

G. Garozzo

36.1 Introduction

Regarding Chinese medicine, there is always a little bit of prejudice by traditional medical doctors and it is often proposed as the last chance of therapy, whenever other treatments have failed to cure.

Studying acupuncture with my great Master and Professor, Nguyen Van Ngh, I could observe similarities between the traditional Western medicine and the Chinese one rather than highlight differences [1].

When we talk about medicine, we speak about man, as such, but more as a part of this universe. And it is this, or rather the laws that govern our universe, that make the two medicines (Western and Eastern) the same. The two medicine should never be regarded as conflicting with each other but rather agreeing on the pursuit of health for man.

Prof. Dr. Nguyen Van Nghi has spent all his life in the quest for integration between the two schools of medicine, and he did so through his 10-year study, being able to match part of the famous Rosetta Stone that would allow us to translate a language (such as the synthetic Oriental Medicine) into the analytic of our Western culture.

This integration should not be seen reductively in an explanation of the effects of acupuncture (considering the possible outcomes of Oriental Medicine) as the result of a reflex system. In literature, it has been reported from many years that acupuncture act at a spinal level, modulating the transmission of nociceptive information to the central nervous system and these concepts have been written. However, stimulating acupuncture points with needles, hands or anything else is not only “evoking a reflex”, but include a more complex emotional individual response. In the same

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manner, smiling “after receiving a caress” or “meeting someone you love” is not only a reflex.

Firstly, we want to focus that Traditional Chinese Medicine is one of the oldest Schools of Medicine. The concepts with which it deals with Traditional Chinese Medicine starts considering that man is indivisible, and that there is an intersection between the soma and the spirit; therefore, physiological, chemical and pathological rules are based on this concept of energy, called “qi”. Disruptions of the flow of energy through the body are believed to be responsible for disease. It is a genuinely fascinating medicine, its diagnostic approach which takes into account the uniqueness of Man is very advanced considering unsuspected relationships still to be proved by western medicine.

For example, in Oriental Medicine we speak of the *heart* as the center of the whole human being and as emperor (using the way they speak) of a universe related to it. Saying so, it explains the functions and relationships, and one of them is its ability to be the element of “fire” of the entire body (the one that heats and burns). Well, myocardial cells produce two hormones, ANP and BNP, that are able to stimulate lipolysis and thermogenesis, two processes known to consume fats (ANP was discovered in 1981 by a group of experts in Kingston, Canada, led by Adolfo J. de Bold, after noting that the injection of extracts of atrial tissue [but not ventricular] in laboratory mice caused abundant natriuresis [release of sodium in the urine]).

The ANP is involved in the homeostatic control of water, sodium, potassium and fat that is present in the organism. It is released in response to an excessive increase in blood volume (high blood pressure) by particular myocytes, in the auricula of the right atrium of the heart. The ANP acts on the kidneys, to reduce the water, sodium and adipose loads in the circulatory system, thereby lowering blood pressure.

BNP (brain natriuretic peptide) is a vasoactive hormone secreted by the heart – to be exact, by the ventricles – in response to excessive dilation or increased wall stress.

So the two medicines speak the same language but must be analyzed by a tool that can be the equivalent of the Rosetta Stone.

Starting from this premise, it is therefore imperative in order to understand the explanation of pathological mechanisms, to know a bit about the organization of our bodies according to the Eastern point of view.

From an anatomical point of view, provided with the understanding of the anatomical and physiological common acquisitions, Chinese medicine tells us about other structures of different types of energy. Briefly, we can say that in addition to muscles, tendons, blood vessels, tissues, and others, Chinese medicine tells us about the energetic pathways that give us the opportunity to communicate and distribute the set of all the energies in our bodies.

These are called meridians, or as they are called in Chinese “jing luo.” In fact, Chinese medicine does no more than clarify the effect and function of substances such as hormones, whose qualities and functions we know, but we believe then that they can only move through traditional anatomical pathways.

So to exemplify all, we say that there are different locations and functions of this pathway, enabling us to divide them as follows:

1. Main meridians or jing mai (12)
2. Secondary meridians are the following:
 - (a) jing jin or tendino-muscular meridians (associated in group of three and divided into yin and yang meridians);
 - (b) jing bie or divergent meridians (associated in pairs respecting Internal-External the rule, or “biao-li” in Chinese);
 - (c) connecting meridians at the Luo points: the 12 regular meridians, externally-internally related in pairs, are linked together by the Luo (connecting) points e related connecting meridians (16 for the former and 12 for the secondary in order to correlate each yin primary meridian with its yang primary meridian); and
 - (d) qi jing ba mai or 8 extraordinary vessel (in number of eight associated in pairs).

The different energies can instead be divided into several groups, but for the sake of simplicity, just remember:

- (a) Ying Qi – also called Nutritive Energy
- (b) Wei Qi – also called Defense Energy
- (c) Jing Qi – also called Acquired Energy
- (d) Shen Qi – also known as Mental Energy
- (e) Yuan Qi – also called Ancestral Energy
- (f) Tian Qi – also called Respiratory Energy
- (g) Gu Qi – also called Food Energy
- (h) Zong Qi – also called Pectoral Energy

36.2 The Tendon-Muscular Meridians (TMM)

The TMM are large vessels that:

1. Start from jing distal points
2. Affect the tendons and muscles
3. Do not penetrate the organs and viscera,
4. Their paths go from bottom to top
5. Play a significant role in the disease known as “external factor”
6. Are not subject to the laws of Yin/Yang alternation.

The three yang meridians of the foot correspond to spring, which are the first, second and third months of the lunar year:

- TMM Stomach is the first month
- TMM Bladder is the second month
- TMM Gall bladder is the third month.

The three yin meridians of the foot correspond to autumn, i.e., on the seventh, eighth and ninth months of the lunar year:

- TMM Spleen/Pancreas is the seventh month
- TMM Kidney is the eighth month
- TMM Liver is the ninth month

The three yang meridians of the hand correspond to summer, i.e., the fourth, fifth and sixth months of the lunar year:

- TMM Intestine is the fourth month
- TMM Small intestine is the spring month.
- TMM San Jiao (also commonly and incorrectly called Triple Burner) is the sixth month

The three yin meridians of the hand correspond to winter, i.e., the tenth, eleventh and twelfth months of the lunar year:

- TMM Pericardium is the tenth month
- TMM Lung is the eleventh month
- TMM Heart is the twelfth month

36.2.1 Bladder

Disorders of the TMM of the bladder (Fig. 36.1) are popliteal muscle contractures, the feeling of a broken spine, contracture of the tendons and muscles of the neck, inability to raise the arm, stabbing pain in the axilla and the supraclavicular fossa, headache, and facial neuralgia.

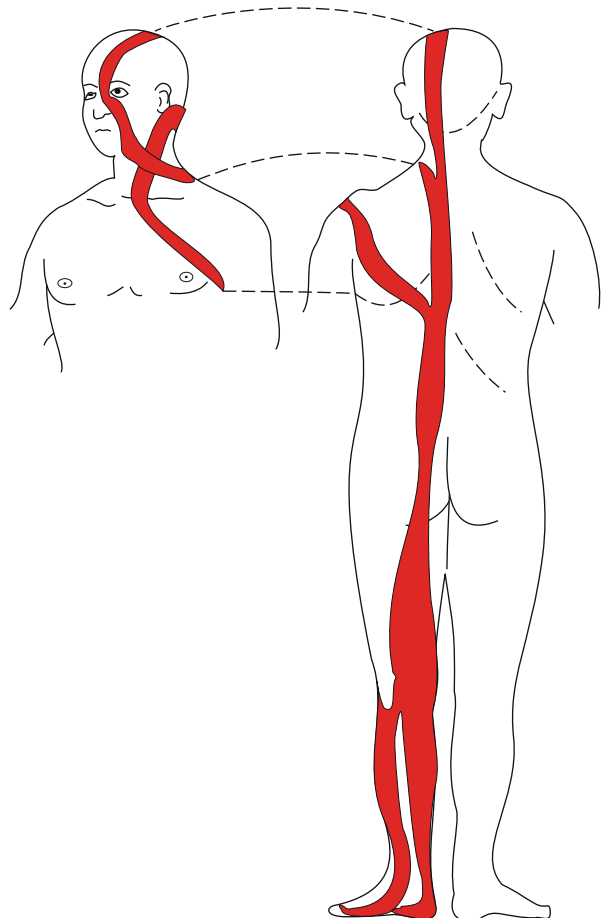
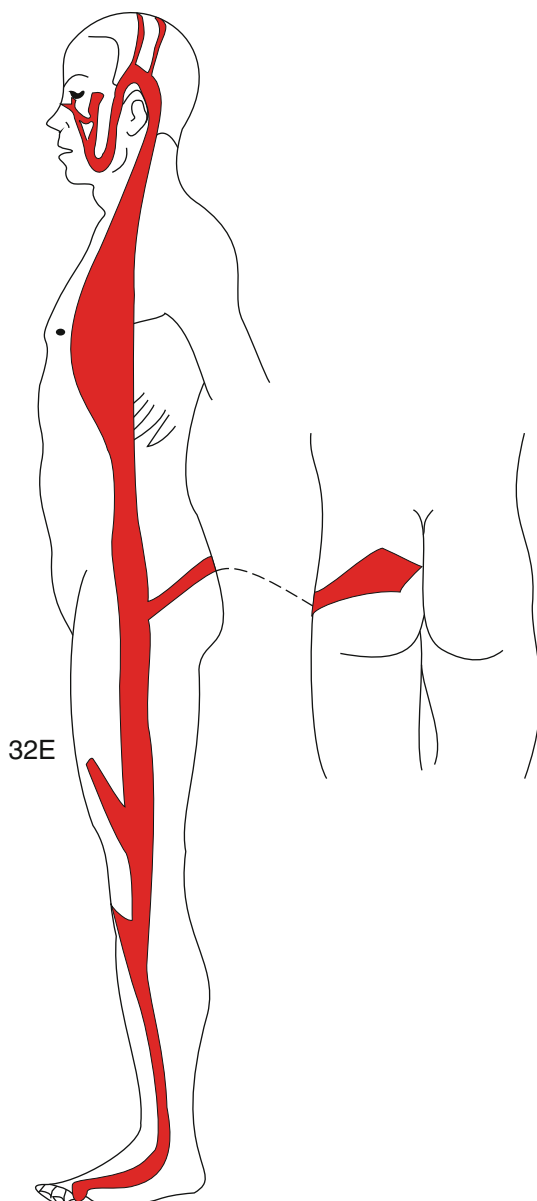


Fig. 36.1 Start at the external corner of the nail of the 5th finger (B67) up to the lateral aspect of the knee (B39), from here: a vessel goes down to the heel, back to the popliteal fossa (B40); a vessel up to the buttock, the medial part of the back and reaches the neck (B10), reaches the base of the tongue, a vessel reaches the skull down to the m around the eye (B2), cheekbone; a vessel reaches the armpit, St12 and reaches the mastoid

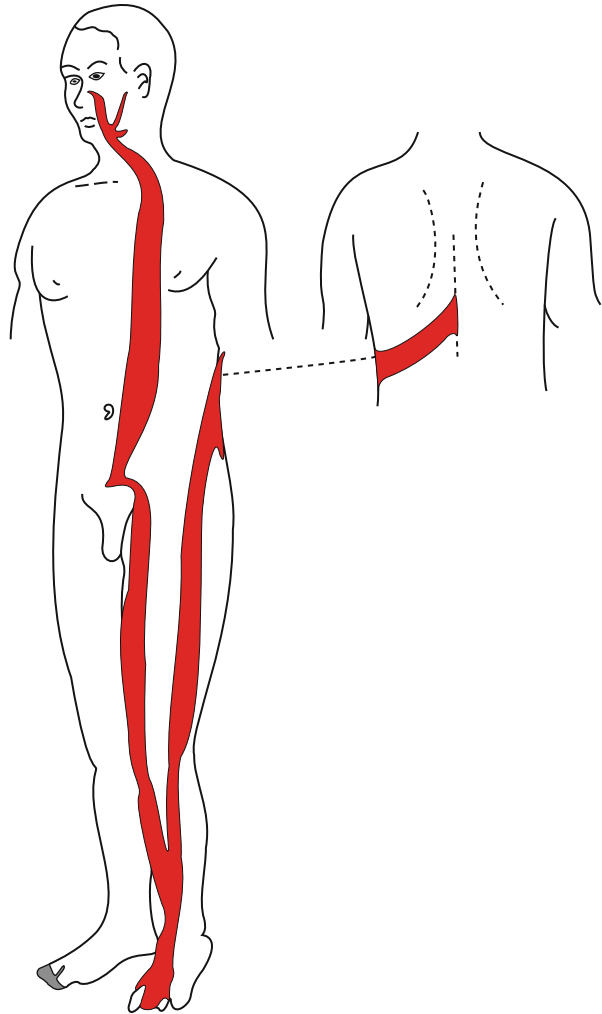
Fig. 36.2 Starts at the external nail of the 4th toe (GB44), climbs the outside face of the legs, inserted on the knee, penetrates to the area of “rabbit crouching” (St32), reaches the thigh and the hip, where a vessel surrounds the buttock, and arrives at the coccyx (DU1). The main vessel climbs to the false ribs, divides into two branches, one arriving at the breast to the supraclavicular fossa St12, the other goes to St8, rises to Baihui, comes back down to the chin and cheekbone SI18, and enters the bone in the external commissure of the eye



36.2.2 Gall Bladder

Disorders of the TMM of the gall bladder (Fig. 36.2) are the inability to stretch and flex the knee associated with pain in the popliteal fossa, pain in the antero-external part of the thigh to the hip, pains in the side up to the ribs, side, chest, breast, supraclavicular region, contracture and pain in the leg up to the lateral malleolus, and contracture of the 4th toe.

Fig. 36.3 Starts from the external side of the nail of the 2nd, 3rd and 4th toe, rises to the instep and is divided into two branches. The external branch goes up to the Huan Tiao hip point (GB30), goes to the false ribs and is inserted on the spine (DU9). The internal branch goes from the dorsum of the foot, climbs to below the patella and joins the regular meridian of GB; The vertical section runs through the area of the “rabbit crouching” (St32), arrives at Scarpa’s triangle, up to RM2 and goes to the m. rectus abdominis, rising up to St12 to the cheekbone (SI18) and to the nose, then to the regular meridian of bladder



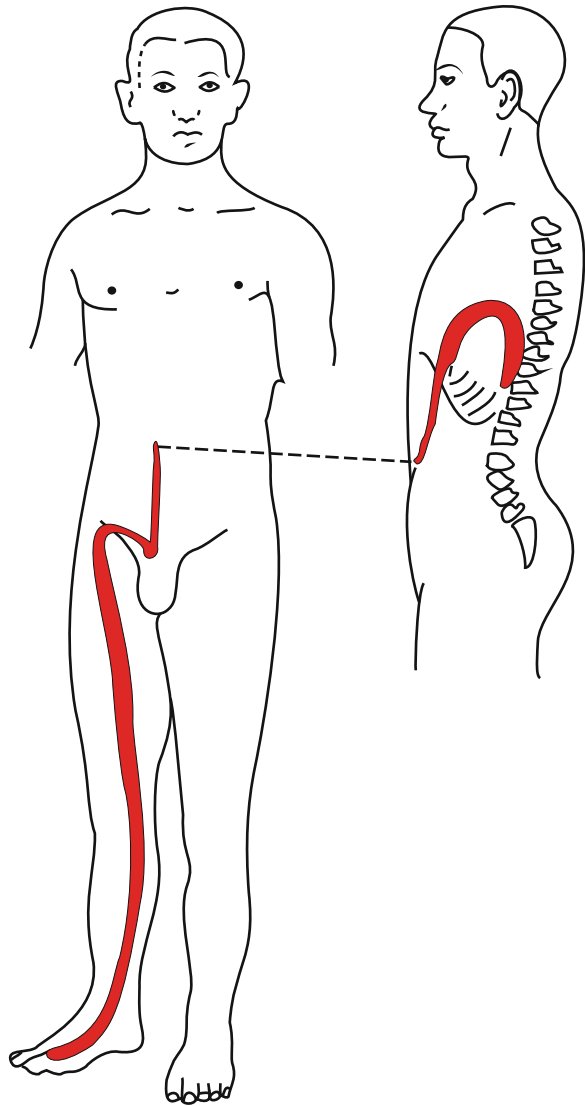
36.2.3 Stomach

Disturbances of TMM of the stomach (Fig. 36.3) are swelling below the groin, orchitis, contracture and stiffening of the dorsum of the foot, contracture of the thigh area known as “rabbit crouching,” contracture and tightening of the abdominal muscles, sudden deformation of the mouth, pain radiating to the supraclavicular fossa and cheek, contracture of the 2nd toe and leg.

36.2.4 Spleen/Pancreas

Disturbances of TMM of the spleen (Fig. 36.4) are pain in the tibia and knee, pain in the medial side of the thigh, up to the groin, shooting pains in the external

Fig. 36.4 Starts at the medial corner nail of the big toe, goes to the internal malleolus, ascends along the medial aspect of the thigh, reaches Scarpa's triangle, converges towards the external genitalia, penetrates the abdomen, reaches the navel, and then the ribs and the internal part of the thorax. A vessel, from the external genitalia, arrives at the spine

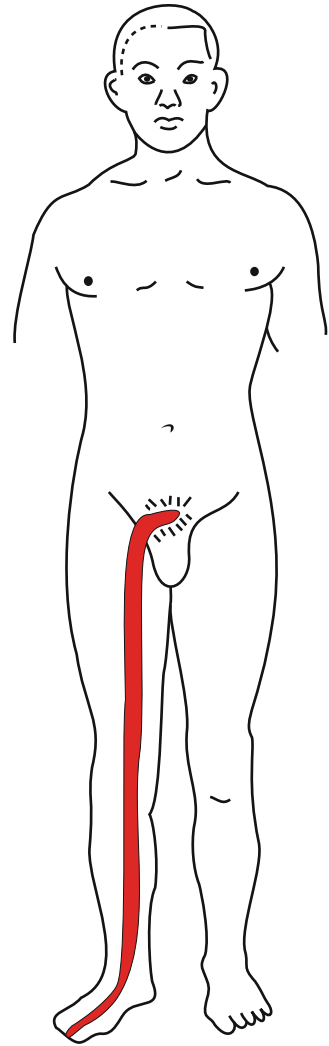


genitals, pain in the navel and hips, widespread pain in the chest and spine, contractures and cramps in the big toe and the internal malleolus.

36.2.5 Liver

Disturbances of TMM of the liver (Fig. 36.5) are contractures and pain in the medial thigh muscle, pain to the tibia tuberosity and medial side of the knee, pain in the big toe up to the internal malleolus, and genital disorders with impotence.

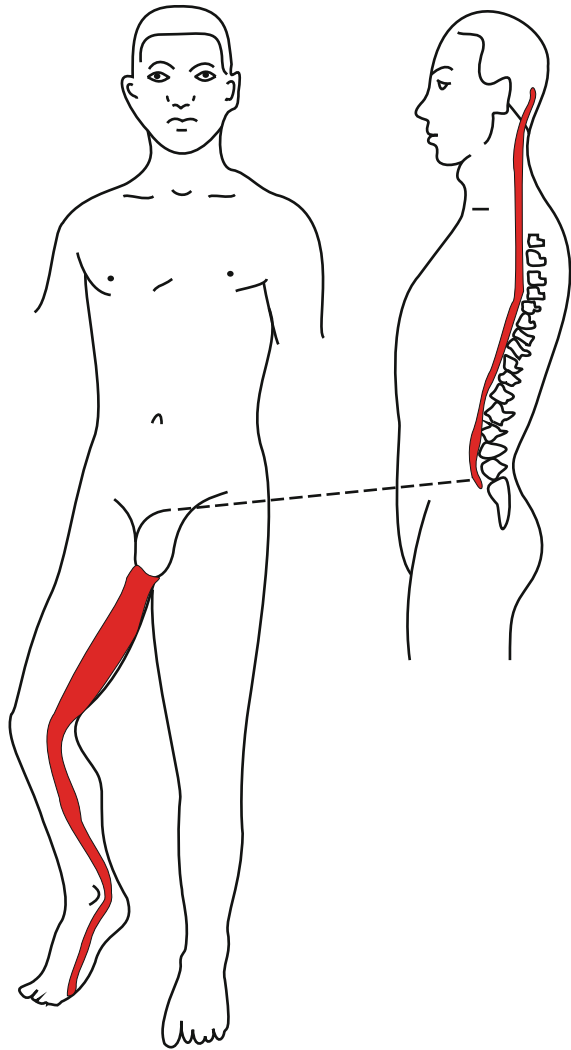
Fig. 36.5 Starts at the big toe, climbs in front of the internal malleolus, passes forward to the spleen jing jin, following the tibia right below the internal tuberosity, up to the groin, converges to the external genitalia to get together with other MTM in the suprapubic region to RM3



36.2.6 Kidneys

Disturbances of TMM of the kidney (Fig. 36.6) are contractures and pain along the entire path, contractures of the plantar muscles, abdominal contracture with the sensation of an anterior weight on the body associated with limiting the ability to bend backwards, abdominal contracture to the external side with a sensation of weight lumbar associated with a limitation to bend forward.

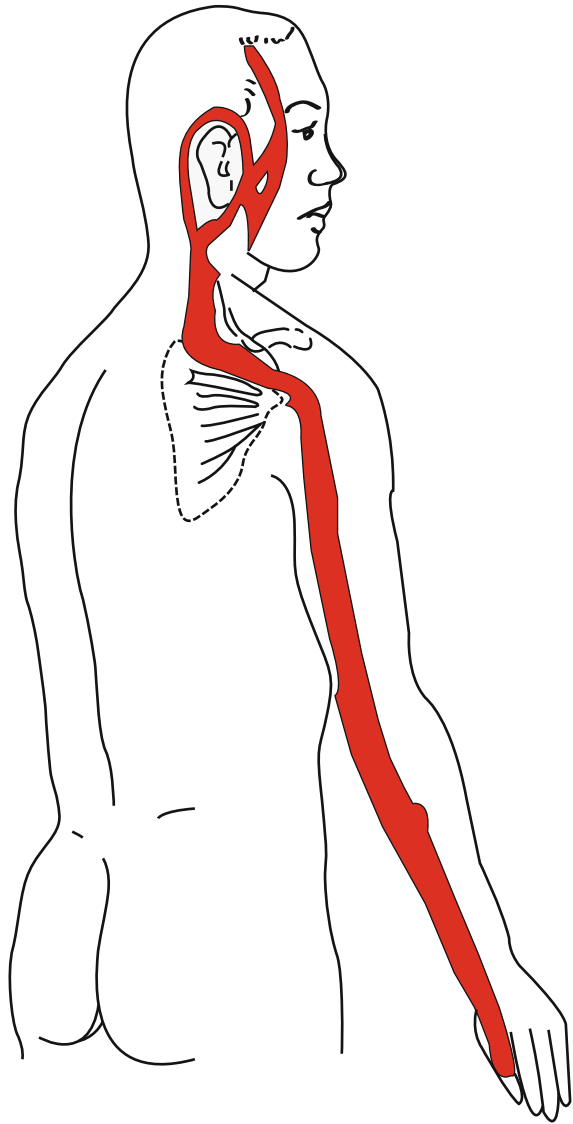
Fig. 36.6 Starts below the 5th toe, reaches Ki1 and follows the TMM of the spleen up to the internal malleolus. Reaches the heel, ascends along the medial aspect of the leg to the internal tuberosity of the tibia, then up to the groin. Converges in the genital region, penetrates the abdomen (RM3) and following the anterior aspect of the spine, a vessel starts to the genital area, passes through the buttock of the opposite side, follows the lateral aspect of the spine, up to the occiput and joins with the TMM of the bladder to B10



36.2.7 Small Intestine

Disturbances of TMM of the small intestine (Fig. 36.7) are pains in the back side of the shoulder to the neck, hearing loss, pains in the ear and chin, eyes closing a moment before looking, muscular contracture of the neck (torticollis), possible pain throughout the path of TMM, internal side pain of the arm from the armpit to the little finger.

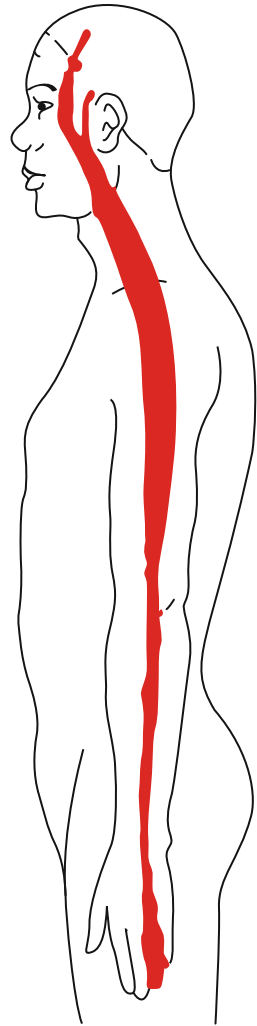
Fig. 36.7 Starts at the external side of the little toenail, goes to the medial epicondyle, reaches the armpit, goes around it, goes to the back side of the shoulder, then up to the neck where it divides into two branches: the secondary branch goes to the mastoid, goes around the ear, then to the jaw and up to the outer canthus of the eye. The main branch goes on the corner of the jaw, St6, passes in front of the tragus, up to the outer corner of the eye and ends at the fronto-parietal region



36.2.8 San Jiao

Disturbances of TMM of san jiao (Fig. 36.8) are contracture and cramping of the entire path, contracture and retraction of the tongue.

Fig. 36.8 Starts at the external corner of the nail of the 4th finger, goes to the wrist, follows the medial part of the forearm, inserted the olecranon, and climbs up to the shoulder and neck, joins the regular meridian, arrives at the corner jaw (SI17) and is divided into two branches: a vessel enters the throat, reaches the base of the tongue; a vessel from the corner jaw goes to St6, passes in front of the ear, comes to the outer corner of the eye, and fits on the front of the St8



36.2.9 Large Intestine

Disturbances of the TMM large intestine (Fig. 36.9) are “helmet headache,” inability to raise the arm, inability to turn the neck, pain, contracture and cramping on the path.

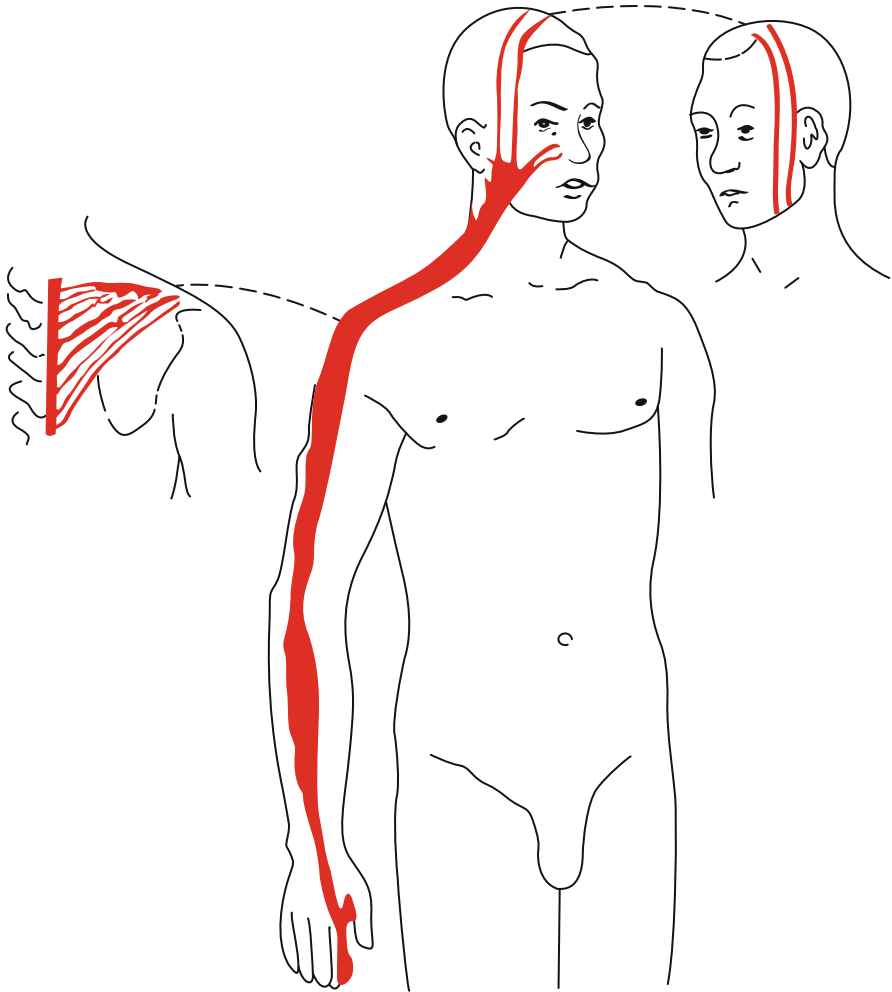
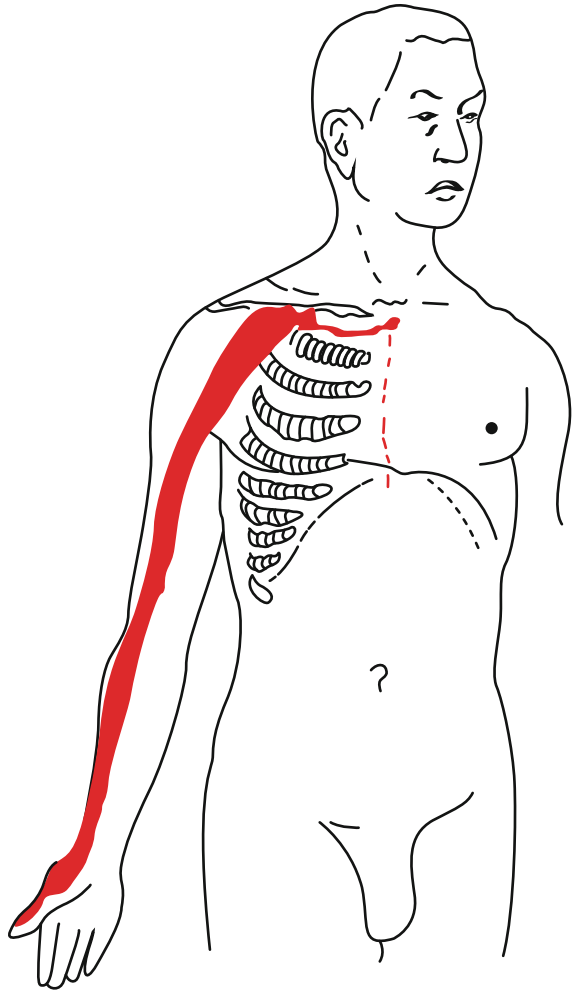


Fig. 36.9 It starts at the external corner of the index finger's nail, climbs along the outer edge of the arm (LI11), reaches the jianyu point (LI15) on the shoulder and is split: a branch goes around the shoulder and goes to DU14. The main branch rises to St6, and is divided into two branches, one in the jaw and the other in the cheekbone, one on the forehead at PC 9 up to the corner jaw on the opposite side

36.2.10 Lung

Disturbances of TMM of the lung (Fig. 36.10) are a sore shoulder that cannot be lifted, hypocondralgia, and sometimes haematemesis. The pain, very sharp, causes anxiety and oppression. The muscles on the course of the meridian are contracted or sore.

Fig. 36.10 Starts at the inner corner of the thumb nail, goes up to the thenar eminence, passes the external side of the wrist (L10), follows the forearm up to the center of the elbow, back along the medial surface of the arm, enters the armpit, goes to GB22, reappears in the supraclavicular fossa at St12, penetrates into the chest until it reaches the cardias, goes deeper into the thorax up to the cardias, then reaches the ribs up to RM17 and then to the diaphragm and the cardias



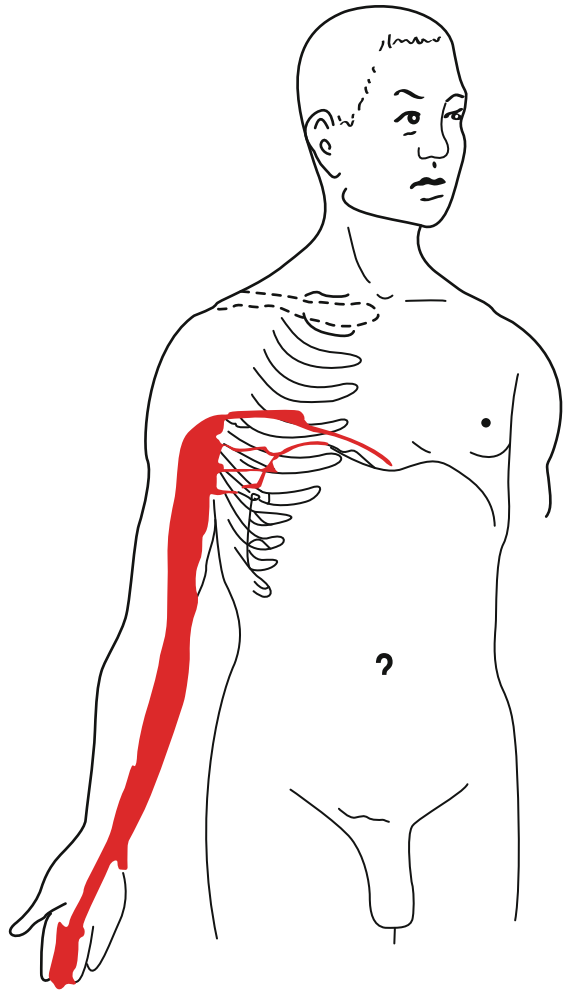
36.2.11 Xin Bao

Disturbances of TMM of xin bao (Fig. 36.11) are chest pain, axillary pain, oppression, contracture and pain on the course of the meridian.

36.2.12 Heart

Disturbances of the TMM of the heart (Fig. 36.12) are the clogging syndrome of the energy at the navel, contractures and pain with a sense of snare at the elbow, contractures and pain in the chest with a painful contracture along the path.

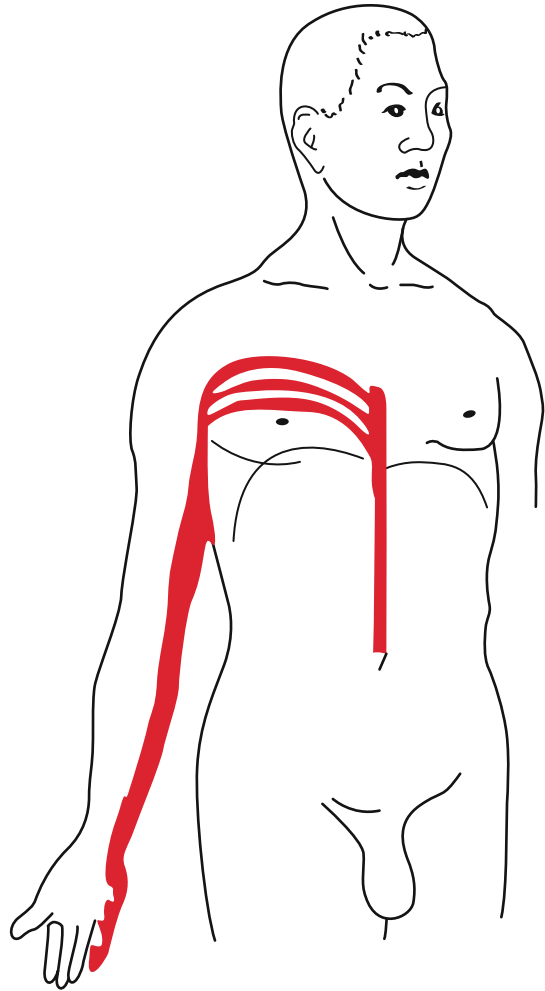
Fig. 36.11 Starts on the external corner of the nail of the middle finger, reaches the center of the elbow, follows the medial side of the arm, fits under the armpit and branches to the ribs. A vessel penetrates deep into the arm, arrives at the inner part of the chest and goes into the cardiac



36.3 Whiplash-Associated Chronic Pain Treatment

Acupuncture is widely used for the treatment of neck and other musculoskeletal pain, and there is some evidence supporting its effectiveness for short-term pain relief. The effectiveness of acupuncture in the treatment of whiplash-associated disorders is not clear and, in my experience, the Quebec classification (orthopedic relevance, fracture or dislocation of the vertebrae or intervertebral discs with spinal cord compression) and the outcome of whiplash to surgical procedure has to be considered in any way. Considering the classification of the Quebec Task Force, whiplash grade 0-1-2 can be combined and treated as a syndrome of TMM, while grade 3 is related to the Longitudinal Luo of Du Mai Syndrome, although symptoms may persist and then we can find a simultaneous involvement of TMM. We will not

Fig. 36.12 Starts at the internal side of the little fingernail, goes to the styloid process of the ulna, up to the medial aspect of the forearm to the elbow, reaches the armpit and joins with TMM of the lung and SJ to 22GB. Penetrates into the chest and continues into the interior space of the breast, goes to RM17 and down to the cardias and then reaches the navel



consider level 4 in any way because it has to be dealt with in the vascular/orthopedics/surgical field.

When there are symptoms resulting from whiplash, we will certainly find the symptoms that usually accompany you when the tendino-muscular meridian (TMM) and the Luo of Du Mai are involved [2] – not only the path, but above all the special form of presentation (traumatic and therefore recently acquired) that characterize the pathology of this particular type of energies' pathways. That said, it is also necessary to make clear that if the treatment is not for a recent whiplash injury, but for a chronic form of symptoms, it may no longer reflect the pathology of these types of energetic pathways but would cover other types of them, which would better explain the chronic painful traumatic event [3].

Many patients with whiplash-associated chronic pain show features of central sensitization. Randomized trials examining whether treatments are able to influence the process of central sensitization in patients with chronic WAD are emerging. Acupuncture results in activation of endogenous analgesia and relief in symptoms in patients with chronic WAD Quebec 1-2-3.

Tobackx et al. [4], through a randomized crossover pilot trial with blind assessors, that was performed on 39 patients, have recently shown that local baseline pressure pain sensitivity and during conditioned pain modulation decreased more significantly following acupuncture compared with simple aspecific relaxation, both in the neck and at a site distinct from the painful region. When comparing the long-term effects of acupuncture versus relaxation, no differences were observed in conditioned pain modulation, temporal summation of pressure pain, neck disability, or symptom severity. Their findings suggest that acupuncture treatment activates endogenous analgesia in patients with chronic WAD at least in the short-medium period [5].

The ancient texts of Nei Jing: Ling Shu, and Su Wen describe the treatment to be carried out according to the pathological state of the event, considering first of all the interest of the surfaces:

- Disease found in the skin: insert the needle into the distal jing points of the meridians Interested, jing jin. Treatment of jing distal point, toning point of the meridian, ashi point in dispersion; for the treatment of TMM.
- Disease is in the subcutaneous tissue: insert the needle into the Luo and Shu points of the meridians involved. For the treatment of Luo M.
- Disease is in deep tissues (muscles, bones and joints, after passing the surface layers and the subcutaneous): insert the needle into the Jing proximal points of the yin meridians and the He points of yang meridians. For the treatment of rheumatic disorders.
- Disease (humidity) is in the yin meridians of the lower: o needle the distal jing points and the ying points. For the treatment of rheumatic syndromes located at the bottom.

36.4 Clinical Practice

36.4.1 TMM

Observe whether the radiation of pain extends along the path of TMM.

Check if the point of union of the 3 TMM involved is painful on palpation.

Check the organ/bowels of the main meridian involved.

36.4.1.1 Needling – Declaration of Qi Bo

Needle the distal point jing.

Tonify the main meridian.

Puncture with a needle the point where the three TMM

Puncture with a needle the painful points (ashi) in dispersion, then continue using the stimulator.

Example 1:

Facial pain – TMM yang of the foot (meeting point SI18)

If the pain goes down to the lower jaw moving from the temporal area: facial point + tones the regular meridian of the gall bladder.

If the pain is associated with the inner corner of the eye: facial point + tones the regular meridian of the urinary bladder. If pains go to the wing of the nose, lips, inner corner of the eye: facial point + tones the regular meridian of the stomach.

(Points to tonify: GB43, B67, ST41; Shu points: GB41, B65, ST43.)

Example 2:

Migraine – TMM yang of the hand (meeting point St8-GB13)

If the pain goes to the outer corner of the eye, ear, jaw, neck, shoulder: painful point + tonify the regular meridian of the small intestine.

If the pain goes to the outside corner of the eye, neck, shoulder, and throat, with a contraction of the tongue: painful point + tonify the regular meridian of San Jiao.

If the pain goes to the cheekbone, if you feel the sensation of a helmet that surrounds the forehead and goes to the opposite side of the jaw: painful point + tones the regular meridian of the large intestine (Points to tonify: SJ3, SI3, LI11; Shu: SJ3, SI3, LI3).

Example 3:

Subaxillary pain – TMM yin of the hand (meeting point GB22)

Pain accompanied by a small pain in the shoulder, chest: painful point + tonify the regular meridian of lung.

If it is accompanied by oppression with pain in the hips and chest: painful point + tonify the regular meridian of Xin Bao. If it is accompanied by pain between the heart and navel: painful point + tonify the regular meridian of the heart: subaxillary pain.

(Points to tonify: PC9, Ht9, L9 Shu; PC7, HT7, L9)

36.4.2 Luo Vessel of Dumai-DU

This vessel starts from Changqiang (DU 1) located at the end of the coccyx and goes up to the heart where it branches toward the shoulder.

It communicates with the bladder meridian at the B10 point and penetrates deeply into the muscles. Symptoms may be divided into symptoms of fullness

(stiffness of the spine) or symptoms of feeling empty (dizziness with a heavy head).

In the case of “fullness,” the treatment is to disperse Changquiang (DU1), while in the case of the “empty feeling,” it is necessary to tonify Changquiang (DU1).

Conclusions

Acupuncture is a well-tolerated treatment for people with chronic WAD pain. The main effects are more evident in the short and medium run, thus it is useful to combine Chinese medicine techniques with the traditional western medicine therapies. Findings suggest that acupuncture treatment activates endogenous analgesia in patients with chronic WAD, that acupuncture is more effective than no treatment, a sham, or alternative [6–8] interventions but also that it is often necessary to combine it with manual and supervised exercise interventions and low-level laser therapy.

For whiplash-associated chronic pain, without radicular symptoms, interventions that focused on regaining function as soon as possible are relatively more effective than interventions that do not have such a focus.

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