

Thenar Tendonitis and Text Messaging

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As technology advances and computer chips get smaller, we move into an age once thought only to be science fiction. Who knew we would be using a device that resembles something you would see in Star Trek. Today, cell phones actually are mini-computer processors and text messaging has become second nature for many. Unfortunately, problems come with this new reality.

The design of these phones forces certain hand positions, thus creating overuse injuries. Although this injury is not considered mainstream, constant text messaging will lead to thenar tendonitis. By understanding the mechanisms from both sports medicine and Chinese medicine perspectives, we can anticipate and prevent the injury. Although our society tends to treat from a symptom-based protocol, educating the general population is key for prevention. (It's usually not until patients experience pain that they bring it to the attention of their doctor.)

As with anything not substantiated with research, this is not technically considered a problem. Treatment protocols will not be in place until there are enough replicated studies and individuals presenting with the signs and symptoms. The reality is the more technologically advanced we become, the more patients will present with thenar tendonitis and pathologies.

Integrated Anatomy

The muscles of the thumb include the abductor pollicis brevis, flexor pollicis brevis, adductor pollicis brevis and opponens pollicis. For these identified muscles, the primary peripheral nerve is the recurrent median nerve and the segmental innervations are C8-T1. Other associated muscles include the abductor pollicis longus, extensor pollicis longus and brevis. The primary peripheral nerve is the posterior interosseous, radial and the segmental innervations are C7-8.

In TCM, the primary vessels affected are the lung and large intestine. There are a number of pre-existing patterns of differentiation contributing to stiffness, pain and numbness in the thenar region. These mechanisms include *qi* deficiency, blood deficiency, wind-cold damp invasion, damp heat and blood and *qi* stagnation in the vessels.

Irregular diet, overwork and mental and physical exhaustion all contribute to *qi* deficiency. This causes the *qi* to be excessively consumed and does not allow the spleen to function. Damp accumulation is caused when the fluids can't be transformed. This accumulation slows the transportation of *qi* moving throughout the body.

Blood deficiency is caused by pre-existing, long-term, overuse, sudden loss of blood, giving birth, and/or long-term Sp *qi* deficiency. The blood is responsible for nourishing. Once blood becomes deficient, it can't nourish the muscles and skin. Wind-damp cold is an invasion from the exterior that affects the channels/vessels of the digit. Once this happens, the *qi* and blood flow becomes partially or

completely blocked, depending on the severity of the pre-existing conditions. If damp heat is present, it's due to long-term damp accumulation that transforms into heat. This will also cause partial or complete obstruction of *qi* and blood deficiency.

Integrated Treatment

It goes without saying we always will tailor the specific treatment to each individual's condition. Western medical philosophy says the muscles are contracted due to overuse flexion and adduction movements of the pollicus. In order to counterbalance this condition, the protocol would include manual therapy such as extending and abducting the pollicus in order to lengthen the involved muscles. Other modalities include ultrasound, microcurrent, laser, acu-scope, galvanic EMS (set at 80-120 pps) or opiate pain control. Once pain has subsided, a strengthening program gradually is implemented. Remember, every specialty has individual variation of application of these modalities depending on depth of knowledge.

TCM integrates modalities such as *tui na* and *ah-shi* points. Acupuncture points and herbal formulas are used, not only according to the channel/vessel affected, but also the underlying conditions that predisposed the individual to this condition in the first place.

I will focus on acupuncture points in this section, although there are many other modalities that can be used. The following points would be used in addition to local/adjacent and distal points. If we want to move the *qi* due to stagnation, *ba xie* and SJ4 can be used. For tonifying *qi*/blood, Lg9 and LI4 points can be used together. If there is severe *qi* deficiency, the addition of R6 and K4 can be used. If we want to harmonize the *qi*/blood, *ba xie* and SJ4 can be used. Points UB17, UB18 and UB20 can be used to tonify the blood. Points that can be used for wind-cold damp include LI4, SJ3 and *ba xie*, which primarily are used for dispelling wind damp. In this case, we also would want to tonify the *qi* and nourish the blood by including St36 and Sp6.

If we are dealing with damp heat, the use of LI2, SJ4 and *ba xie* points will move the blood and prevent stagnation in the vessels/channels. Points used to clear heat and dispel damp include the combination of GB34, St40 and Sp6. These are just an example of some points that would be effective. The key is the pattern of differentiation that is the pre-existing condition, not just the "channel theory."

It's important to remember anticipation is key in identifying and preventing injuries. Thenar tendonitis due specifically to text messaging is completely preventable. Oriental medicine tangibly identifies injuries and pathologies using differential diagnosis. This is crucial for the correct application of acupuncture and medicinal herbs, especially when scientific method is implemented.

I applaud the research being done in acupuncture. However, I believe a lack of understanding the theory of TCM diagnostic methods provides a very limited viewpoint when trying to explain its mechanisms. This is seen with the segmental and/or trigger-point perspectives following protocol application based on sign/symptom diagnostic methods. Unfortunately, this opinion is promoted by some physical therapists, chiropractors and medical doctors. The argument is explained through neuro-endocrinology as the primary functional component. Although this is a very popular viewpoint, one must remember it's a fragmented perspective of the accepted traditional academic mindset.

The basic flaw in this argument (and evidence-based research in general) is that it does not involve the synergistic component. This component is the key to success in treating using TCM diagnostic methods. If it's overlooked, it can create long-term ramifications. If only one piece of this philosophy of

TCM is understood, then the rest will be thrown out.

I challenge research scientists and clinicians (traditional and nontraditional) to go beyond the dogma of "how it has always been done." Instead, expand on the scientific method to include patterns of differentiation when trying to develop the experimental design. This truly advances patient care and the possibility to move into the future of preventative medicine.

While there is so much more to Oriental medicine, this is a very simple glimpse into prevention and the role of pre-existing conditions associated with TCM-identified thenar tendonitis (due to text messaging). It's not just about what points to use in order to treat the condition. It's the synergistic thought process from both TCM and Western perspectives in preventing and managing the condition that is important.

This holds true for TCM providers. It's important to understand the different traditional medical disciplines, diagnostic methods and protocol treatment philosophies. This is crucial in order to integrate medical philosophies for implementing research and quality of care for our patients.

Thenar tendonitis due to text messaging is just one example. There are far more complicated, internal medical pathologies and injuries. By implementing this change in perspective, we can expand the application of the scientific method and understand the mechanism of acupuncture treatments within the current evidence-based paradigm.

Resources

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