, EX-LE4 (inside), Shitsugan (outside), BL40, SP10, ST34, ST32, etc. among which the appropriate points for the treatment at hand are selected. Moreover, in order to examine the importance of a combination therapy comprising acupuncture and exercise therapy, the following trial was performed. Forty-eight patients (12 men and 36 women) for whom roentgenography identified in the early or intermediate stage of the disease were included in the study. They were divided into three groups: Group A: 18 patients (acupuncture, SSP combination therapy); Group B: 20 patients (acupuncture, SSP, exercise combination therapy); and Group C: 10 patients (only exercise therapy). The therapeutic results as evaluated with the JOA score and measurements of muscle strength with a sthenometer showed that in the fourth week after treatment began, a reduction of the pain had been achieved in groups A and B, while an increase in knee extensor power was observed in groups B and C. Based on these results, it was stated that a combination of acupuncture and exercise therapy produces even better results[4].

Besides ordinary acupuncture a number of other treatment forms have also been tried.

Low frequency electroacupuncture is frequently used. Furukawa et al. applied a 50 Hz stimulus to the knee joint region and reported on the observed course[5,6]. Concerning pain the treatment was reportedly effective regardless of the grade, but improvements of the activities of daily living are reportedly difficult to achieve in cases of advanced gonarthrosis.

The warming needle method too is an effective

treatment form. Tanaka has presented the method for treatment with the warming needle in supine position choosing the points ST32 (rectus femoris muscle), SP10 (vastus medialis muscle), Kampu (vastus lateralis muscle), Shitsugai (articular space), SP9 and GV34, and in the prone position KI10 (articular space), BL55 (triceps muscle of the calf), SP9 (triceps muscle of the calf), Soto Chokuritsu (biceps femoris muscle) and the Chokuritsu (semimembraneous muscle)[7].

Moxibustion is an effective treatment for this disease, but so far there are few written reports on it. Recently, Uryu, et al. used sham moxibustion in a controlled clinical trial (CCT) to examine the effects of warming moxibustion He divided the patients into a warming moxibustion and a sham moxibustion group and reported the treatment to be effective for the pain[8].

Kuroiwa, et al. reported the practical application of trigger points during acupuncture treatment. The use of single points was rare and they reasoned that it is necessary to use several points during the acupuncture treatment in order to guarantee adequate relaxation of the muscles[9].

Otherwise network vessel pricking is also effective. In particular in cases of marked swelling of the knee joint dramatic effects are seen. Therefore many therapists do use this modality, but the number of reports is small.

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Clinical Application: Periarthritis Humeroscapularis

Periarthritis humeroscapularis is a disease occurring mainly in people in their 50s characterized by pain in the shoulder joint and limitation of movement. In Japan it has been termed "Fifty-age shoulder" because it develops mainly after that age. The western medical approach to the pain is rest, administration of analgesics, and injection of steroids or sodium hyaluronate into the synovial sac. This treatment is combined as early as possible with exercise therapy within a range that does not cause pain.

It is a good indication for acupuncture and moxibustion treatment which is often markedly effective. Shirota stated that mild cases of the condition may heal within a period of 2 to 3 weeks, while moderately severe cases may require 1 to 1.5 months. In severe cases, the treatment may require more than 3 months. Yet, a cure is usually achieved within a period of 3 months. Treatment may consist solely of moxibustion, but a combination of acupuncture and moxibustion reportedly will accelerate the cure. He recommends the following treatment.

Acupuncture and moxibustion:

GV12, TE15, BL43, SI11, SI10, LI15, LI15, LU1, LU3, LI11, LU4, LU6.

In patients with spontaneous pain, the acupoints BL10, BL11, SI6, etc. on the affected side are often required. In order to alleviate spontaneous pain and limitations of movement at an early stage, obvious tender spots around the shoulder joint were needled shallowly as required. Intradermal needles were also applied[1].

Isaburo Fukaya treated this disease with moxibustion only. He carefully observed the movements of the muscles related to the shoulder joint, searched for tender spots within these muscle groups, and palpated for indurations. Mostly he used SI11, SI9, SI10, LI14, TE12 and on the front side LU1, LU2, LU3 and LU4. In particular, Ketsubon, or spots a little lateral of it, is a famous moxibustion point for the treatment of this condition. Otherwise, supplementing the action of aforementioned acupoints, BL41, BL43, GB21 and similar points on the back constitute the main therapeutic points[2]. Fukaya has reported highly interesting case studies such as presented below:

Patient: A 58-year old woman with a limited range of motion of the left arm and associated pain.

She visited a local physician because the arm was uncomfortably painful during the night and treated with injections that were completely ineffective. She also underwent shiatsu and moxibustion treatment, but the condition nevertheless remained unchanged. Fukaya applied seven cones half the size of a rice grain to the acupoints GB21, BL41, SI11, TE12 and SI9. When he instructed the patient to raise her arm, the patient replied, "I cannot possibly be able to raise my arm so quickly. Besides, moving it will be painful."She did not even try to raise the arm. I told her, "The stiffened muscles have been relaxed, so you will be able to raise the arm painlessly, so please raise it." When the patient doubtfully tried to raise the arm, it went up smoothly. When requested to turn it onto her back, she could effortlessly turn the arm. Yet, she still felt pain at the shoulder joint. When the patient was requested to assume a slightly oblique posture, pressure a short distance lateral of ST12, an excruciatingly painful spot was revealed. Pressure on the point LU1 elicited the same kind of pain. Following application of seven cones of moxa as described above on these two points, the patient could rotate the arm easily. Delighted, the patient raised and rotated her arm. Fukaya made the following comments regarding this case. "The patient should be afforded this kind of relief from the pain in exchange for enduring the very hot moxibustion. However, this patient was not yet cured. On the following day there was a relapse but she now had developed faith that the moxibustion treatment would work so the treatment could be continued. For a patient with these symptoms, first apply moxibustion to important points for the treatment of this disease. Repeat this treatment and then check for the remaining pain. Then you may look for the next therapeutic points. Regarding the point selection, good effects will not be obtained unless there is marked tenderness. This is very important[2].

Although this disease is marked by lesions of the shoulder joint, it can often be cured by using acupoints on the legs. In the 1950s, Sorei Yanagiya, a leader of Japanese acupuncture and moxibustion at that time, was once asked during a lecture to treat the periarthritis humeroscapularis of one of person in the audience. Checking the pulse of that person he predicted, "This will be cured by the great needling method," and needled Fukuryu on both sides. When he next needled Gokoku on the left, the patient could lift the right arm higher than had been possible so far. That had been a feat of agility of about 2-3 minutes[3].

This is just one example, but many acupuncturists take a similar approach.

Nishida takes the meridians, channels, and collateral channels into account that pass through the vicinity of the shoulder joint and performs the following type of treatment[4]. First, regarding the sequence of the treatment, he uses acupoints on the legs, next points on the arms or else remote extraordinary points and then finally selects points around the shoulder joint, extraordinary points or irregular reactive spots (Aze points).

A. In case of pain on the anterior side of the shoulder joint, use the acupoints SP9 or SP8 of the greater yin spleen channel of the foot associated with the greater yin lung channel of the hand. Needle LU5 next and finally perform a regional treatment.

B. In case of pain on the lateral side of the shoulder joint, use the acupoints ST38 of the stomach channel associated with the brighter yang large intestine channel of the hand and then needle strongly tender points among LI11, LI10, or LI4 of the large intenstine channel of the hand.

C. In case of pain on the posterior side of the shoulder joint, first needle GB34 of the lesser yang gallbladder channel of the foot associated with the lesser yang triple heater channel of the hand, then needle TE5, and finally TE14 and TE13 in the region of the shoulder joint.

D. In case of pain under the shoulder joint, first needle BL57 of the greater yang bladder channel of the foot associated with the greater yang small intestine channel of the hand on the affected side, next select SI3 on the affected side. For the regional treatment, the shoulder pain point, SI9 and irregular reactive spots are needled.

E. If GB26 on the affected side is very tender, needle TE5 and GB41.

F. If the shoulder joint pain streches over a wide area, retain the needles in ST38 and BL57 (in Chinese medicine penetrating needling from ST38 to BL57 is used, but separate needling is also effective).

Thus, for the treatment of this disease the channels passing through the region of the shoulder joint are frequently taken into consideration.

Tanaka palpates for reactive spots on the channels associated with the painful areas or channels associated with the relevant meridians, channels and collateral channels (for example the greater yang small intestine channel and the greater yang bladder channel, or the brighter yang stomach channel and the greater yin spleen channel) and says that the selection of very painful points is beneficial[5].

Sakamoto pricks network vessels if present and then applies cupping for nocturnal pain. Moreover, he says that in particular for the kidney yang deficiency type aggravated by cooling the regional application (to the shoulder joint) of warming needles is also beneficial[5].

References

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