An Introduction to Classical Fascia Acupuncture

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Keywords: Acupuncture, fascia, qi, channels, classical acupuncture, Chinese medicine, needling, connective tissue, palpation, acupuncture mechanisms.

Abstract

Acupuncturists, regardless of their school, style or understanding of what they do, are engaged in the treatment of the fascia. Understanding the form and function of the fascia and its role in human health and pathology can provide insights into the practice of acupuncture. Classical Fascia Acupuncture (a term coined by the authors to emphasise the fundamental role of fascial palpation in the practice of acupuncture) utilises the fascial system to understand, in modern scientific terms, the mechanism of acupuncture. By doing this, philosophical principles that are applied to human health in Chinese medicine emerge as meaningful and applicable to all styles of acupuncture practice. This article provides a basic introduction to the practice of acupuncture from this perspective, including a scientific discussion that maintains harmony with classical approaches. Within this context, a rational explanation for the apparently confounding results of recent scientific acupuncture research is offered.

Fascia

> *'Fascia is defined as the soft tissue component of the connective tissue system that permeates the human body … [It includes] aponeuroses, ligaments, tendons, retinaculae, joint capsules, organ and vessel tunics, the epineurium, the meninges, the periosteal and all the endomysial and intermuscular fibers of the myofasciae …'* (Findley et al, 2009)

> *'Fascia forms a continuous tensional network throughout the human body, covering and connecting every single organ, every muscle, and even every nerve or tiny muscle fiber.'* (Schleip et al, 2012 p. xv)

The fascia of the human body is a continuous sheath of tissue that moves, senses and connects every organ, blood vessel, nerve, lymph vessel, muscle and bone. It is a continuous, three-dimensional, whole-body matrix, a dynamic metasystem[1] that interpenetrates and connects every structure of the human body, an interconnected network of fibrous collagenous tissues that are part of a whole-body tensional force transmission system.

For many years, fascia was viewed as merely 'packing material' that encased and padded everything within the body and contributed to physical form. Its two primary functions were considered to be separating and allowing gliding between structures, and connecting and transferring forces within the body (Huijing, et al 2009; Schleip et al, 2012). However, research has demonstrated that fascia should actually be considered as an organ that provides a unified environment contributing to the functioning of all body systems.

Understanding the fascia as a continuous web of tissues allows us to better conceive of the human organism as a fully integrated, interconnected whole, rather than a collection of disparate parts. This is particularly important for practitioners of acupuncture, as the nature of the fascia as a unifying structure can explain the mechanism of action and efficacy of acupuncture treatment.

Recent research has shed light on the various functions of the fascia. Langevin (2006) considers fascia to be a metasystem - a complex communication network that both influences and is influenced by every muscle, organ, blood vessel and nerve, and which is intimately connected to every aspect of human physiology. In addition, the fascial system provides form to the entire body. It is the ground in which all organs and systems function, and it connects and influences all physiological systems. Guimberteau (2007) refers to fascia as a single connecting organ that is related to every aspect of human physiology - a unified whole and the environment for the functioning of all body systems. Stecco et al (2014) have developed the concept of the 'organ-fascial unit', in which the functionality of an organ system is inextricably bound to its associated fascial connections. Oschman (2012) describes fascia as a body-wide communication system. He has coined the term '"living matrix" [which] includes the connective tissue and fascial systems … as well as the transmembrane proteins (integrins and adhesion complexes), cytoskeletons, nuclear matrices, and DNA.' (p.105). Paoletti (2006) suggests that to some extent fascia is involved in every type of human pathology. Because nerves and vessels are not in direct contact with individual cells, the extracellular matrix, 'the milieu surrounding a single cell' (Pischinger, 2007, p.4), acts as the mediating factor in nutrient exchange,

which connects the fascia to cellular nutrition and metabolism (Guimberteau, 2007; Paoletti, 2006; Pischinger, 2007). Fascia is directly involved in haemodynamic processes, particularly venous and lymphatic circulation (Paoletti, 2006; Meert, 2012). Gabbiani (2003) and Tomasek et al (2002) all link fascia to chronic disease. Pischinger (2007) views the fascia as a link between the external world and the internal environment, and he connects the fascia to the initial, non-specific immune reaction of the human body to invading pathogens.

As a tensional network, fascia is central to physical movement and muscle function (Stecco, 2004). It provides insulation, lubrication and structural integrity (Paoletti, 2006). Fascia protects the body from both internal stresses and external forces. The effect of compressive forces on cellular metabolism has been demonstrated by Chen et al (2007) in their tensegrity model of the cytoskeleton. Tensions applied through the fascial system have been found to affect biochemical changes at a cellular level via mechanochemical transduction. Thus mechanical stresses applied on a macro scale result in structural rearrangements that can directly alter many cellular processes, including gene expression, growth, differentiation and survival.

The fascia is capable of the transmission of local and distal effects in the form of referred pain along fascial planes and impaired movement related to myofascial deformations (Simons et al, 1999; Stecco, 2004). Somatovisceral effects describe the connection between surface deformations within the myofascia and visceral dysfunction (Good, 1950; Gutstein, 1944), and viscerosomatic effects describe the connection between visceral pathology and myofascial deformations (Dworken et al, 1952; Melnick, 1957; Mendeloff et al, 1974). Myofascial tissue deformations have been linked to visceral and autonomic dysfunctions, which are resolved when the myofascial impairment is corrected (Simons et al, 1999).

Fascia responds to stimulation. Permeated with four types of sensory receptors, Schleip (2008) considers it to be our richest and most important sensory and perceptual organ. Langevin (2006) describes fascia as a mechanosensitive signalling system that serves to integrate systems in a way that is analogous to the nervous system. Fascia is involved in the process of proprioception (Van der Wal, 2012; Benjamin, 2009; Stecco, 2007). Schleip et al (2012) discuss the fascial role in interoception, a largely unconscious sense of the physiological condition of the body which has affective and motivational dimensions related to the homeostatic needs of the system.

Fascia, therefore, can be understood as a metasystem that connects every aspect of human physiology. It is directly involved in circulation, metabolism, immune function, pathology, insulation, protection and movement. It serves to integrate physiological systems and affects cellular metabolism. As a sensory organ fascia reacts and moves, and is important in proprioception and interoception, which relate to affective and cognitive aspects of human functioning. Treatment of surface deformations in the myofascia has been linked to the resolution of visceral dysfunction via somatovisceral and viscerosomatic effects. From this, the relationship of fascia to acupuncture may be apparent, but further clarification may useful for the practitioner to begin to reconsider the nature of the practice of acupuncture.

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Fascia and acupuncture

Palpation

The earliest practice of acupuncture was based on extensive surface palpation and clinical observation (O'Connor et al, 1981; Birch et al, 1999). Matsumoto et al (1988) tell us that palpation was commonly used as part of the diagnostic process by practitioners in China during the Han Dynasty, and once Chinese medicine was brought to Japan palpation was developed to a highly sophisticated level: 'In the *Nei Jing* the condition of someone's *qi* was assessed by palpation of points all over the body' (Birch et al, 1999 p.19). A facet of palpation worthy of note in regard to its place in the medical classics is the role touch probably played in the development of the theories of the channels and acupoints. According to Lu & Needham (2002), palpation played a significant role in the discovery and systematisation of the channels and acupoints:

> *'There can be little doubt that visceral malfunction of many kinds can be reflected in all sorts of ways in phenomena ascertainable on palpation'* (Lu & Needham, 2002, p.85).

Palpation is one of an acupuncturist's central skills, part of a physical skill-set that requires extensive hands-on training. Birch et al (1999) state:

> *'Acupuncture, not unlike a sport or martial art, requires the development of physical skills, some of which are not easy to acquire.' (p.132)*

While some acupuncture styles continue to place some emphasis on whole body palpation, there appears to have been a general decline in the training and use of this skill (at least in the United States, where the authors have familiarity with many acupuncture colleges). Birch et al (1999), in their history of acupuncture, indicate two events, one ancient and one modern, where there was a significant shift away from body palpation. The first took place during the middle Zhou period with the rise of Confucianism:

'Confucian influence was pervasive. Verbal interrogation rather than palpation became the dominant method of gathering information because touch between humans and displays of the human body were strongly discouraged. Thus correspondence sets that could be applied by asking questions came to the fore.' (p.135)

This change was the result of a religious and moral influence, rather than one based on medical or philosophical principles. The second event was a change in training due to political influences. This was the development of Traditional Chinese Medicine (TCM) in the Peoples' Republic of China under the influence of the Chinese Communist Party (CCP):

'But in the CCP's political environment traditional Chinese medicine could not survive without being scientized … To accomplish this the theoretical basis of acupuncture and herbal medicine had to be standardized and adapted to classroom training … Traditional medical practice was saved, but the qi paradigm was its ransom.' (Birch et al, p.52)

Pirog (1996) refers to TCM acupuncture as 'herbalised' acupuncture. After the Cultural Revolution, thousands of schools that had been based on the master-apprentice model were outlawed in favour of large, standardised classes (Birch et al, 1999). The closely supervised, hands-on training that is required for palpation training suffered because of this.

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Points, channels and stimulation of the fascia

There is an extraordinary anatomical correlation between acupuncture channels and fascial planes, and acupuncture points and fascial septa (Langevin et al, 2002). Stecco (2004) finds a direct correlation between the primary acupuncture channels and unidirectional myofascial sequences (p.187).[2]

Acupuncture channels may be considered fascial planes that pass through and connect large segments of human anatomy. Such planes allow for the transmission of force through a tensional network that generates widespread influences. Functionally, acupuncture channels serve to integrate the whole body. From the perspective of Chinese medicine they circulate *qi* and blood, express pathology of the internal organs, and transmit needle sensation (Ni, 1996). Each of these functions can be understood from a fascial perspective: the fascia integrates the whole body, it functions in haemodynamic processes, superficial myofascial restrictions and deformations allow practitioners to identify disorders via careful palpation of the surface, and fascia is responsive to needle penetration (Fox et al 2014; Pischinger et al, 2007).

Birch et al (1999) point out that the correct translation of the term 'xue' ('point') is actually 'cave' or 'hole' – a point at which something deeper within the body may be accessed. They remind us that acupuncture points were considered to be dynamic structures on the body surface and were chosen for use by palpation. 'Locations were traditionally palpatory instructions … Toyohari trained practitioners of acupuncture to use the textbook location as a starting point for feeling the "currently live point." This is determined by palpation and may change as the patient's condition changes.' (Birch et al, 1999, p.128). Pischinger's (2007) descriptions of acupuncture points are similar. He cites Heine's work (1988) in discovering the morphology of the acupuncture point and refers to it as an accessible 'window on the matrix system'[3] (Pishinger 2007, p.104). He goes on to discuss the palpable features of an 'active' versus a 'non-affected – in-active' point (which is non-palpable), and reminds us that, because of these changes in point quality, therapeutic results can be assessed through careful point palpation (Pischinger 2007, pp.109-110).

Fascia responds to tissue stimulation, which causes responses at a distance from the site of stimulation. Fox et al (2014) specifically demonstrated this effect using acupuncture needling.[4] Fascia has been shown to be responsive to numerous therapeutic techniques, including needling (Simons et al, 1999, Pishinger, 2007), massage (Caspari et al, 2012), pressure (Stecco et al, 2012), vibration (Comeaux, 2012), heat (Klingler, 2012), microcurrent (McMakin, 2012) and stretching (Meyers et al, 2012).

Chinese medicine utilises a number of techniques that clearly stimulate fascia: acupuncture (needling), moxibustion (heat), *tuina*, (massage, manipulation and stretching), *guasha* and cupping (tissue irritation and perfusion), electroacupuncture (microcurrent), *taijiquan* and *qigong* (stretching and exercise). However, it is clear that every acupuncturist, regardless of the techniques being used, and regardless of the explanations given for the effects of treatment, is always and under every circumstance engaged in the stimulation of fascia.

Acupuncture is unique among fascial therapies because it employs minimal tissue stimulation and often does so at multiple sites simultaneously. Acupuncture can be a delicate and elegant form of treatment. It does not require tissue to be forced with great pressure or strong irritation to be effective. It prompts activity of the tissues both locally and distally, utilising sophisticated patterns of stimulation to gently coax

the return of proper tissue function.

The parallels between acupuncture treatment and other forms of fascial therapy are too striking to be coincidental. If we assume for a moment that acupuncture is a method for the treatment of a wide range of pathology and dysfunction via the strategic stimulation of fascia, it can enhance our understanding of numerous acupuncture principles and practices, provide a means of identifying the most useful and pertinent information in our evaluation and treatment strategies, and perhaps even provide a useful mechanism for the treatment of conditions where other approaches to acupuncture have been previously unsuccessful, for example in the treatment of chronic myofascial pain syndromes. Increasing our knowledge of the vast role that the fascia plays in human health, healing, structure and disease may provide the information that we need to understand the mechanism by which acupuncture works. The fascia mechanism of acupuncture is such a hypothesis (Finando et al, 2011).

The meta-analysis paradox

A number of recent meta-analyses of acupuncture studies all concurred that there was a general failure to find significant differences between acupuncture and control treatment (Cherkin et al, 2009; Linda et al, 2009; White et al, 2004; Moffet, 2009; Vickers et al, 2012). These analyses involved hundreds of studies and were the subject of numerous news reports in the United States (see Lao, 2008; Vickers et al, 2012). Some acupuncturists agreed, stating that acupuncture results may well be a function of placebo effects.[5] However, a perspective that views fascia as the underlying mechanism of acupuncture may provide a scientific explanation for such findings.

In a systematic review by Lao (2008), three types of acupuncture studies were reviewed. In the first group of studies acupuncture was applied to some subjects but withheld from others. The second group of studies used placebo acupuncture - involving no stimulation or insertion of needles - as a control. The final group used sham acupuncture, where non-charted points and/or points unrelated to the condition under study were needled or stimulated. In the first two groups there were significant differences between acupuncture and control in virtually every study. However, in all but one of the sham acupuncture studies no significant differences were found between sham and 'true' acupuncture (although true acupuncture was consistently slightly superior to sham needling) - both demonstrated significant effects when compared to no treatment or conventional medical therapies (see Scharf et al, 2006; Haake et al, 2007). Such research findings may be explained by the power of stimulation of the fascia. All stimulation was effective, but needling based on acupuncture treatment principles and accurate point location was slightly more effective. In addition, given that acupuncture research commonly employs formulaic TCM point selection, future research utilising point selection based on body palpation would likely shed more light on the efficacy and mechanism of acupuncture.

Classical Fascia Acupuncture

Principles of treatment

Perhaps the most essential construct of acupuncture is that of *qi*, which is taken by many to refer to a 'vital energy' or 'life force'. What then is the place of *qi* in a fascial approach to acupuncture? First we must try to clarify what is meant by the term *qi* (a broader description is available in Finando et al, 2012).

Scholars of Chinese medicine generally agree that the meaning of *qi* is in fact neither 'energy' nor 'life force'. The term *qi* is considered to be untranslatable - too complex to sustain a simple definition (O'Connor et al, 1981; Unschuld, 1983; Birch et al, 1999). *Qi* is a complex philosophical principle that is rooted in Eastern philosophy. It is a concept that applies to everything, all of existence. It is connected to a worldview that perceives and expresses the interconnectedness of all things, and represents the quality or nature of whatever it is applied to. For the acupuncturist, it is the basis of understanding human health.

Taoist cosmology describes a state, prior to existence, that is likely to represent the state prior to modern cosmology's Big Bang. It is called *wuji*: the void, no movement, the absence of *qi*, quiescence. *Wuji* is symbolised by a simple empty circle. What follows is the beginning of existence, the *taiji*, which is represented by the *yinyang* symbol. Existence begins with activity, movement. Activity presupposes duality, since movement is a relative concept and can only be understood in relationship to something else. Because *taiji* marks the beginning of existence it is applicable to everything that exists. The expression of this idea in the material world is *qi*. *Qi* describes the fundamental nature of everything. It is the fundamental principle of existence and can be applied to any and every object, process or circumstance. It demonstrates that everything may be understood in terms of its activity or movement, and within the context of its relationship to everything else. *Qi* describes things in terms of activity and relativity, whether it is a mountain or a human cell.

The concept of *qi* is therefore complex, but encompasses ideas essential to the activity and interactions that comprise human life. For example, the *qi* of the lungs describes the proper activities of respiration and its associated circulation, diaphragmatic movement and the other physiological processes of which it is a part. It also refers to the interrelationships of the lungs with both the internal environment (the heart, circulatory vessels and muscular dynamics for example), and the external environment - the climatic conditions which may affect breathing (such as air temperature, clarity, quality and humidity). Lung *qi* reflects the proper harmony and activity of the breathing mechanism of the body; dysfunction and disease reflect a disturbance therein.

The *qi* of the fascia refers to the proper activity and relationships within the fascia, its innumerable planes, connections, intersections, functions and activities at both the gross and cellular levels. It is hypothesised that what has been referred to as the *qi* of the channels is identical to the *qi* of the fascia (Finando et al, 2012).

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Treatment methodology

Movement is the hallmark of life. The acupuncturist works with a living, moving terrain. Channels and points are not static entities that can be precisely identified according to charts. They are dynamic, living structures that change in the presence of pathology and dysfunction, and from treatment to treatment. Point location may vary from patient to patient, and active points may change based on the degree of health or pathology of any given patient at any given time.

Acupuncture charts are merely maps, not the terrain itself. While a patient's medical history, signs, symptoms and pulse are employed to provide direction, the focus of both evaluation and treatment should lie in what is expressed on the surface of the human body, the myofascia, the channels, and the points. This ever-changing terrain provides the information and direction of where and how to treat our patients: where to coax movement when there is restriction within the myofascia and when to encourage muscle strengthening to encourage the body to restore harmonious relationships. The key to treatment lies therefore in the palpation skills of the practitioner, who employs their skills to pay close attention to the terrain.

Palpation of the surface anatomy is perhaps the most important skill for an acupuncturist to develop. However, myofascial palpation is a delicate and difficult skill and may not be a part of the training of many acupuncture practitioners. It requires direct, focused practice with many patients under the guidance of a teacher. For the acupuncturist, it means a clinical practice that couples careful, attentive palpation with a knowledge base that includes both the fundamental principles of traditional acupuncture and the study of myofascial and skeletal anatomy, physiology, biomechanics and myofascial trigger points and their radiating pain patterns. With practice, palpation becomes extremely efficient, and guides both diagnosis and treatment.

Palpating the channels involves the palpation of the interstices between the muscles, along the fascial planes. Palpating acupoints requires keen awareness of location and a precise and delicate touch. When utilising a fascial approach the practitioner places greater emphasis on palpation of the myofascia, the musculature and the surrounding fascial tissues, understanding that fascial constrictions can be found in the superficial fascia, within a constricted muscle or within individual taut bands of muscle tissue.[6] Myofascial palpation is informed by knowledge and understanding of myology, i.e. muscle placement, attachments, fibre directions, actions, functions and range of motion, and the study of myofascial trigger points and their radiating pain patterns. Understanding body mechanics helps the practitioner identify the nature of the immediate myofascial syndrome and provides direction for the treatment of the various muscles involved (Simons et al, 1999; Finando et al, 2005).

As we palpate the myofascia we look for areas of non-tender hyperconstriction that, when compared to the opposite side of the body, seem deformed in shape, as well as taut and tender areas of constriction, in which trigger points may be found. Comparison between right and left for shape, thickness and tenderness is important in identifying affected tissues. An unaffected muscle feels soft and supple under the palpating hand, and the underlying skeletal structures can be easily palpated. A constricted muscle is resistant to pressure; it may or may not be tender to the touch and the associated joint may be limited in its range of motion. The underlying structures will be obscured to palpation. Taut bands of muscle tissue may be palpated in an affected muscle, and a trigger point may be palpated within the taut band as a highly tender localised area of hyperconstriction. Trigger points have been demonstrated to produce specific and reproducible radiating pain patterns (Simons et al 2009). A working knowledge of the muscle/pain pattern relationship is highly useful in the clinical setting. Identifying the pain pattern will guide the practitioner to the muscle or muscles that harbour the trigger points that are producing the pain and dysfunction.

Treatment using acupuncture needling can eliminate myofascial constrictions, return an affected muscle to its full resting length and alleviate associated pain or physiologic dysfunction. Clinical experience has demonstrated that this technique is highly effective in the treatment of chronic and acute myofascial pain syndromes and visceral dysfunctions.

Patient evaluation and treatment

Every healthcare professional understands that, regardless of the nature of the complaint, the evaluation of the patient begins as soon as the patient walks into the room. Observing the patient for gait, posture and movement (e.g. from standing to sitting or moving on and off a table) provides an enormous amount of information. As always, a complete health history is essential in order to ascertain past injuries, surgeries, significant illnesses, medications and diet, all of which may impact the current complaint.

It is essential for the patient to identify areas of pain or dysfunction as clearly as possible, regardless of the condition for which treatment is being sought. We ask

our patients to shade in a drawing to clarify - both for themselves and us - where their difficulties lie. This tends to allay potential confusion – particularly when the patient says that their hand really hurts, but they actually mean their shoulder or arm.[7] A discussion of the patient's history helps to provide an idea of how they experience - both physically and emotionally - their complaint.

A structural evaluation must be part of the examination. Structural problems such as scoliosis, leg-length discrepancy or shoulder or head tilt may be related to myofascial constrictions and visceral dysfunctions. Reduced range of joint motion should also be noted, even if at first it does not seem to be related to the immediate complaint. This is because compensatory myofascial changes frequently occur in the presence of chronic pain syndromes or visceral dysfunction in areas that may seem unrelated to the presenting condition. For example, a patient who seeks treatment for neck pain may also have restrictions in their lower back – the primary complaint may be the neck pain, but this will not resolve completely without attending to the myofascial restrictions elsewhere (for which there has been no complaint).

What the body reveals to the palpating hands of the skilled practitioner is considered to be primary information. Identifying areas of restriction and myofascial trigger points are the most significant parts of the evaluation, since myofascial constrictions are often directly related to chronic and acute pain syndromes and may reflect visceral as well as muscular dysfunction. This is particularly useful in the evaluation and treatment of respiratory, cardiovascular, genitourinary and digestive disorders. If, for example, a patient has been suffering with a chronic or acute respiratory condition, it is not uncommon to find trigger points within the pectoralis group, sternocleidomastoid, upper trapezius, proximal paraspinals and rhomboids. Resolution of these trigger points, in addition to treatment of the Lung, Spleen, Kidney and Bladder channels, is highly effective in the management of such conditions. Similarly, trigger points in the rectus abdominis are associated with indigestion, bloating and heartburn. The treatment of these myofascial restrictions can be used along with traditional acupuncture treatment approaches and appropriate dietary guidelines to expedite recovery.

From the fascial perspective, channels may be viewed as planes of influence that have effects upon the anatomical areas - both superficial and deep - through which they pass. As such, channels are assessed and treated as distal support for local dysfunctions. Channels are palpated to identify areas of heat, cold, flaccidity or fullness. Individual acupuncture points are then palpated to assess their quality. Inactive points may not be distinctly palpable, whereas active points will feel 'hollow' and the practitioner's finger will drag as it is drawn across the point. For example, when assessing points for treatment along the Lung channel, as the practitioner glides their finger along the pathway of the channel, an active point will feel like the gliding finger is halted by the slight traction of a small hollow. We have found that the treatment of myofascial trigger points is exceptionally useful in chronic and acute pain syndromes, and a combined use of traditional acupuncture approaches and myofascial trigger points is highly beneficial in the treatment of visceral disorders.

If a point or area is assessed as being 'empty' or 'flaccid', this can be approached by identifying and needling active acupuncture points and areas of constriction proximal and distal to the point/area. It is frequently the case that needling 'above and below' will stimulate and 'fill' the area. Once the needles have been inserted, the patient rests for 15 to 18 minutes in a comfortable position in a warm room. After the removal of needles, a technique employing subtle mobilisation of the fascia is applied. This technique is akin to the fascial 'listening test' described by Paoletti (2006). The practitioner makes extremely gentle full palmar contact with the area of the body that has been treated and then allows fascial movement to guide the hands. Throughout this technique we are assessing the fascial mobility and rhythm (which is normally approximately 8 to 14 cycles per minute - see Paoletti, 2006), listening to the body with a quiet mind and relaxed body, waiting for its response – in other words, following the *qi*. It is the fascia that leads our hands. We call this 'dancing with the tissues.' This movement serves multiple purposes. First, it will produce a more global release of the tissues. Secondly, the movement will guide the hand to additional areas of constriction. Finally, it will help mitigate any post-treatment soreness that might occur due to extensive release of deeply constricted myofascial areas.

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At every level of evaluation and treatment, the body is guiding the practitioner – whether in terms of needle placement or subtle mobilisation. As the body changes, so does the treatment. We are unwinding a complex knot of restricted tissue, beginning at the surface of the body and allowing the body to show us where the next level of restriction lies. As such each treatment must be different. When identified clearly and treated with acupuncture needling, a restricted area of the myofascia will release, and the body will change. For example, an elevated hip will drop as a function of the release of quadratus lumborum, revealing other constrictions in the myofascia that are contributing to a patient's back and leg pain. The fascia tends to continue to respond for up to 48 hours after treatment. Therefore the overall affects of a treatment may

not be clear for some days.

A patient's daily activities affect their musculature. If a patient repeatedly returns with the same neck pain and restrictions in the sternocleidomastoid muscle, for example, we have to ask what activities they are engaging in that might contribute to such muscular contraction. How is their computer station set up? Is their monitor off to one side causing them to look up and to the side for extended periods? These behaviours are examples of the various factors that may contribute to ongoing muscular restriction. In doing so, we function both as practitioners of acupuncture and detectives trying to clarify how and what our patients are doing to create their problems. Once identified, we provide suggestions for behavioural changes as needed.

Home-care and treatment support

This aspect of treatment emphasises the nature of this type of care as a shared effort. The practitioner and the patient are working together to resolve the pains and difficulties being experienced by the patient. This differs from the Western medical model in which the doctor prescribes and the patient adheres, often without question. The patient can support their acupuncture treatment at home through the application of moist heat twice daily for 10 to 15 minutes each time. The use of a moist heating pad or thermophore helps to minimise post-treatment soreness associated with myofascial release. Klinger (2012) describes the importance of heat in reducing myofascial stiffness. Simons et al (1999) suggest moist heat application to avoid surface dehydration and improve elasticity and circulation.

For the patient with myofascial pain, movement and exercise are recommended as soon as they can be tolerated. As major fascial restrictions are reduced, the patient is instructed in stretches to be done throughout the day that specifically target the muscle or muscle group that has been treated. These stretches are aimed at re-educating the muscle to return to its normal resting length. In general, the exercises are done in a relaxed fashion and performed slowly and gently. The patient moves into the stretch position and relaxes for 10 to 20 seconds. One or two repetitions of the exercise are performed each time. All stretches should be pain-free and should be performed bilaterally. For optimum results the stretches should be performed frequently, approximately every 90 to 120 minutes throughout the day. It is the frequency - the repeated elongation of the region - that is the most important aspect of myofascial re-education. Strengthening exercises are suggested as needed once the patient is able to tolerate increased activity. This same process is applicable whether the treatment is for myofascial pain or visceral dysfunction.

Conclusion

Traditional acupuncture applies knowledge of the channels and acupuncture points that is based on centuries of experience. It utilises universal philosophical principles such as *qi*, *yinyang* and the five phases as principles of acupuncture treatment. Understanding the nature of the fascial system adds another important dimension to the skill-set of the acupuncturist - one that is rooted in extensive knowledge of the structure and function of the muscles and fascia. This knowledge that is informed by palpation. Palpation skills of the superficial muscles and fascia are subtle and may be challenging to master, but they produce the ability to detect myofascial restrictions and deformations in the surface terrain of the body that contribute to pain and physical dysfunction. During palpation our hands become our eyes and ears. 'Listening' to the fascia with our hands supports the movement of the fascia. Such 'dancing with the tissues' can transform the effectiveness and efficiency of treatment in dramatic ways.

Palpation is a complex skill that requires training of the mind and body. It requires postural awareness, acute sensitivity to subtle movement and awareness of surface anomalies, all of which must be predicated on self-awareness. As the martial artist practising the use of staff or sword learns to experience the weapon as an extension of their body, so the acupuncturist must extend their awareness through the needle. Palpation skills are used in needle placement as well as sensitivity to tissue movement, resistance and release as transmitted through the needle. Palpation requires mental as well as physical training: focused concentration, emotional awareness and control, and the ability to 'let go' to the experience of the patient. Classical Fascia Acupuncture requires a return to this training that used to be part of many different acupuncture schools and traditions.

Acupuncture is an approach that places great emphasis on the body's inherent propensity to restore harmonious functioning. The acupuncturist therefore does not heal, but rather sets the stage for the self-regulating function of fascia to naturally occur. The ability of acupuncture to resolve a wide variety of somatic and visceral dysfunctions through the use of careful surface palpation and stimulation is extraordinary. In our decades of clinical experience we have noted that the use of a fascia-based treatment approach has exponentially improved treatment efficiency and effectiveness, and has done so without the support of herbal medicines. We ceased to prescribe herbal therapy many years ago and therefore our clinical results were not confounded by herbal treatment.

We stand in awe of the fascial system, the metasystem that affects, connects and integrates every aspect of human physiology. Understanding that acupuncture is a treatment that supports the proper activity and interrelationships of the fascia helps us to understand Chinese medical theory in new and rational ways. The use of the fascial approach to treatment continues to be informed by scientific research,[8] which provides expanded knowledge and insight into this extraordinary metasystem. As our understanding of the

fascia evolves, perhaps we can arrive at a rational, scientific understanding of the mechanism of acupuncture's effectiveness.

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Endnotes

1 A metasystem may be considered to be a system that underlies and is external to other systems, the understanding of which is essential to the understanding of the (contained) systems (modified from the definition at <www.businessdictionary.com>).

2 In his book, *Fascial Manipulation* (2004) Luigi Stecco describes the fascia as the unifying element of the body's locomotor system. He describes fascia's role in movement as a 'coordinating component of motor units'. Muscle fibres and associated fascial sheaths are grouped together in what he calls 'myofascial units'. 'Myofascial sequences' are considered to be a uniting element between unidirectional muscle chains (muscles or muscle fibres that act together to move the body part in a specific direction). As connecting elements between body joints, they are referred to as 'myofascial spirals' (p.11).

3 In describing it as such he points out that acupuncture can directly affect the matrix system - the entire structural and functional environment in which all bodily systems function.

4 Using ultrasound technology, mechanical tissue changes were observed in response to acupuncture needle manipulation. Tissue displacement occurred in the longitudinal direction when needling between muscles, and in the tranverse direction when needling over a muscle belly.

5 See http://www.medpagetoday.com/comments.cfm?tbid=34673 [Accessed 8 August 2014].

6 A constricted muscle presents with generalised atypical tightness. In a muscle that harbours trigger points, individual fascicles can be palpated as taut bands, and trigger points can be palpated within the taut bands.

7 Although this may seem obvious, it is based on personal experience with an elderly patient. She kept referring to pain in her hand, whilst saying that she was unable to raise it. She was actually referring to pain in her shoulder.

8 The Fascia Research Society (www.fasciaresearchsociety.org) is an international organisation that has been established to facilitate, encourage and support the dialogue and collaboration between clinicians, researchers and academicians in order to further our understanding of the properties and functions of fascia.