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The Journal of Acupuncture and Oriental Medicine

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Acupuncture Augmentation of Lidocaine Therapy for Provoked, Localized Vulvodynia: A Protocol for a Feasibility and Acceptability Study

Can Acupuncture Therapy be Quantified?

Case Reports: Acupuncture and Moxibustion for Displaced Fractures of the Left Clavicle and Local Acupuncture and Distal *Gua Sha* for Ankle Sprains

Catalyzing Emergence: Integral, Evolutionary, and Spiritual Perspectives on Chinese Medicine, Part I

Opioid Facts for Patients

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Book Review: *Live Well Live Long*



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Cover: Red varietal wine grapes on vine, ripe for harvest. Photo © Terrance Emerson



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MERIDIANS

The Journal of
Acupuncture and
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Letter from Editor in Chief Jennifer A. M. Stone, LAc



Welcome to the fall 2018 issue of *Meridians: JAOM*.

The leaders on the *Meridians: JAOM* editorial board and the leaders of the national organization, the American Society of Acupuncturists (ASA), continuously look for ways to provide resources to help acupuncturists in the clinic, in academia, and in political activism. We have two new resources that we've prepared for clinicians to make available as a handout for their patients.

"The Relationship Between Acupuncture & Dry Needling – Clarifying Myths & Misinformation" is a pamphlet prepared by the ASA and sponsored by Lhasa/OMS. Lhasa/OMS has printed 3000

hard copies and will put one in every needle box order. Clinicians can then print as many copies as they wish to make available to their patients. It is also posted on the MJAOM website and can be easily printed out.

The second resource, published in this fall issue of *Meridians: JAOM*, is called **"Opioid Facts for Patients."** I first prepared this fact sheet for my own patients, mostly seniors who are dependent on the narcotics they have been prescribed for many years. Their doctors are now weaning them off of this kind of medication and they're terrified of losing the medicine that relieves them of their pain. Some of my colleagues who are pain management physicians and nurse practitioners have also found this useful for their own patients.

A downloadable, print-ready PDF version of **each of these resources** and more are at the *Meridians: JAOM* website: <http://meridiansjaom.com/author-research-resources.html>

In this fall issue we're pleased to present two original research pieces. The first is an expertly written protocol design manuscript prepared by Lee Hullender Rubin, DAOM, LAc, FABORM and colleagues entitled "Acupuncture Augmentation of Lidocaine Therapy for Provoked, Localized Vulvodynia: A Protocol for a Feasibility and Acceptability Study." Protocol design posters and manuscripts are a good way for researchers to invite feedback on their research design when they're still in the planning process.

The second original research piece prepared by Donald Lefeber, MAOM, LAc and colleagues is an exploratory study to determine if changes in a patient's fine motor control can be detected and quantified using what is called an RU-Fit device following acupuncture treatment.

Included in this issue are two case reports about unique treatment strategies for orthopedic injuries. The first case discusses the use of acupuncture and moxibustion for the treatment of two displaced fractures of the left clavicle in a patient who refused recommended surgery. The second study is about the successful use of acupuncture with *gua sha* on a patient who suffered recurring ankle sprains.

Accomplished author and scholar Lonny Jarrett has a wide background in the field of neuro and chemical biology and over 30 years of clinical AOM experience. For this issue, he presents "Catalyzing Emergence: Integral, Evolutionary, and Spiritual Perspectives on Chinese Medicine, Part I," the first of three parts.

Meridians JAOM

welcomes letters to the
editor from our readership.
Please send them to
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and be sure to include your
full name and any licenses
and/or titles, your phone
number, and email address.

Peter Deadman is the well-known author of the comprehensive text, *A Manual of Acupuncture*. His most recent book is *Live Well Live Long: Teachings from the Chinese Nourishment of Life Tradition and Modern Research*. Editorial board member Shane Haggard, LAc gives us his review of Peter's new book and includes an interview with Peter about what inspires him to write and how he uses the artistic process when writing this and his other compelling books.

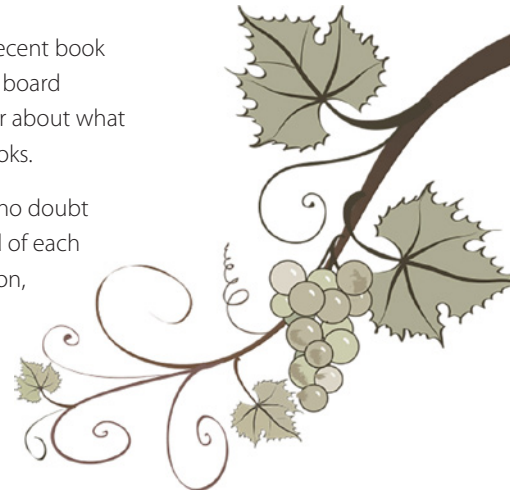
Regarding artistic processes, those of you who have consistently read our issues of *Meridians: JAOM* have no doubt seen the beautiful paintings that were each designed to define a particular point. Found towards the end of each of the issues, the paintings are created by Mrs. Martyna Janik and are discussed and defined by Yair Maimon, DOM, PhD, Ac and Bartosz Chmielnicki, MD. Don't miss the one in this fall issue!

As always, we invite your questions, feedback, submissions and letters to the editor. Please contact us at meridiansjaom@gmail.com.

Respectfully,

Jen

Editor in Chief, *Meridians: JAOM*



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Acupuncture Augmentation of Lidocaine Therapy for Provoked, Localized Vulvodynia: A Protocol for a Feasibility and Acceptability Study

By Hullender Rubin, Lee E.;^{1,2} Mist, Scott D.;³ Schnyer, Rosa N.;⁴ Rowe, Ruth;² Wimberly, Alisha;⁵ Leclair, Catherine M.³

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Please see bio at end of the article.

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Abstract

Provoked localized vulvodynia (PLV) is a prevalent sexual pain condition in women for which acupuncture's effectiveness is unknown. In this IRB-approved feasibility study, our objective is to assess the feasibility and acceptability of acupuncture augmentation of lidocaine, a first-line usual care therapy, as a treatment for PLV pain. Thirty women with PLV will be randomized to either the traditional acupuncture (TA) with lidocaine 5% cream group or to the nontraditional acupuncture (NTA) with lidocaine 5% cream group. Each will also be diagnosed according to her traditional Chinese medicine (TCM) pattern. The course of TA treatment includes manual and electrical-stimulated acupuncture using a semi-standardized protocol based on this TCM diagnosis. The NTA treatment includes standardized minimal needling and sham electro-acupuncture on points located away from classically described acupoints and/or channels not traditionally associated with vulvar pain. Participants will attend 18 sessions over a twelve-week period and a follow-up at 24 weeks. The primary outcome measure will be the change in Tampon Test pain score from baseline to week 12.

Key Words: vulvodynia, acupuncture, dyspareunia, vulvar pain

Introduction

Vulvodynia is a pain disorder presenting as pain and discomfort in the vulva with no identifiable cause that is present for a duration of at least three months. The pain can be limited to a specific area (localized vulvodynia), be present in the whole vulva (generalized vulvodynia), or be present in both areas (mixed vulvodynia). Vulvodynia pain can also be present constantly (unprovoked) or with specific touch or pressure (provoked).

Provoked, localized vulvodynia (PLV) is defined as pain localized to the vulvar vestibule provoked by touch.^{1,2} PLV is the most common vulvodynia presentation; it is estimated to affect 8-15% of women,^{3,4} who often describe the pain as burning or searing with touch or pressure to the vestibular skin. PLV is also known as vulvar vestibulitis or provoked

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vestibulodynia, While the cause is unclear, several factors are associated with PLV, including genetic, hormonal, inflammatory, musculoskeletal, neurologic, psychosocial, and structural defects.⁵

As a diagnosis of exclusion, other infectious and dermatologic causes of pain are first investigated before PLV is assigned. Treatment for PLV is often multi-modal, treating not only the physical but emotional and sexual distress that accompanies a disorder that profoundly impairs intimacy. Therapies include a combination of topical agents, oral medications, pelvic floor physical therapy, and cognitive behavioral therapy.^{6,7} If symptom resolution is insufficient after all other treatments have been attempted, then surgical excision of the affected tissue is the final treatment option.

A topical anesthetic liquid or cream such as lidocaine is a common first-line therapy. Frequent daily lidocaine use has been associated with 20-50% reduction in PLV pain scores in women.⁸⁻¹⁰ However, in a large randomized clinical trial, lidocaine showed no difference in pain relief compared with placebo.¹¹

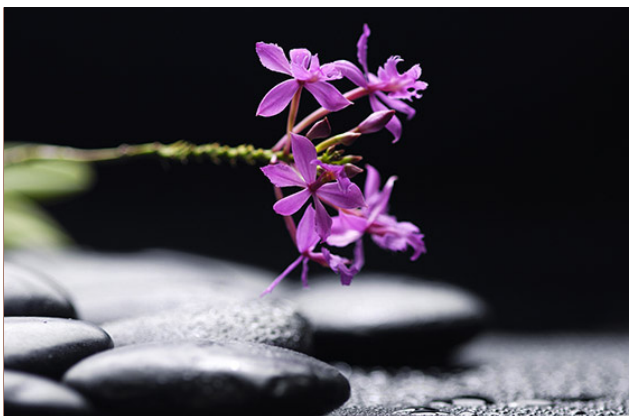
While acupuncture is effective in alleviating the symptom of pain in some chronic pain conditions, its impact on relieving PLV pain is not well understood. Acupuncture is a modality within the system of traditional Chinese medicine (TCM) frequently sought for the treatment of pain,¹² and it is a potential therapy for PLV.⁷ Studies evaluating acupuncture's effect to reduce PLV pain are promising⁷ but are few in number and difficult to interpret. The studies used different vulvodynia classifications and different acupuncture treatments, methods, and frequency of sessions. Only one had a control arm.¹³⁻¹⁷ Clearly, more research is needed to better understand acupuncture's role in vulvodynia treatment.

In this study, we aim to evaluate if acupuncture augmentation of lidocaine is an acceptable, low side-effect medical treatment for PLV pain. Acupuncture is predominantly sought for the treatment of pain,¹² and we expect it could effectively treat PLV. The objective of this feasibility study is to determine the feasibility and acceptability of acupuncture augmentation of lidocaine as a treatment for PLV pain.

Methods

Study Design: This will be a two-arm, randomized, controlled trial comparing two types of acupuncture as an adjunct to standard lidocaine 5% therapy to treat provoked, localized vulvodynia (PLV). This study will estimate acceptability and feasibility, and is registered with ClinicalTrials.gov, NCT01996384. The Institutional Board Review at Oregon Health & Sciences University (OHSU) approved this study (#9664).

Recruitment and Consent: The recruitment process is threefold. First, established patients at the Center for Women's Health (CWH) Program in Vulvar Health at OHSU will be identified through a cohort discovery report of patient electronic health records in Electronic Privacy Information Center (EPIC). Patients in this academic health center consented to allow their records to be used for research purposes. We will send an email or letter inviting potential participants to be screened for enrollment, provided they have a diagnosis of vulvar vestibulitis, vulvodynia, dyspareunia, or vaginismus; have attended an office visit within the last three years; and reside within 45 miles of OHSU. Second, potential participants will receive information about this study as they wait for their regularly scheduled appointments at the CWH. We will post flyers in the CWH and community clinics' waiting areas describing a study investigating traditional acupuncture (TA) and lidocaine 5% cream compared to nontraditional acupuncture (NTA) and lidocaine 5% cream as a treatment for PLV. After their physician visits, we will screen potentially eligible participants with PLV and obtain consent after informing of risks associated with each treatment and rights of immediate withdrawal. Routine medical, surgical, and demographic information from a medical interview will be collected. We will also perform a physical exam and chart review in EPIC. Women who elect to participate and meet eligibility criteria will be enrolled and randomized. The participants, physician, nurses, and statistician will be blinded to group assignment.



“In this study, we aim to evaluate if acupuncture augmentation of lidocaine is an acceptable, low side-effect medical treatment for PLV pain. Acupuncture is predominantly sought for the treatment of pain,¹² and we expect it could effectively treat PLV.”

Diagnostic Criteria for PLV: A vulvar health specialist at the CWH Program in Vulvar Health will confirm the diagnosis of PLV according to Friedrich's criteria¹⁸ prior to participant screening and enrollment. The vulvar vestibule is the moist skin of the vulva medial to Hart's line and lateral to the hymen. Light touch of a moistened cotton swab (Cotton Swab Test) to the vestibule at four defined points (1:00, 5:00, 7:00, and 11:00)⁷ must provoke localized vestibular tenderness for the diagnosis of PLV. In addition, a woman must verbally rate the pain intensity as greater than or equal to 40 on a 100 mm Visual Analog Scale (VAS). She must also verbally rate pain intensity as 30 or less on a 100 mm VAS for all other areas of the vulva including the perineum, labia majora, and labia minora. No other specific neuropathology, atrophic vaginitis, dermatoses (such as lichen sclerosus), or genital infections (such as herpes simplex) can be present.

Inclusion criteria are:

- Confirmed diagnosis of PLV using Friedrich's criteria for at least 3 months,¹⁹
- Premenopausal, aged 18-45 years old,
- VAS vestibular touch pain with Cotton Swab Test test $\geq 40/100$ mm, and
- Tampon Test pain $\geq 40/100$ mm.

Exclusion criteria are:

- Co-existing vulvar diagnoses (e.g., herpes simplex, lichen sclerosus, etc.),
- Pregnant or postpartum,
- Started or changed neuropathic medication dose in the previous 6 months,
- Menopausal,
- Non-menstrual pelvic or low abdominal pain for more than 3 months,
- Unwilling to refrain from beginning other treatments, and
- Acupuncture in the previous 3 months.

Randomization: We will complete all baseline assessments prior to randomization. Group assignments will be prepared with computer-generated randomization using the balanced allocation method, with four key baseline demographics for pain intensity, smoking status, BMI, and pain duration at the baseline visit. We will allocate fifteen subjects to the TA and lidocaine 5% cream group and fifteen to the NTA and lidocaine 5% cream group.

Lidocaine: Participants in both the treatment and control groups will receive lidocaine 5% cream for self-application and will apply four times daily to the vulvar vestibule. The study nurse will provide training and dispense medication at the first study visit. All participants may use oral acetaminophen every 4-6 hours, up to 4 g maximum per day, as rescue pain treatment.

“Treatment for PLV is often multi-modal, treating not only the physical but emotional and sexual distress that accompanies a disorder that profoundly impairs intimacy.”

TCM Diagnosis: At the baseline visit, the participant will be diagnosed according to TCM pattern with primary and secondary diagnoses. As this is an investigation into an acupuncture intervention, the primary TCM diagnoses pertaining to the affected acupuncture channel are: *qi* and Blood stagnation in the Liver channel, Fire in the Liver channel, and Cold in the Liver channel engendering Fire. Secondary diagnoses pertain to any TCM systemic pathology contributing to the vulvar pain. Underlying patterns include: Liver *qi* stagnation; Liver/Spleen disharmony; Damp-Heat accumulation in the lower burner; Phlegm/Damp accumulation; Spleen *qi* deficiency; Heart Blood deficiency; and Blood stasis. See Table 1 on following page.

The channel diagnoses were influenced by the work of Bob Flaws and based on clinical experience, and secondary TCM diagnoses were first described by Curran et al.¹⁶

TA Group: We will allocate 15 participants to this group. It will be described as “classical acupuncture” in the recruitment flyer and consent form. Participants will be interviewed and diagnosed at their first treatment. They will receive biweekly treatments for the first six weeks and then weekly treatments for six more weeks, totaling 18 treatments over twelve weeks.

We will needle all acupoints using 0.18 mm diameter (38-gauge), 30-50 mm length DBC brand, Spring-type acupuncture needles (Korea). We will use an insertion guide tube to insert the needles in the Japanese style, which is gentle and usually painless. We will select the length of needles based on size of the participant and acupoint location. We will apply mild, manual stimulation using the rotating or lifting/thrusting method to elicit a very mild *de qi* sensation. *De qi* is a sensation of tingling, heaviness, mild pressure, or achiness at the needling location.²⁰ We will actively avoid causing a muscle twitch. Participants will retain needles for 30 minutes for all visits.

Acupuncture will be performed by study acupuncturists, all of whom will have at least 15 years' experience and be licensed in the state of Oregon. Participants will be supine on all odd-numbered visits, alternating with prone treatments on all even-numbered visits. We will needle all points bilaterally, except for those located on the anterior midline. Supine treatments will include a core set of three primary points for all participants and up to two additional points dictated by secondary TCM diagnoses


Table 1. Vulvodynia TCM diagnosis descriptions and points for anterior treatments

Diagnostic Criteria	TCM Diagnosis Pattern	Acupuncture Protocol – Supine Position	Description
Primary Diagnoses	Qi Stagnation and Blood Stasis	Zhongji CV-3, Qichong ST-30, Ligou LR-5	Enduring and lancinating vulvar pain; marked pain that may radiate to the perineum, low abdomen, or low back; possible mental emotional depression; irritability; insomnia; restlessness; no other significant symptoms of hot or cold. Purple tongue or purple-spotted tongue; wiry and/or choppy pulse.
	Fire in the Liver Channel		Burning and lancinating vulvar pain that is ameliorated with cold; pain worse in hot climate/ weather and may radiate; local redness; feels hot to the touch; mental agitation; possible burning or painful urination; possible fever and/or overall red complexion. Dry, red tongue, yellow tongue coating; forceful, rapid, surging pulse.
	Cold in the Liver Channel Engendering Fire		Localized and lancinating vulvar pain that may also be burning, but is relieved by warmth. Pain is worse in cold climate/weather. Varying degrees of physical cold; aversion to cold and pronounced lack of warmth in the extremities; with thirst, sensations of heat, and mental agitation. Tight, wiry pulse or slow pulse; pale tongue with moist, white coating.
Secondary Diagnoses	Liver Qi Stagnation	Taichong LR-3	Mental depression; rashness; impatience; exaggerated emotional response; pains that rapidly change in location and intensity or distending pain in chest and/or rib-side; oppression in the chest; menstrual pain; menstrual block; painful distention of the breasts; breast lumps; menstrual irregularities. May have normal tongue or slightly swollen tongue with slimy, white coating; wiry pulse.
	Liver/Spleen Disharmony	Zhangmen LR-13	Abdominal distension and painful diarrhea that are worse with stress or emotional upset; chest, breast, and rib-side distention and pain; irritability; fatigue; lack of strength; cold hands and feet; orthostatic hypotension; easy bruising; and possible menstrual irregularities. A pale but dark, possibly swollen tongue with thin, white coating; a fine, wiry pulse.
	Damp-Heat Accumulation in the Lower Burner	Yanglingquan GB-34	Genital irritation; burning hot feeling in the vulva; fatigued limbs; distending pain in the low abdomen; loss of appetite; bitter taste in mouth, with or without a slimy sensation; thirst without appreciable fluid intake; frequent, urgent, possibly painful urination with a burning hot feeling in the urethra; small amounts of dark-colored, turbid urine; and constipation. In severe cases, nausea, vomiting, and/or foul-smelling diarrhea. Tongue coating is thick, yellow, and slimy. Soggy or slippery pulse that is also rapid.
	Phlegm/Damp Accumulation	Yiningquan SP-9	Extended illness that does not resolve; dull complexion with obviously greasy skin; moist, often odorous secretions from the armpits, genitals, palms, and soles; lack of concentration or poor memory; excessive salivation with expectoration; heavy limbs; dizziness; sensitivity to petrol or perfumes; numbness of the limbs; fatigue; sluggish, incomplete stools that are not dry. May be heavy set in body type; may require excessive sleep. Symptoms may worsen with weather or seasonal changes, but particularly in damp weather. Tongue coating is thick and slimy; pulse is slippery.
	Spleen Qi Deficiency	Zusanli ST-36	Withered, yellow complexion; mental exhaustion; thin or loose stools; fatigued limbs; reduced appetite; distension and oppression in the center and abdomen; indigestion; frequent urge to urinate with a long, clear urination; possible incontinence or enuresis; lack of warmth in the four limbs; possible facial edema. Pale, fat tongue with white coating; deficient, weak pulse.
	Heart Blood Deficiency	Shenmen HT-7	Pale, lusterless, or withered complexion; dizzy head; flowery vision; pale tongue; pale lips; pale nails; palpitations; insomnia; poor memory; profuse dreaming. Pale tongue and fine pulse.
	Blood Stasis	Xuehai SP-10	Severe pain with lower abdominal distention and pain which refuses pressure. The skin may be dry, rough, and lusterless with red speckles and/or purple macules, red thread marks, prominent veins on the abdomen. Menstrual blood is dark and possibly clotted. Dark tongue with static macules or spots, and a wiry and/or choppy pulse.

continued on page 10



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Protecting the Lung from the Irritations of Autumn

Autumn is the season when the Lung and its associated orifice, the nose, are most susceptible to dryness and the variety of irritations that wind-born external pathogens can bring. Traditional Chinese Medicine provides some guidelines for the prevention and treatment of external wind conditions associated with the season. Here are a few formulas we suggest:



Sheng Mai Formula (*Sheng Mai San*)

Jade Windscreen Formula (*Yu Ping Feng San*)

Ling Zhi Lung Formula (*Ling Zhi Fei Pian*)

Xanthium Nasal Formula (*Jia Wei Cang Er Pian*)

Xanthium & Magnolia Formula (*Jia Wei Xin Yi San*)

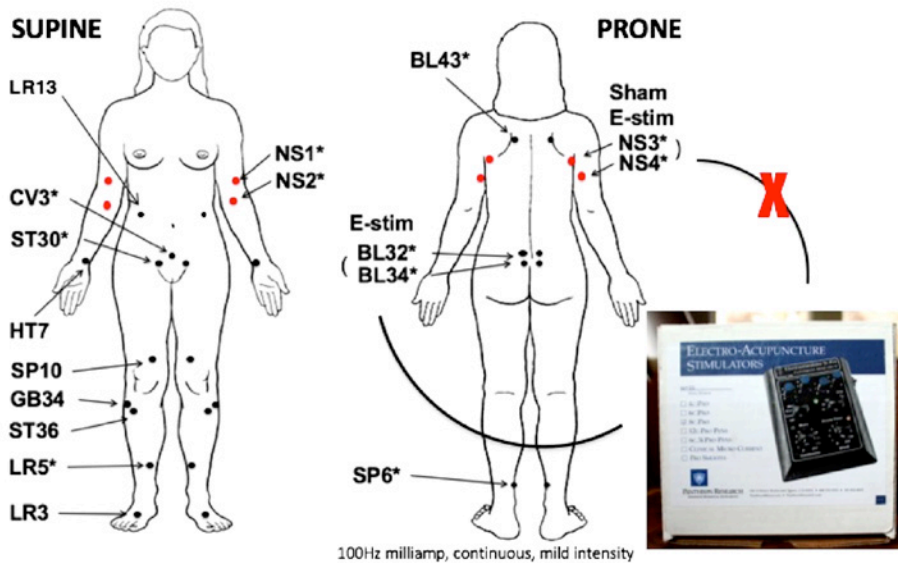
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(see Table 2). This set of points will not change once we make the TCM diagnosis at the initial visit. All participants will receive the same protocol for their prone treatments. These treatments will include electro-acupuncture at 100 Hz continuous milliamps for 30 minutes. All point actions and indications are sourced from *A Manual of Acupuncture*.²¹ Figure 1 illustrates the point locations.

Figure 1. Acupuncture point illustration. Traditional acupuncture points are on the left of each figure and non-traditional acupuncture points are on the right. Points with an asterisk will be needled on each patient in that group.



NTA Group: Fifteen participants will be allocated to this group. It will be described as “non-classical acupuncture” in the recruitment flyers and consent form. Treatments will consist of minimal needling, a form of acupuncture. As with the intervention group, we will interview and diagnose participants within the TCM system at their first treatment. They will receive biweekly treatments for the first six weeks and once weekly for six more weeks, totaling 18 treatments over twelve weeks.

We will needle all acupoints using 0.18 mm diameter (38-gauge), 30 mm length DBC brand, Spring-type acupuncture needles (Korea). We will not manually stimulate the needles once inserted. During all treatments, we will bilaterally needle only two locations; these locations are unrelated to vulvar pain (see Table 2). The treatment protocol will not change during the study. Participants will be treated supine on all odd-numbered visits and prone on all even-numbered visits. We will attach an electro-acupuncture device to the needles during the prone treatments to mimic the treatment of the intervention group. The leads will connect from points NS-3 to NS-4 on the right side and NS-3 to NS-4 on the left

side. We will turn on the machine so that its flashing lights can be seen, but it will not emit electrical stimulation. Participants will feel the lead wires being attached to the needles and the leads against their skin during treatment. They will retain needles for 30 minutes for all visits.

Table 2.

Classical acupuncture

SUPINE (odd-numbered visits): 5-9 needles

PRIMARY POINTS

- Zhongji CV-3
- Qichong ST-30
- Ligou LV-5

SECONDARY POINTS^a

- Liver Qi Stagnation: Taichong LV-3
- Liver/Spleen Disharmony: Zhangmen LV-13
- Damp-Heat Accumulation: Yanglingquan GB-34
- Phlegm/Damp: Yinqingquan SP-9
- Spleen Deficiency: Zusanli ST-36
- Heart Blood Deficiency: Shenmen HT-7
- Blood Stasis: Xuehai SP-10

PRONE (even-numbered visits): 8 needles

PRIMARY POINTS

- BL-32 to BL-34 with continuous milliamp electro stimulation 100/5Hz
- Sanyinjiao SP-6
- Gaohuangshu BL-43

Non-classical acupuncture

SUPINE (odd-numbered visits): 4 needles

NON-SPECIFIC (NS) POINTS

- NS 1: On the distal aspect of brachialis, two cun superior to LU-5 and LI-11, but between the two channels.
- NS 2: On the proximal aspect of flexor carpi ulnaris, two cun inferior to PC-3 and HT-3, but between the two channels.

PRONE (even-numbered visits): 4 needles

NON-SPECIFIC (NS) POINTS

- NS 3: On the midpoint of the medial triceps brachii, three cun inferior to SI-9.
- NS 4: One cun lateral to the inferior angle of the scapula.

^a Up to two additional points selected based on participant’s TCM diagnosis.

“To date, five studies have investigated acupuncture as a treatment for PLV. Overall, researchers found that acupuncture reduced pain, improved the quality of life, and was well tolerated by participants.”¹³⁻¹⁷

Assessments: All participants, regardless of group, will have the following assessments (see Table 3 for the schedule). A physician (CML), blinded to group assignment, will perform a Cotton Swab Test (CST) at the consented participant’s first visit to WHRU.

At their first acupuncture treatment, we will collect additional baseline measures from the participant-reported Tampon Test, a validated assessment of PLV pain.²² We will also assess the participant-reported scale of expectation, and Patient Reported Outcomes Measurement Information System (PROMIS)²³ questionnaires on global health, vaginal discomfort, pain intensity, sexual function, anxiety, depression, pain behavior, and interference. For the scale of expectation, participants will be asked about how much they “expect” the study interventions will or will not help with the symptoms of their PLV, how much they “think” the intervention will or will not help, and how much they “feel” that the intervention will or will not help. To assess satisfaction, participants will be asked to rate their satisfaction on a 5-point scale: very satisfied (5), satisfied (4), neither satisfied nor dissatisfied (3), dissatisfied (2), or very dissatisfied (1).

Participants will fill out a daily Pain Diary for 12 weeks. They will enter their pain scores into Research Electronic Data Capture (REDCap) via daily emailed hyperlinks.²⁴ If electronic diaries are declined, participants will complete the Pain Diary on paper, and study assistants will enter all data into REDCap manually. Every Wednesday for 12 weeks, all participants will perform a Tampon Test²² with a study-provided Original Regular Tampax™ tampon and record the pain intensity on a 100 mm VAS in their Pain Diary. They will also report on the frequency of sexual intercourse in the preceding 24-hour period and the intensity of pain during intercourse using the same scale.

At the end of visit 4 (week 2), we will assess how well participants were blinded to their group assignment. All participants will guess as to which intervention group they are assigned. At visit 12 (week 6), participants will fill out the same PROMIS questionnaires as at their first visit. At visit 18 (week 12), they will fill out the same PROMIS questionnaires, and we will again assess all participants’ guesses as to which intervention group they are assigned and have them report satisfaction with their received intervention and their pain relief using 5-point scales (very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, very dissatisfied). At visit 19 (week 13), within 5 days of the previous visit, the physician blinded to group assignment will perform a CST on each participant. At the visit 20 follow-up (week 24), the physician will again perform a CST on each participant. At this visit, all participants will report their pain from a Tampon Test, report their satisfaction

(using a 5-point scale), fill out the PROMIS questionnaires, and report on other treatments sought during the follow-up period.

We will assess feasibility and acceptability of acupuncture adjunct to lidocaine 5% therapy by determining the proportion of women who meet the eligibility criteria among those who respond to recruitment and by monitoring compliance of participation by numbers of return or missed visits and percentage of dropouts. We will also determine the proportion of women who sought additional treatments in the follow-up period.

Table 3. Schedule of Assessments

	Baseline	Visit 4	Visit 12	Visit 19	Visit 20
Tampon Test	X		X	X	X
Cotton Swab Test	X			X	X
TCM Diagnosis	X				
PROMIS Scales	X		X	X	X
Expectation	X				
Blinding Assessment		X		X	
Satisfaction					X

Outcomes: The primary outcome variable will be the change in reported pain as measured with the Tampon Test²² from baseline (mean score at week 1) to the end of the treatment phase at visit 18 (mean score at week 12). As secondary outcome variables, we will measure the change in mean reported pain scores with the Tampon Test between weeks 1 and 6, weeks 1 and 24, and weeks 12 and 24.

Additional secondary outcome measures will include changes in scores on the CST and on PROMIS scales for global health, vaginal discomfort, pain intensity, sexual function, anxiety, depression, pain behavior, and interference. We will compare changes in the reported CST pain scores as follows: 1) the change in mean reported scores for pain at week 1 to those at weeks 12; 2) the change in mean reported pain scores at week 1 to those at week 24; and 3) the change in mean reported pain scores at week 12 to those at week 24. We will compare PROMIS scores from baseline (visit 1) to scores at week 6, scores at the end of the treatment phase in week 12 (visit 18), and scores at the follow-up in week 24 (visit 20).

Finally, we will estimate the prevalence of TCM diagnoses as assessed at baseline and perform a cluster analysis with the

continued on page 13



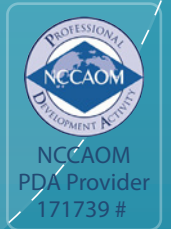
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primary outcome as a dependent variable in order to determine if TCM diagnosis is a potential predictor of treatment response. We will also compare frequency of intercourse and intensity of pain from intercourse from baseline to scores at weeks 6, 12, and 24 based on changes in mean VAS pain scores recorded in the daily pain diary.

Discussion

We designed this feasibility study to assess two types of acupuncture augmentation of lidocaine therapy for the treatment of PLV. PLV pain can be recalcitrant and difficult to manage.^{7,25} Women with PLV often try many kinds of treatment, sometimes with poor to moderate response before moving to vestibulectomy. There is fair evidence to support the effectiveness of vestibulectomy (the surgical excision of the vulvar vestibule) as a treatment for PLV.^{1,7} However, vestibulectomy is typically considered only after other non-surgical treatments are unsuccessful, as this procedure is more invasive and poses mild surgical risks. Effective non-surgical treatments are clearly needed.

To date, five studies have investigated acupuncture as a treatment for PLV. Overall, researchers found that acupuncture reduced pain, improved the quality of life, and was well tolerated by participants.¹³⁻¹⁷ However, heterogeneity exists amongst the studies, as they varied significantly in methodological quality, which was typically low: 1) the largest study was a wait-list randomized controlled trial in which all types of vulvodynia were accepted and the vulvar diagnosis was not confirmed;¹⁷ 2) four were uncontrolled, single-armed observational trials with fewer than 15 subjects in each study; 3) acupuncture point protocols and methods of vulvodynia classification were inconsistent between studies; and 4) there were different outcome measures between studies.¹³⁻¹⁶

Vulvodynia classifications in the acupuncture studies included vulvodynia,^{15,17} vulvar vestibulitis,¹⁴ generalized vulvar dysesthesia,¹³ and provoked vestibulodynia.¹⁶ Powell et al. (1999) needled four unilateral acupoints for all participants during five consecutive weekly treatments, and they assessed outcomes using a VAS and adapted Quality of Life (QOL) questionnaire.¹³ Danielsson et al. (2001) bilaterally needled four abdominal and two distal acupoints (with additional points added when “possible or necessary”) during ten treatments, once to biweekly.¹⁴ They assessed outcomes using a QOL tool and VAS for reported self-provoked pain. Guevin et al. (2005) needled three bilateral acupoints for all participants during four treatments over four weeks, and they assessed outcomes using a VAS for pre- and post-treatment patient-reported pain scales.¹⁵ Curran et al. (2010) offered ten treatments with point prescriptions dependent on participants’ TCM diagnoses, and they assessed outcomes with self-reported pain scores, pain-associated cognitions (Pain Catastrophizing

“We designed this feasibility study to assess two types of acupuncture augmentation of lidocaine therapy for the treatment of PLV... There is fair evidence to support the effectiveness of vestibulectomy as a treatment for PLV.^{1,7} However, vestibulectomy is typically considered only after other non-surgical treatments are unsuccessful, as this procedure is more invasive and poses mild surgical risks. Effective non-surgical treatments are clearly needed.”

Scale, Pain Vigilance and Awareness Questionnaire), and sexual response (Female Sexual Functional Index).¹⁶ All these previous studies offered a total of 10 or fewer sessions, and only Danielsson et al. and Guevin et al. had follow-up at 3 months.

While all four studies reported a reduction in pain with acupuncture, only two reported pain scores. Curran et al. reported modest improvements in pain measures in eight women.¹⁶ However, Guevin et al. reported a significant mean difference of 6.38 in VAS scores after acupuncture in 13 women ($p < 0.001$).¹⁵ Powell et al. ($N = 12$) and Danielsson et al. ($N = 14$) did not report pain scores.^{13,14} These findings show promise for the utility of acupuncture to treat PLV pain.

In this feasibility study, we improve upon the methodologies of the previous studies. We will use a standardized acupuncture protocol compared with a penetrating needle control that accounts for time and attention, as required by the ethical review. We will adhere to the standards described in Consolidated Standards for Reporting Trials (CONSORT)²⁶ and Standards for Reporting Clinical Trials of Acupuncture (STRICTA).²⁷ In addition, bias will be reduced compared with the previous acupuncture vulvodynia studies by blinding the participants, physician, nurses, staff, and statistician.

We also differ from the previous studies by having a longer treatment course, consisting of a total of 18 treatments and a 3-month follow-up. Characteristics of acupuncture treatment associated with significant pain reduction include more sessions.²⁸ Acupuncture may provide lasting benefit to chronic pain sufferers, up to 12 months.²⁹ Our treatment protocols use both primary endpoints for PLV and secondary endpoints that are based on each participant’s TCM pattern diagnosis, a method that will reflect individual difference and variability. We anticipate this individualized approach enables us to better understand PLV patient treatment response based on TCM pattern diagnosis. Schlaeger noted considerable differences in vulvodynia pain response associated with acupuncture based on TCM pattern.³⁰ The results will be submitted for publication.

Conclusion

In this feasibility study, we expect acupuncture augmentation of lidocaine as a treatment for PLV will be feasible, acceptable, and provide pain relief. We also expect to better understand common TCM diagnoses for PLV patients and learn more about how PLV can be characterized based on TCM diagnosis. Our study outcomes will inform any follow-up investigation on acupuncture as a therapy for PLV.

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Project conception: LEHR

Design: LEHR, SDM, RNS, CML

Writing: LEHR, AW, RR, CML

Revision: LEHR, CML

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In clinical practice since 2002, **Lee Hullender Rubin** is a Doctor of Acupuncture and Oriental Medicine, a licensed acupuncturist, and a Fellow of the American Board of Oriental Reproductive Medicine. She specializes in reproductive medicine, chronic pain, women's health, female pelvic pain, vulvovaginal pain, anxiety, and depression. She was in private practice from 2002 to 2010 in Washington, where she also started and managed an acupuncture program at Northwest Center for Reproductive Sciences, a conventional fertility clinic. In 2010, she relocated to Portland, Oregon, to pursue academia and a post-doctoral research fellowship funded by the National Institutes of Health at the Oregon College of Oriental Medicine (OCOM). Upon completion of her fellowship, she resumed private practice within an interdisciplinary gynecology practice and was staff acupuncturist at Oregon Reproductive Medicine. In 2018, she joined the Osher Center for Integrative Medicine at the University of California San Francisco. She has authored several publications and was invited to present her research at the Mayo Clinic and Columbia University. She has presented at research congresses for the American Society of Reproductive Medicine, Society for Acupuncture Research, International Research Congress for Integrative Medicine and Health, British Acupuncture Council, and the International Society for the Study of Vulvovaginal Diseases.



Press Release

NIH names Dr. Helene Langevin director of the National Center for Complementary and Integrative Health

August 29, 2018

National Institutes of Health Director Francis S. Collins, M.D., Ph.D., announced today the selection of Helene M. Langevin, M.D., C.M., as director of the National Center for Complementary and Integrative Health (NCCIH). Dr. Langevin is expected to join NIH in November 2018.

"Helene's distinguished career and leadership in the integrative health community, along with her research on the role of non-pharmacological treatment for pain, makes her ideally suited to lead NCCIH," said Dr. Collins. "We are so pleased to have her join the NIH leadership team."

As NCCIH director, Dr. Langevin will oversee the federal government's lead agency for scientific research on the diverse medical and health care systems, practices and products that are not generally considered part of conventional medicine. With an annual budget of approximately \$142 million, NCCIH funds and conducts research to help answer important scientific and public health questions about natural products, mind and body practices and pain management. The center also coordinates and collaborates with other research institutes and federal programs on research into complementary and integrative health.

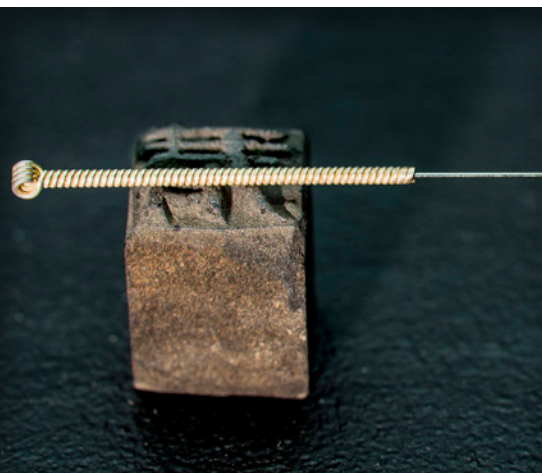
Dr. Langevin comes to NIH from the Osher Center for Integrative Medicine, jointly based at Brigham and Women's Hospital and Harvard Medical School, Boston. She has served as director of the Osher Center and professor-in-residence of medicine at Harvard Medical School since 2012. She has also served as a visiting professor of neurological sciences at the University of Vermont Larner College of Medicine, Burlington.

As the principal investigator of several NIH-funded studies, Dr. Langevin's research interests have centered around the role of connective tissue in low back pain and the mechanisms of acupuncture, manual and movement-based therapies. Her more recent work has focused on the effects of stretching on inflammation resolution mechanisms within connective tissue.

Dr. Langevin received an M.D. degree from McGill University, Montreal. She completed her post-doctoral research fellowship in neurochemistry at the MRC Neurochemical Pharmacology Unit in Cambridge, England, and a residency in internal medicine and fellowship in endocrinology and metabolism at Johns Hopkins Hospital in Baltimore.

"I want to recognize and thank Dr. David Shurtleff for his outstanding leadership as acting director of NCCIH for the past year," added Dr. Collins. "David is an incredible asset to the NIH community and showed admirable commitment and dedication in this role."

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Can Acupuncture Therapy be Quantified?

Abstract

by Donald J. Lefeber, MAOM, LAc,
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Please see bio at end of the article.

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Context: Currently there is a high demand for evidence-based research in the field of acupuncture. The practice of acupuncture has existed for thousands of years and purportedly has been successful at managing a wide array of health conditions. Producing objective/quantitative data that rules out any possibility of placebo effect has proved burdensome.

Objectives: This exploratory study sought to determine if changes in a patient's fine motor control could be detected and quantified following an acupuncture treatment.

Design, Setting, Participants, Interventions: This study looked at acupuncture patients undergoing treatment for general minor injury or pain relief to determine if quantifiable changes could be detected in the fine motor control of the hands after the treatments.

Two groups of 50 subjects were used in the study. The test group was given a fine motor control test prior to and after their acupuncture therapy to determine if any changes could be measured.

The control group was given two fine motor control tests without any intervention with a 40-minute delay between the tests to replicate the test group timing. This study was conducted at a non-profit community clinic between 9/28/16 and 2/19/17.

Results: Of the 50 subjects (sample error $\pm 14\%$) studied, 74% experienced an immediate positive effect on their fine motor control capabilities, averaging $\sim +5\%$ improvement in their fine motor control capabilities. Of the 23 subjects receiving continued therapy, 94% experienced a long-term positive improvement in their fine motor control capabilities. The 50 subjects in the control group not receiving any acupuncture treatments had a positive improvement averaging $\sim +0.6\%$ in only 23% of the subjects. A t-test comparison between the test group and the control group indicated a significant difference between the two groups with $p < 0.001$.

Conclusions: The RU-Fit device can be used to measure fine motor movement improvements in patients with pain following acupuncture treatment. Test reports can provide the patient with a review chart demonstrating the improvements in their fine motor control following acupuncture treatment and quantify long-term improvement over multiple treatments.

Trial Registration: The ARIPI trial is registered at the US National Institutes of Health (ClinicalTrials.gov) #NCT03459872 Unique Protocol ID: RU-Fit Acu 1

Key Words: acupuncture, outcome-based rehabilitation, physical therapy, reaction times, fine motor control, evidence-based medicine, quantitative data

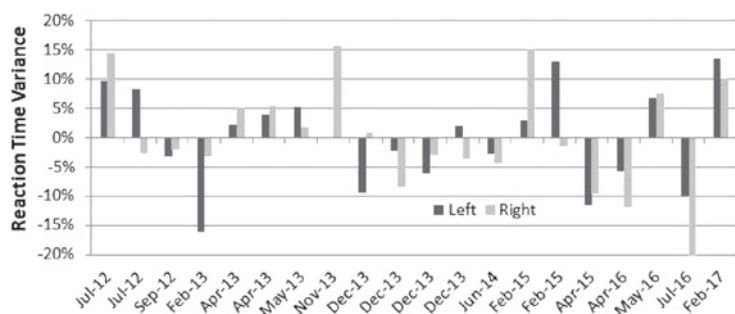
Introduction

Outcome-based rehabilitation requires that a given treatment be capable of being objectively evaluated. If quantitative measurements are available, monitoring any changes in the patient caused by the applied treatment is quite compelling. The primary objective is to demonstrate that changes in the fine motor control of the hands provides a clear indication whether or not a specific rehab treatment has in fact provided an appropriate improvement in the patient's physiological abilities, such as reaction times, coordination, or timing jitter between the hands' digits. While this study concentrated on changes due to acupuncture, the same approach would work for a number of clinical, physical therapy, homeopathic, or chiropractic treatments.

Reaction Times

A seemingly obvious physical marker of change is reaction times. However, reaction times vary considerably for people depending on gender, dominant hand, age, types of stimulus used, dehydration, fatigue level, types of distractions present, and many other factors. Multiple tests on the same non-injured subject over many months have shown a variance in the reaction times on the order of 25-30%. This variability makes using reaction times unreliable or possibly misleading as a biomarker to determine whether real changes have occurred in a subject based on acupuncture treatment. This wide variance is shown in **Figure 1**, which lists reactions times as published by different groups using a visual stimulus. Sight and sound stimulus would provide different results.

Figure 1. Changes in Reaction Time Variance Over Time



Fine Motor Control (Coordination)

Fine motor control (FMC) is defined as the coordination of small muscle movements producing small, precise skills like writing, painting, or threading a needle, as opposed to gross motor skills like walking, running, etc. These precise hand movements may be studied by measuring the forces applied by the fingers as a function of elapsed time. If the timing intervals are small enough, discrepancies in the movements of the hand may be detected and documented, providing information concerning an injury or the recovery from a previous injury. Strengths of the digits may be monitored, and inter-digital coordination may be recorded. Fatigue rates for each digit studied may be determined and compared. By monitoring these parameters, acupuncture treatments may then be monitored for effectiveness and efficiency. This allows the practitioner to set up and monitor their programs to resolve existing or new injuries. These same FMC measurements may also be used to provide long-term documentation of the treatment's efficacy as well.

Part of overall coordination, **timing jitter** refers to the timing differences in the digits when the hand performs any task. Do the digits grasp an object at the same time or at different times? This variance has been reported to be 8–15 ms in non-injured subjects and as high as 80 ms in injured subjects. High timing jitter equates to clumsiness. If the fingers do not clasp closed at the "same" time, the object being grasped will be pushed away by the unopposed force caused by the first digit making contact.

Fatigue can also be measured. Fatigue depends on many variables and as such is not very reliable. However, the relative fatigue rate of the digits is useful in conjunction with other measurements, i.e., does the thumb fatigue at the same rate as the fingers or not?

Acupuncture and FMC

This research was intended to determine if a measurable, repeatable, and reproducible method could be developed to demonstrate that acupuncture does or does not affect the fine motor control of the patient. If acupuncture does cause a physical change in fine motor control, quantitative data supporting acupuncture's efficacy should be produced. While this study looked at the effects of acupuncture, other mitigations associated with physical therapy, chiropractic, or clinical medical treatments could be demonstrated in a similar manner.

Materials and Methods

In this exploratory/pilot study, the test population was developed at a non-profit clinic. The study design and treatment protocol were reviewed and approved by the Rice University/Texas Medical Center Institutional Review Board. Study participants were recruited through verbal advertisements from the acupuncture patient population freely visiting the clinic. Individuals became participants after signing an informed consent form. One hundred participants were enrolled in the study using the diagnostic criteria described below. Subjects that were included in the study were over 18 years of age, and no pregnant women participated in the study. Patients were asked about simultaneous therapies that might have been done at same time of acupuncture, and none of the subjects reported using any at the time of acupuncture treatments.

MathCad was used for the statistics. A proprietary software of the Red Oak Instruments was used for analysis. Power analysis indicated that 25 test subjects would suffice to obtain statistically significant results; however, the decision was made to include more subjects to strengthen the study.

In the control group, the subjects took two FMC tests spaced ~40 minutes apart, without treatment of any kind between the two tests. These FMC tests were conducted to demonstrate the effect of sequential testing to ensure that "learning the test" would not be a factor and to establish a basis for "normal" changes to be expected between the FMC tests. The test group was given a FMC test prior to and following an acupuncture treatment administered by a licensed acupuncturist.

Study Intervention

Acupuncture point selections were based on traditional Chinese medicine (TCM) meridian theory to treat various pain and non-pain related conditions. Pain conditions included: pain of neck, shoulder, elbow, knee, upper and lower back, neck, osteoarthritis of hip, rheumatoid arthritis of hands, carpal tunnel syndrome, and stroke.

Individualized treatment protocols for each patient provided a unique and evolving diagnosis and treatment. Points were selected from textbooks based on classical points. They were chosen for specific conditions based on meridian differentiation, constitution of patient, and their presenting symptoms. The rationale was utilizing acupuncture as in routine practice.

Acupuncture points, both distal and local, were used on the four limbs, back, neck, head, or abdomen depending on the presenting symptoms the patient was showing. An average of 11.5 needles were used per patient. All needles were inserted at a pre-marked depth of 4 mm from the tip of the needle. Depth of insertion was dependent on thickness of skin and subcutaneous fatty tissues at the location of

"Individualized treatment protocols for each patient provided a unique and evolving diagnosis and treatment. Points were selected from textbooks based on classical points."

acupuncture points around 1 to 1.5 cm. Insertion tubes were used during needling with two-hand needling technique, generally in the direction of the flow of the channel/meridian.

De qi sensation was sought upon insertion of needles. Manual stimulation was used to help elicit *de qi* response for some needles. Needle was rotated with index finger and thumb in alternating clockwise and counterclockwise directions at a rate of three to five rotations per second.

Although the majority of patients received only acupuncture therapy, in a couple of instances, complementary therapies of electrical stimulation, moxibustion, cupping, or herbs were used. Wave form setting was used with electrical stimulation. Voltage was set at a level just above the pain threshold.

Treatment times for acupuncture were between 25-30 minutes from last needle insertion to cessation of treatment. DBC Individual Needles with Tubes, (Korea), 0.25x30, 0.25x40. 1 and 1.5 cun needles were utilized.

Acupuncture group subjects received at least one acupuncture treatment. The number of visits was entirely dependent upon patient compliance and desire. Frequency of treatments was dependent on compliance and desire of patient to come for treatments. Number of treatments varied from one to as many as 19 for subjects that were included in this study. TCM diagnostic procedures and treatment all occurred within individual treatment rooms. Acupuncture subjects chosen to be included in the study were patients of the licensed acupuncturist's designated facility of practice. Acupuncture practitioner was a U.S.-trained, NCCAOM-certified licensed acupuncturist.

Patients were enrolled in the study and randomized after signing an IRB-approved informed consent document. Fifty patients undergoing acupuncture treatment for pain relief or general minor injury were studied to determine whether or not observable changes could be detected in the fine motor control of their hands after receiving acupuncture treatments. A control group (N=50) was utilized to observe if improved measurements in fine motor control would occur due to "learning the test." This control group was given two fine motor control tests without acupuncture treatment with a 40-minute delay between the tests to replicate the test group timing.

Test population

Age, gender, and dominant hand were collected for demographic purposes. Age, gender, and race were not considered to be statistically significant factors in a study including only two groups of 50 subjects each. No patient was excluded based on these factors. This study did not test or include subjects less than 18 years of age, nor did it include any pregnant women.

Study participants were recruited from the acupuncture patient population freely visiting the clinic. Patients were asked if they would be interested in a research study. They were informed about the objectives of the study, what their role would be, and that this was a free, non-invasive test that they would undergo before and after their regular acupuncture treatment.

Before inclusion into the program, patients were provided with informed consent forms, and after agreeing and signing the form, individuals then became participants. The demographics are shown in **Table 1**. One test subject was dropped (P-31) because they did not take the second test after acupuncture. The test group of 50 completed all tests.

Table 1. Demographics

	Test Group	Control Group
Average Age	47.1 ± 17.4	44.5 ± 20.8
Males	19 (37.3%)	22 (44.0%)
Females	32 (62.7%)	28 (56.0%)
Left Handed	6 (12%)	5 (10%)
Right Handed	44 (88%)	45 (90%)
Total Subjects	50	50
Acupuncture Treatments	135	0
FMC Tests	268	132

Study Procedure

The FMC tests were conducted to baseline the fine motor capabilities of the participants prior to any acupuncture treatment. Then a licensed, fully accredited acupuncturist performed an acupuncture treatment. Acupuncture point selection was determined by TCM diagnosis and the symptoms presented by the patient. Individual treatment regimens were tailored for each subject.

After a pre-set duration determined by established clinical and acupuncture guidelines, the acupuncture needles were removed, and the patient was re-tested with the FMC test system. Data was analyzed by remote HIPAA-compliant servers and compiled by a technician, and summary reports were generated. The patient's acupuncturist provided notes, which were used to cross-reference with the FMC results.

FMC Equipment used

The RU-Fit™ system provided by RedOak Instruments was used to collect the FMC data. RU-Fit is an FDA-approved portable handset controlled by a laptop computer, using a silent visual stimulus to prompt the subject to complete coordination tasks with each of the hands separately. The FMC testing is non-invasive.

Table 2. RU-Fit Medical Device Evaluation Criteria & Standards

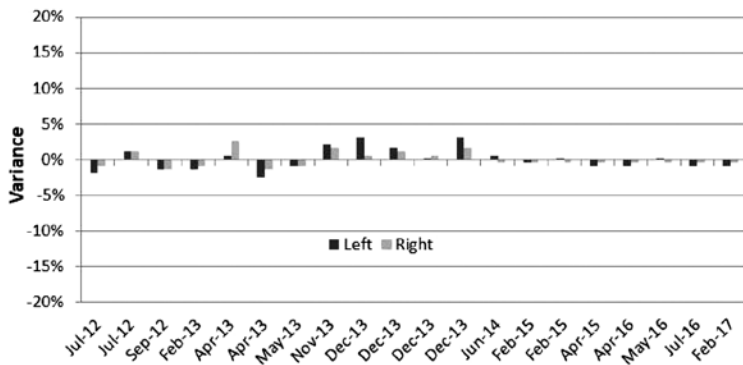
Criterion	Body Function/Structure Classification
Appropriateness	While many physical limitations are readily apparent, determining the extent of fine motor limitations allows for a more directed rehab program. Monitoring improvements and documentation of those improvements demonstrates the appropriateness of the rehab treatment.
Reliability	Reliability tests have shown the objective RU-Fit system to reproduce fine motor measurements to within standard deviation of ±1% over a five-year trial. Changes larger than 1% are due to the rehab treatment and not the reproducibility of the testing equipment. Reaction times show a standard deviation of ±8% by comparison.
Validity	Sensitivity and specificity tests have shown a 97% predictive probability for detecting fine motor control issues.
Responsiveness	The RU-Fit provides rapid documentation about treatment efficacy by detecting small changes in the patient's fine motor control capability due to the therapy treatment. Is the patient responding to the treatment as expected or not?
Precision	Changes observed over a five-year period demonstrate reproducibility on the order of ±1% for fine motor control measurements for normal subjects. However, tests have shown some stroke patients exhibit very large variations in their abilities during early rehab stages depending on the extent of the damages sustained during the stroke. This variability tends to compress as the treatments progress.
Interpretability	Reduces interpretation problems by providing an objective evaluation of the patient's fine motor control capabilities. Trends over subsequent testing can provide quite definitive proof for improvements, or the lack thereof.
Acceptability	By providing objective measurements, which may be presented to the patient in tabular or graphical form, the patient more easily accepts the efficacy of the rehab program as subsequent tests demonstrate concrete improvements in their fine motor control capabilities.
Feasibility	The RU-Fit provides rapid, objective, reproducible and repeatable measurements in a timely and inexpensive manner. Medical staff members can be trained and certified in a couple of hours training.

Differentiation: Reaction Times vs. Fine Motor Control

A reliable, reproducible physical measurement is desired to determine whether or not a change has been effected by the acupuncture treatment. As mentioned above, reaction times by themselves are insufficient for this task. **Figure 1** represents the variance in the measured reaction times over a five-year period for a healthy, non-injured male. The average reaction times and standard deviations for the left and right hands in this case are: left hand 281 ± 22 ms, right hand 278 ± 22 ms. Changes in the timing jitter in **Figure 2** over the same time period show that the timing jitter variance is much smaller than the reaction time variance. While the standard deviation for the reaction times was $\pm 8\%$, the timing jitter variance had a standard deviation of only $\pm 1\%$.

The units used for this study are based on the probability that a subject's results are within normal standards. As such, the output is expressed as a percentage; 100% implies normal capability. During this study, a stated +10% difference refers to the difference between two measurements, such as 84% on the first measurement and 94% on the second measurement. Scores of 64% and 74% would provide the same +10% difference.

Figure 2. Timing Jitter Variance Over Time



Results

Timing jitter and coordination were used to differentiate the test subjects in the following analysis for the 50 control and 50 test subjects. For the test group, **Figure 3** shows that a nearly +5% average change occurred between the two FMC tests, implying that acupuncture can show a measureable change within 30 minutes of the acupuncture treatment. Not all of the changes were positive.

In this series, 74% of the test group saw a positive effect the day of the treatment. Eighteen percent saw a negative effect and 8% saw no change after acupuncture. Only half (25) of the test subjects

returned for additional testing. Of the 25 test subjects returning for additional acupuncture treatments, 23 (92%) demonstrated a net positive improvement in subsequent weeks. This will be discussed further below.

The control group is shown in **Figure 4**. This group only saw a +0.06% change between the tests, which is within the $\pm 1\%$ variation seen in **Figure 2**. In the control group, 23% had a positive change, 45% had a negative change and 32% showed no change between the tests. **See Table 3.**

Figure 3. All Acupuncture Results: Pain/no-pain

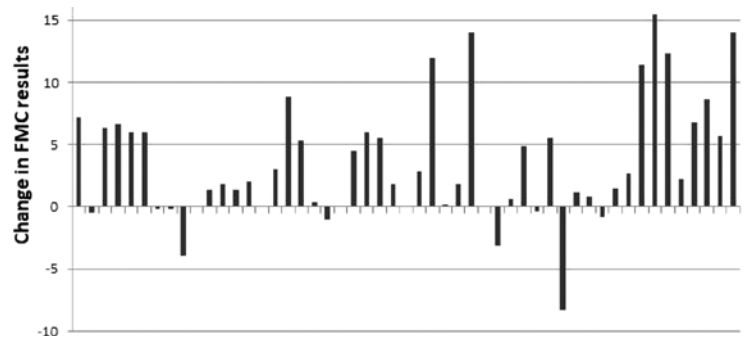


Figure 4. Control Group

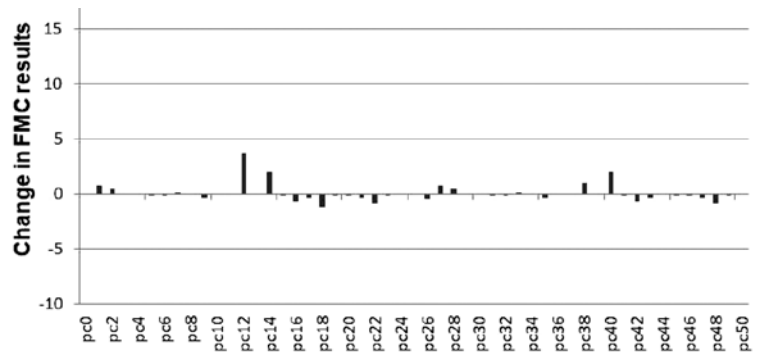


Table 3. Changes Within the Groups

	Test Group N = 50	Control Group N = 50
Had Positive Change	74%	23%
Had Negative Change	18%	45%
Had No Change	8%	32%
Significance	$p < 0.000054$	
Uncertainty	$\pm 14\%$	

The positive change detected in the test group is not observed in the control group. The test group improved quite quickly and a measurable improvement (average +5%) was observed within 30 minutes of the conclusion of the acupuncture therapy in 74% of the subjects. This was significantly better than the changes observed in the control group, which was on average +0.1% and positive in only 23% of the group.

In a sample of 50 subjects, our sample uncertainty is $\pm 14\%$. A t-test comparison implies these groups are significantly different with a p-value less than 0.001. In addition, the acupuncture therapy used in the study was successfully modified based on past recorded treatments in several of the test subjects.

Discussion

Half of the test group returned for multiple tests, which allowed for a review of multiple acupuncture treatments for some of these subjects. **Figure 5** and **Figure 6** show the data for a stroke rehab patient, showing that the left hand (Fig. 5) improved quickly over the 13-week period of treatment. The right hand (Fig. 6) shows a trending improvement but did not respond as well to the treatment. Note that for the left hand (Fig. 5), the second test (solid symbol) is always better (higher) than the first test (open symbol), demonstrating an improvement immediately after the acupuncture treatment. This is not true for the right hand, even though the right hand did improve over the treatment period. The results from Figures 5 and 6 were used to modify the acupuncture treatment to improve the outcome, as seen for the right hand in late October/early November, resulting in a higher plateau in December.

Figure 5. Left Hand P-30

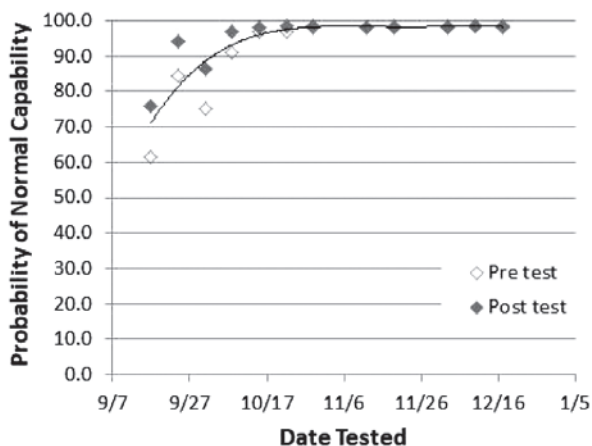
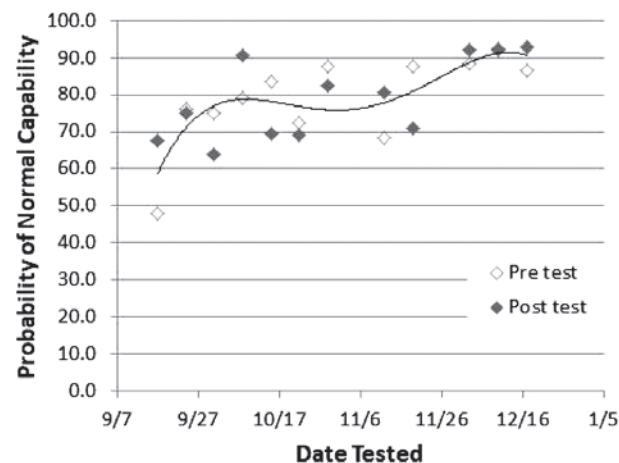


Figure 6. Right Hand P-30



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Subject P-8 presented with "soreness" in the shoulders. This test subject returned over a ten-month period for occasional therapy, and the results of his tests are shown in **Figures 7 and 8**. In this case, the subject recorded a drop in capability immediately after treatment in both hands. However, over time, the subject shows a trend to better fine motor capabilities in both hands. It was suspected that a delay in the second FMC test of an hour or so might have shown an improvement. This will need to be tested to determine the optimal time after acupuncture to observe an improvement.

Figure 7. Left Hand P-8

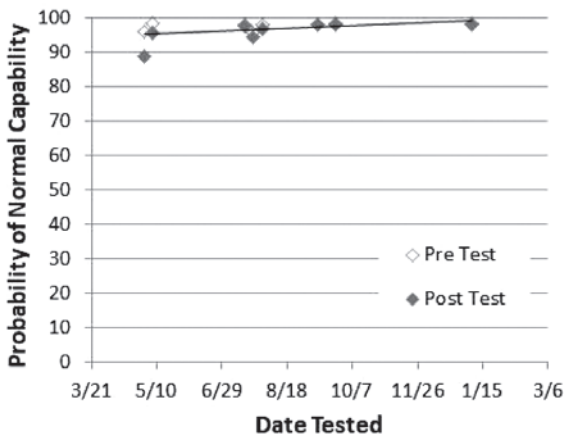
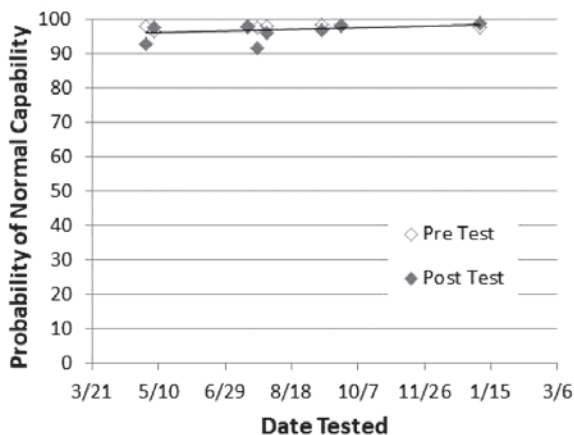
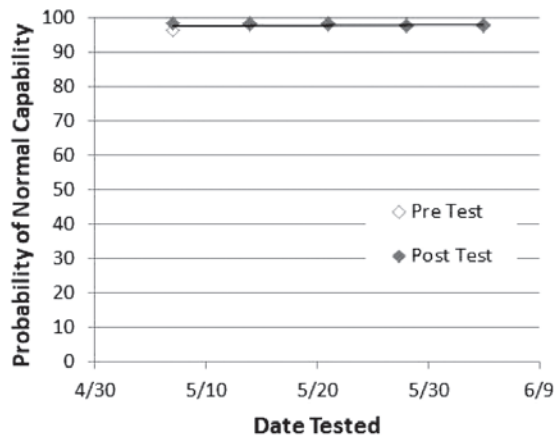


Figure 8. Right Hand P-8



An example where no changes were observed over time can be seen in **Figure 9**. These results were for a subject seeking smoking remediation. A small improvement occurred after the first treatment, but no changes were observed through the subsequent weeks of testing. Pain is not usually associated with smoking. However, "jittery" nerves have been associated with smoking cessation, and we were curious if any changes in fine motor control would be noticeable during this pilot study, as the patient did mention having experienced some symptoms.

Figure 9. Both Hands P-11



Conclusion

The RU-Fit device can be used to measure changes in fine motor control following acupuncture in patients who experience pain and shows promise as a new objective measure.

Donald J. Lefeber, MAOM, LAc is an advocate and proponent to the advancement and understanding of integrative medicine and the role that acupuncture and Oriental medicine will play in this new paradigm of health care. Lefeber is a full member of the Texas Medical Center/Rice University Sigma Xi Research Society. He has been involved in research work for the past 10 years and has given presentations at the Texas Medical Center and international conferences for acupuncture and Oriental medicine as well as integrative medicine. Lefeber has helped to build integrative medicine collaborations within the Texas Medical Center, the HOPE Clinic, and the Pain Recovery Program of the Memorial Hermann's Prevention and Recovery Center in Houston. From 2012-2017 he served as the director for Integrated Health Care and Wellness at the Community Medical Foundation for Patient Safety. In mid-August 2015, Lefeber helped construct a unique eastern-western integrative medicine program at HOPE Clinic. The objective is to provide holistic care and achieve optimal outcomes for patients by using acupuncture and Oriental medicine for various diseases and conditions, especially pain management.



Case Report

Acupuncture and Moxibustion for the Treatment of Two Oblique Displaced Fractures of the Left Clavicle

By Diane Behall, DAOM, LAc

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Abstract

Surgical intervention has become the most common treatment for displaced clavicle fractures. In the past, this injury was primarily treated with non-surgical, conservative treatment using figure-eight bandages or immobilization slings. Further complicating the issue is the lack of definitive research on which treatment method is superior, and several randomized trials comparing non-surgical and surgical treatment have not shown compelling evidence in favor of surgery. This is a single case study of a 28-year-old male with two oblique displaced fractures of the left clavicle following a bicycle accident. His medical team recommended surgery; however, he declined due to lack of health insurance. Starting two and a half weeks after his accident, he received three acupuncture treatments with moxibustion over a four-week period. The clavicle bone healed completely without surgery. He reports no residual dysfunction to his left arm and has full range of motion and muscle strength. Further research may show that acupuncture and moxibustion can be an appropriate adjunctive therapy to aid in the healing of clavicle fractures.

Key Words: clavicle fracture, traditional Chinese medicine, Oriental medicine, acupuncture, moxibustion, moxa

Introduction and Biomedical Background

Fractures of the clavicle bone comprise 2.6–5% of all fractures in adults.¹ They occur most commonly in men (68%), with males aged 15–24 years representing 21% of all clavicle fractures.² The majority of these injuries (94%) involve a direct fall on the shoulder, while 6% result from a fall onto an outstretched hand.³ Fractures are often sustained during sports activities or traffic accidents, with same-level falls and bicycle accidents being the most common injury mechanisms.^{2,3}

Patients with this condition will present with a history of recent trauma, a severely swollen and painful shoulder, and an inability to move the injured arm. In addition, the injured shoulder will drop, appearing lower than the healthy shoulder, and will lean forward and inward.⁴ The patient's head will also lean toward the injured shoulder and their chin toward the opposite side.⁴

Midshaft fractures of the clavicle are the most common type of clavicle fracture (69–82%).^{1,2} Anatomically, the midshaft is the thinnest part of the clavicle bone. It is more susceptible to fractures because, unlike the medial and lateral aspects of the bone, it lacks strong attachments to ligaments and muscles.^{1,2} This type of fracture primarily occurs lateral to the sternocleidomastoid muscle and medial to the coracoclavicular ligaments.¹ Displaced midshaft fractures, where two ends of a fractured bone are separated and out of alignment,⁵ constitute 43% of all fractures and are the most frequently operated fractures.² These types of fractures can be extremely painful, as there is damage to the bone, nerves, and blood vessels, as well as soft tissue damage of the surrounding muscles, tendons, and ligaments.⁶

Bone heals by complete regeneration rather than scar tissue formation.⁷ Fractures in bones trigger a sequence of healing that includes inflammation, repair, and remodeling.⁷ During the repair phase, a soft callus (primarily cartilage) forms to stabilize and bridge the fracture gap.⁷ New blood vessels develop to nourish the cartilage, and immobilization is recommended to allow for revascularization.⁷ Bone begins to replace the cartilage after two to three weeks, forming a hard callus.⁷ Mineralization further stabilizes the fracture and brings about clinical union, demonstrated by a lack of pain at the fracture site and bone formation on radiograph.⁷ Final healing occurs during remodeling (six weeks post-injury), when the weaker fracture callus is absorbed and replaced by mature bone.⁷

The best treatment for displaced clavicle fractures has been debated for decades.⁸ Traditionally, clavicle fractures were treated non-operatively, regardless of the type of fracture.² Simple slings, collar-and-cuff slings, and figure-eight bandages² were commonly used to immobilize the fracture for four to eight weeks.⁷ Total healing time in adults is six to twelve weeks.⁷ In a multiyear study of 1,000 adult patients,⁹ most fractures (89%) healed uneventfully with conservative treatment in a collar-and-cuff sling until acute pain subsided. Only 6% required surgical intervention.⁹

Surgical treatment has become more common in recent years.⁸ The most commonly used operative method is open reduction and internal plate fixation; a smaller number of fractures are treated with intramedullary nails, pins, or wires.² However, the evidence supporting surgical treatment over non-surgical treatment is limited and not compelling.

Several randomized trials comparing both intervention types have not shown surgery to be the superior intervention.⁸ In addition, shoulder function outcomes post-healing did not show significant difference between conservative treatment methods and operative intervention of open reduction and locking plate fixation.¹ Therefore, routine operative treatment is not recommended, even though it appears to be a trend.⁸

Acupuncture and Oriental Medicine Background

There is limited evidence to support the use of acupuncture specifically for fracture healing. However, this evidence is promising and indicates that acupuncture may accelerate bone healing. A randomized controlled trial found that electroacupuncture (EA) enhanced callus formation and bone mineralization during the healing process of tibia fractures.¹⁰ Additionally, a few case studies, utilizing both EA and standard acupuncture, showed similar results of accelerated healing in other types of fractures (humerus,¹¹ distal radius,¹² and metatarsal¹³) as well as reducing pain¹¹⁻¹³ and edema from the initial injury.¹³

When treating fractures, the emphasis should be on regulating the flow of *qi* and Blood both systemically and locally.¹⁴ Treatment protocols should focus on the removal of stasis by invigorating Blood circulation.¹⁴ Ping states that “without vigorous Blood circulation the fractures will never heal.”¹⁴ Physical trauma causes local stagnation of *qi* and/or Blood (i.e., disruption of normal *qi*/Blood circulation) in the affected area, giving rise to pain, bruising, and swelling. Severe trauma can cause Blood stasis, i.e., fixed, stabbing pain with dark Blood.¹⁵ Although trauma may seem a temporary cause of disease, in practice, the effect of trauma can linger for a long time.¹⁵ External trauma includes broken bones, dislocation of bones, damage to muscles and tendons, and open wounds.¹⁶

Fracture healing in traditional Chinese medicine (TCM) can be divided into three distinct stages: initial, intermediate, and natural cure.¹⁴ During the initial stage (weeks one to two after fracture), there is local pain and swelling, and the fracture ends are unstable.¹⁴ Damaged blood vessels around the broken bone can create significant bruising.⁶ Treatment principles are to remove obstruction from the channels and collaterals, activate Blood circulation and resolve Blood stasis, overcome spasms of muscles, and stop pain.¹⁴ Moxibustion (moxa) is not used during this stage.¹⁴

During the intermediate stage (weeks three to six post-fracture), local pain and swelling subside and the fracture ends become more stable.¹⁴ Treatment should focus on callus formation and the reunion of fracture ends.¹⁴ This is accomplished by tonifying *qi* and Blood to nourish bones, clearing Blood stasis, and promoting circulation.⁶ Moxa may be used during this stage.¹⁴

“When treating fractures, the emphasis should be on regulating the flow of *qi* and Blood both systemically and locally.¹⁴ Treatment protocols should focus on the removal of stasis by invigorating Blood circulation.¹⁴ Ping states that ‘without vigorous Blood circulation the fractures will never heal.’¹⁴”

The final stage, called “natural cure stage,” occurs seven weeks post-fracture. Treatment principles focus on tonifying the Liver and Kidney, replenishing *qi* and Blood, strengthening muscles, tendons, and bones, and warming the channels to promote the flow of *qi* and relieve rigidity of joints. EA and moxa may be used during this stage.¹⁴

Moxa is generally used in the intermediate and natural cure stages after the initial inflammation and swelling dissipates.^{6,14} During these stages, it is used to reduce residual swelling, pain, and stiffness; disperse accumulations of stagnant Blood and fluids; and warm injured areas that are cold to the touch (inadequate circulation) or for chronic injuries that ache in cold, damp weather.⁶ Moxa is contraindicated over open lesions or skin ulcerations or when the injured area is hot, red, and painful.⁶

Case History

In April 2014, a 28-year-old male presented with a fractured left clavicle. Two and a half weeks prior to this appointment, the patient was in a bicycle accident where he flipped over the handlebars, landing on the concrete sidewalk. He knew this was a serious injury because he immediately felt extreme pain and was unable to use his left arm. He was wearing a backpack at the time and the weight of it pulled on the fracture. He remembered “lying on the sidewalk in the rain, in excruciating pain.”

He went to urgent care and was diagnosed by x-ray (Figure 1) with two oblique displaced fractures of the left clavicle with a floating bone in the middle. Urgent care referred him to an orthopedic surgeon; however, this patient did not have health insurance and could not afford the recommended surgery. He wanted to try other options and decided to see if acupuncture and moxa could provide some relief.

Figure 1 X-ray Images of Clavicle Fracture



Significant Ten Question Findings

The patient reported pain levels of 5-6/10 while his left arm was immobilized in a sling. Pain levels could rise to 8-9/10 when his arm was jostled or bumped. He stated that the muscles surrounding the fracture (pectoralis major, deltoid, trapezius, and sternocleidomastoid) were actually more painful than the fracture site.

He experienced occasional numbness in his left pinky and ring fingers while lying down, which went away when he sat or stood up. He also reported generalized muscle fatigue and overall exhaustion. No range of motion testing was performed.

Patient had a history of previous fracture to his left scapula from a motorbike crash in Thailand in 2000. He did not need surgery after that accident, though he stated that his left shoulder had been weaker since the injury. The patient worked as a personal trainer and was in excellent physical health. At the time of treatment, he was unable to work due to his injury.

Objective

The patient was 6 feet tall and weighed 195 pounds. Tongue was slightly puffy with thin white coat and red/purple body. Pulse was wiry. Left shoulder was approximately two inches lower than right shoulder and appeared to be dangling when not in the sling. The area of broken bones was clearly apparent when viewing. There was light yellow bruising in the affected area. The area was tender to light palpation, with no abnormal heat signs. Skin and nail bed color were consistent in both arms, as well as sensation of touch in bilateral fingertips.

Diagnostic Assessment + Etiology and Pathogenesis

The TCM disease diagnosis was Blood stasis and *qi* and Blood stagnation due to trauma, with obstruction to the Kidney, Stomach, and Lung channels.

This patient suffered a traumatic bicycle accident, resulting in two oblique displaced fractures of the left clavicle. He presented with Blood stasis, characterized by swelling and localized, fixed, intense pain. *Qi* and Blood stagnation were indicated by the presence of

local distention and pain, disruption to the smooth flow of *qi* and Blood from trauma, pain migrating to surrounding muscles, occasional numbness to pinky finger, wiry pulse, and a red/purple tongue body.^{4,15} Three meridians cross or connect with the clavicle bone: Kidney, Stomach, and Lung.¹⁷ The flow of *qi* was disrupted through each channel pathway due to the physical obstruction of the broken bone.

Treatment

The patient was extremely needle-phobic, which limited treatment options. The treatment consisted of needling around the fracture site (“surround the dragon” technique), with distal points on the arm and legs to circulate *qi* and Blood. Pole moxa (smokeless) was also used at the fracture site, surrounding muscles, and distal left arm.

Needles (DBC brand, Korea) were retained for a total of 25 minutes and were not stimulated after insertion. Needle gauge was 0.20 x 30 mm and 0.16 x 15 mm. Pole moxa (Longevity brand, smokeless, pure moxa stick) was used for 20 minutes.

Acupuncture: left side only except where noted as bilateral (B).

- LI-14 Binao, LI-11 Quchi, GB-34 Yanglingquan (B), ST-36 Zusanli (B) (length: 0.20 x 30 mm); Baxie, LI-4 Hegu, LU-7 Lieque, KI-3 Taixi (B), Ear Shenmen (B) (length: 0.16 x 15 mm)
- Surround the dragon x 5 needles at fracture site; superficial insertion (length: 0.16 x 15 mm)

Table 1. Actions and Indications of Acupuncture Point Selection

LI-14 (Binao)	pain, numbness, painful obstruction of upper arm and shoulder
LI-11 (Quchi)	clears Heat, cools Blood, regulates <i>qi</i> and Blood
LI-4 (Hegu)	painful obstruction and atrophy of four limbs, pain of sinews and bones
LU-7 (Lieque)	activates channels and alleviates pain
KI-3 (Taixi)	<i>shu</i> stream and <i>yuan</i> source, strongly tonifies Kidney <i>yin</i> , <i>yang</i> , and essence
GB-34 (Yanglingquan)	influential point of sinews, benefits sinews and joints, spreads Liver <i>qi</i>
ST-36 (Zusanli)	tonifies <i>qi</i> , nourishes Blood and <i>yin</i> , distal point on Stomach channel
Baxie	clears Heat, dissipates swelling (LI-4 used instead of fourth Baxie point)
Ear Shenmen	tranquilizes the mind and allows connection to spirit

Reference: Deadman, P, Al-Khafaji, M, Baker, K. A Manual of Acupuncture. Hove: Journal of Chinese Medicine Publications, 2001.

Results/Outcomes

The patient was extremely nervous during needle insertion, as this was his first ever acupuncture treatment. After needle insertion, a smokeless moxa pole was burned over the fracture site, surrounding muscles, and distal left arm. The patient reported a pleasant, warm sensation from the moxa. He remarked that he could “feel something happening.”

As the moxa moved over the fractured clavicle, both patient and practitioner felt a strong magnetic-like pull, as if two magnets were being pulled together. This sensation lasted for several minutes and eventually dissipated. The patient said he felt warmth, tingling, and movement around the clavicle.

He only noticed this sensation with the moxa therapy, not with the needles. Pole moxa was also burned over the pectoralis major, upper trapezius, and deltoid muscles, as well as the distal points on the lower left arm and legs.

After the session ended, the patient reported feeling very relaxed, with a significant decrease in pain. When he came out of the room, the practitioner immediately noticed a drastic change in the position of his left shoulder. Prior to the treatment, his left shoulder was approximately two inches lower than the right shoulder. After treatment, the gap was reduced to less than an inch. The patient was elated by the transformation he saw in the mirror.

The patient had two more acupuncture sessions (a total of three over four weeks) identical to the above treatment. The magnetic sensation with moxa was only experienced during the first session. He was able to start rehabilitation exercises soon after the first treatment. During the next two months, he worked with a physical therapist for two sessions (exercises only, no manipulation or manual therapies) and four sessions where only elastic therapeutic tape (Kinesio Tape) was applied for support.

He reported wearing an immobilization sling full time for almost two months, which progressed to wearing the sling just at work, on walks, and during rehabilitation. The patient started lifting light weights at four months, and by the end of six months, he reported that the left arm and shoulder were stronger than pre-injury.

As a personal trainer, with initial assistance from professional colleagues, he knew which exercises to utilize for a full recovery and did most of the rehabilitation on his own. The clavicle bone knitted together completely without surgery. He self-reported that there is no residual dysfunction to his left arm and that he now has full range of motion and full muscle strength. This assessment is based on his expertise as a personal trainer. He declined to return for further acupuncture sessions and chose not to be re-evaluated by a physician. Unfortunately, before and after photos are not available.

“This is an unusual case for several reasons. First, this is an atypical patient. He had never received acupuncture prior to his first session and only tried it because he lacked health insurance for the recommended surgery. Second, the results could be due to a spontaneous healing. Neither the patient nor the practitioner expected such a drastic improvement after the first session.”

Discussion

In this case, a 28-year-old male presented with two oblique displaced fractures of the left clavicle. He was unable to pay for recommended surgery and decided to seek alternative treatment. After one session with acupuncture and moxibustion, the left shoulder droop noticeably improved, going from two inches lower than the right shoulder to less than an inch difference. The patient continued to improve utilizing rehabilitation exercises from his training as a personal trainer and ultimately did not need surgery.

It is important to note that this is a single case, which severely limits generalization of these results. This is an unusual case for several reasons. First, this is an atypical patient. He had never received acupuncture prior to his first session and only tried it because he lacked health insurance for the recommended surgery. Second, the results could be due to a spontaneous healing. Neither the patient nor the practitioner expected such a drastic improvement after the first session. At best, they hoped for local pain relief and improved circulation in his left arm and pinky finger. Everyone was pleasantly surprised by the results.

In addition, the patient was a young, healthy male who worked as a personal trainer. He had a better-than-average understanding of his body and was in peak physical condition prior to the injury. He also knew which rehabilitation exercises to perform and had daily access to essential equipment. Given these factors, no definitive conclusions can be drawn from this specific course of treatment. However, this case is unique and has merits that are worth sharing with the acupuncture community.

There is minimal research on the use of acupuncture or moxibustion for the treatment of displaced clavicle fractures. A literature review did present several studies in which acupuncture had been used in patients with various types of fractures. These studies showed that the inclusion of acupuncture during the recovery phase may accelerate the healing process in fractures of the humerus, distal radius, metatarsal, and tibia bones.¹⁰⁻¹³ Acupuncture was also shown to reduce pain and edema from the injury site.¹¹⁻¹³ These results are encouraging and indicate the need for further research.

Conclusion

Acupuncture may be an appropriate adjunctive therapy to aid in the healing of clavicle fractures. Research, although limited, has shown that the inclusion of acupuncture may accelerate the healing process of fractures and reduce pain. This case study can serve as a primer to foster discussion and subsequent research on the potential benefits of acupuncture and moxibustion for the treatment of clavicle fractures. Given the research inconsistencies between surgical and non-surgical interventions, the use of acupuncture and moxibustion may provide other treatment options for patients seeking conservative treatment.

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Catalyzing Emergence: Integral, Evolutionary, and Spiritual Perspectives on Chinese Medicine, Part I

By Lonny S. Jarrett

Lonny S. Jarrett has been practicing Chinese medicine in Stockbridge, Massachusetts, since 1986. He has been teaching and publishing on integral and evolutionary perspectives on medicine for over three decades. Lonny is a founding member of the Acupuncture Society of Massachusetts and a fellow of the National Academy of Acupuncture and Oriental Medicine. Lonny is the author of *Nourishing Destiny: The Inner Tradition of Chinese Medicine* and *The Clinical Practice of Chinese Medicine*. He holds a master's degree in neurobiology and a fourth-degree black belt in Tae Kwon Do. He was recently featured in *The Great Work of Your Life: A Guide for the Journey to Your True Calling* by bestselling author Stephen Cope. Lonny hosts nourishingdestiny.com, an online community for 3,000 practitioners of Chinese medicine worldwide. His teaching schedule is at www.chinesemedicine.courses, and his texts are available from spiritpathpress.com.

Note: This article is abstracted from Jarrett's new book in progress, tentatively titled *Deepening Perspectives on Chinese Medicine*, in which he focuses on integral, evolutionary, and spiritual perspectives on the practice of Chinese medicine. It is the first of three parts that will be published in *Meridians: The Journal of Acupuncture and Oriental Medicine*.

“May I be the doctor and the medicine.”

—Shantideva's Bodhisattva vow

As evidenced in the *Shen Nong Ben Cao*, *Baobuzi*, and the *Shanhaijing*, Chinese medicine (CM) was born in magical thinking. It developed through mythic influences evident even in the opening lines of the *Neijing*, which describe “the people of high antiquity who exceeded 100 years of age and remained strong because they followed *yin* and *yang*.”¹ It matured to a rational stage of expression in the Han dynasty when the classic texts, the *Neijing*, *Nanjing*, and *Lingshu*, were written. “Chinese” medicine has evolved through each stage of culture to become a world medicine. Having transcended the worldviews of Daoism, Confucianism, Buddhism, Marxism, and modernism, CM is now, at its leading edge, stepping beyond postmodernism to embrace integral values.

As we transcend nationalism and the relevance of geographically and demographically isolated nation states, we need new social, political, ethical, fiscal, legal, educational, military, and medical systems to address the realities of a global world. Practitioners of CM are potentially advanced holistic systems thinkers who understand the relationship of consciousness to biology, physiology, biosphere, culture, and kosmos.² It will take just such an appreciation to birth the new culture that is imperative for us to manifest if we are to successfully face the challenges that confront us. Medicine is politics and a potent vehicle for cultural change. We practitioners of CM are well situated to help catalyze this emergence.

While the tradition of CM is rooted in an ecological perspective, it reflects in some respects values and insights that have been transcended as our understanding of humanity and its place in the universe has evolved over the 2500 years since the classics were written.³ To live up to our potential as healers of individuals, cultures, and the planet, the embrace of a more highly evolved perspective that utilizes the best of our knowledge is essential. During my time in clinical practice, three main perspectives on medicine have impressed themselves

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upon me. These are the integral, evolutionary, and spiritual perspectives. In my eyes, these present different facets of a single view. Looking through this view, the goal of medicine is to catalyze the emergence of a more deeply and highly integrated self, culture, and kosmos. My new text, in the works, will present these perspectives in depth as a unified view.

In this series of three articles, I'll briefly introduce them and offer a few ideas of their importance in a medical context. Here, in Part I, I'll create a context for understanding Integral Medicine, outlining the Four Quadrants as perspectives through which all sentient beings view the world. Part II will discuss the relationship between state and stage development and the dynamics of stage pathology. I will examine repression, shadow, and projection as they manifest in stage specific allergies and fixations. Part III will focus on lines of development and typing systems. It will also discuss my understanding of the evolutionary and spiritual perspectives for the practice of medicine.

I. Integral Medicine

Theoretical Foundations

“.....the process, being integral, accepts our nature such as it stands organised by our past evolution and without rejecting anything essential compels all to undergo a divine change.”⁴

—Sri Aurobindo

In formulating integral yoga, the Indian sage Sri Aurobindo conceived of a practice that left no significant dimension of the self behind. He asserts that, “The self contains the universe,”⁵ “[b]ut this knowledge is valueless for Yoga if it is only an intellectual and metaphysical notion void of life and barren of consequence; a mental realisation alone cannot be sufficient for the seeker. For what Yoga searches after is not truth of thought alone or truth of mind alone, but the dynamic truth of a living and revealing spiritual experience.”⁶

In my experience, the awareness of most people is constrained to the biographical dimension of the self. That self, born in time, consists of so many moments strung together like pearls on a necklace, creating the illusion of a separate existence. Upon dying, each pearl, each moment, spills like so many drops of water back into the ocean, the source of self.

We understand Chinese medicine to be holistic, to address body, mind, and spirit, recognizing no separation between them. In integral medicine, we endeavor to practice a medicine that leaves no dimension of the self behind. Yet we practitioners will only be able to access dimensions of the self in patients to the precise degree that we have an authentic living and developing relationship to those dimensions within ourselves. For the practitioner of integral medicine, the body, mind, ego, soul, conscience, spirit, emptiness, and

the authentic self must be more than philosophical abstractions. The dictum “to know the patient, know the self,” is based on the nondual recognition that patient and practitioner are one.⁷

From this perspective, a foundation of efficacy in treatment is the practitioner’s orientation toward, and actualization of, evolving integrity across all lines of development and through all dimensions of the self. The practitioner of integral medicine endeavors to have an uncommon integrity, one that speaks prior to words or therapeutic actions—an integrity so compelling that it challenges the patient’s cynicism regarding the degree of wholeness that they might obtain if they cared to. All knowledge and technique serve the healer’s developing integrity. Hence the Bodhisattva vow affirms, “May I be the doctor and the medicine.”

In this context, the force of the practitioner’s integrity creates an alignment through resonance with the upright influences in the patient’s core (Heart/Kidney axis) prior to acting. In medicine we can eliminate what is false (stagnation) and tonify the presence of what is true (*jing, qi, shen*, for example). Subtle alignment within the patient, reinforced through therapeutic action, initiates a dual process. On the one hand, all forces within and without that support the expression of the upright will marshal themselves to catalyze the emergence of a more highly developed and integrated self. Simultaneously, all forces of resistance committed to maintaining the *status quo* will emerge as resistance in the form of repression, denial, and self-defeating behaviors. It is the degree of the practitioner’s victory over these forces within their own self that imparts the humility, compassion, and knowledge necessary to guide the patient, offering hope, inspiration, and the strength of doubtless conviction in the positivity of the process.

Integral Theory

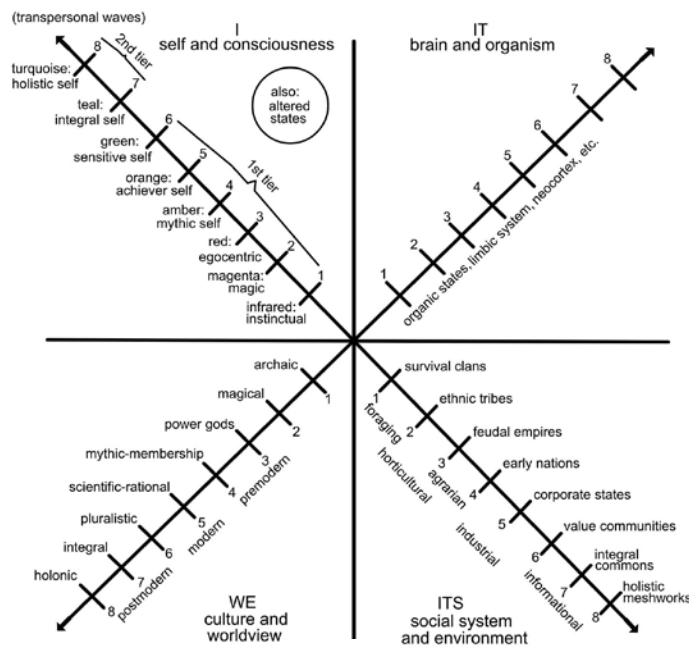
I have endeavored throughout my career to forge a medicine coherent with the time, culture, and place in which I practice. My first article in the profession, entitled “The Holographic Paradigm and Acupuncture,” was based on *The Holographic Paradigm*, edited by Ken Wilber.^{8,9} This work was elaborated upon in *Nourishing Destiny* and in my *Clinical Practice* text. In *Clinical Practice*, I presented a state and stage perspective of the evolution of CM, discussing the clinical import of an evolutionary perspective and presenting a case study.

My new text will, in part, address Integral Theory in detail as it relates to the practice of medicine. Wilber has been at the forefront of shaping Integral Theory and the field of transpersonal psychology for nearly the last 50 years.¹⁰ Integral Theory offers an overarching meta-perspective, a map of maps, providing a compelling top-down view of human history, individual and cultural development, and our place in the Kosmos. This excerpt will discuss quadrants, the first element of Integral Theory. The remaining four elements, states, stages, lines, and types, will be discussed in subsequent issues of this journal.

The Four Quadrants

The quadrants are four basic perspectives through which all sentient beings view the world (Fig. 1). These perspectives are enacted through at least eight methodologies, as illustrated in Fig. 2. The methodology we use brings forth the phenomena we experience, thus defining our reality by disclosing the world-space in which we live. The direction or *telos* of development in each quadrant is toward increased stages of complexity and integration. An integral approach always considers an “All-Quadrant All-Level” (AQAL) perspective on emergent phenomena.¹¹

Figure 1: The AQAL Map



Adapted from: Wilber K. *A Theory of Everything: An Integral Vision for Business, Politics, Science, and Spirituality*. Boston: Shambhala; 2000.

Figure 1 Legend: The quadrants define four perspectives that every sentient being looks through. Here are depicted stages in the evolution of the self (I), culture (We), the body (It), and society and ecosphere (Its). The trajectory of each line in each quadrant is toward increased complexity and integration. As each new stage emerges, it transcends the limitations of previous stages while retaining their strengths.

Integral philosophy recognizes that experience is viewed through four primary perspectives and that all phenomena can be viewed in terms of those four perspectives. The Upper Left Quadrant (UL) is the domain of individual (“I”) inner subjective experience and development. These are enacted phenomenologically through meditation, contemplation, and introspection. The validity claim is truthfulness, sincerity, and authenticity relative to subjective reality. Here the self-line of development evolves from embeddedness in the unconscious, through ego formation, and into the transpersonal stages.

The Lower Left Quadrant (LL) is the domain of the interior of the collective (“We”). It is the sphere of culture, intersubjectivity, and mutual resonance between two or more individuals. This domain is enacted with hermeneutics, the study of meaning. Validity claims in the LL involve justness and mutual understanding.

The Upper Right Quadrant (UR) is the domain of the exterior-objective perspective of the physical body of a human being (“It”). It is enacted through empirical methods of quantification that we identify with Western, materialistic, reductionist science. The validity claim of the UR is objective truth.

The Lower Right (LR) is the domain of the exterior-objective view of the collective (“Its”). This is the domain where two or more individual “Its” interact with each other. This perspective is enacted through systems theory and its validity claim is “functional fit.” Humans exist in relationship to two exteriors. The first is the cosmos, a subset of which includes nature in the sense of the earth’s biosphere or “GAIA.”¹² The second are the social systems that we create. The structure of society from its architecture and use of space, through its laws, rules, and regulations, constitute the exterior of the collective.

The individual (“I,” UL) is situated in a culture of shared values (“We,” LL), a body (“It,” UR), and a society and ecosphere (“Its,” LR). All four quadrants are inextricably linked and arise together. We are always implicitly taking these four perspectives. An understanding of Integral Theory helps to make them explicit, imparting insight into those we may be repressing, denying, or not sufficiently attending to.

These four quadrants correlate with Plato’s “the true” (UR and LR), “the good” (LL), and “the beautiful” (UL). Those are the major domains explored through quantitative science (UR and LR), ethics (LL), and art (UL).¹³

Wilber has further divided each quadrant into an inner and outer view or “zone,” yielding eight irreducible perspectives that are enacted through specific methodologies (see Figure 2).¹⁴ The integral approach entails holding a Four-Quadrant, Eight-Zone (4Q8Z) perspective on phenomena.

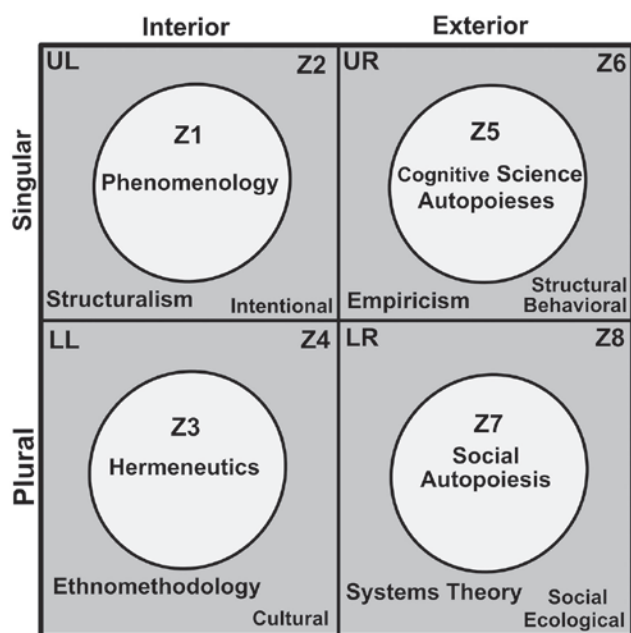
Each quadrant, zone, and methodology reveals only partial aspects of any phenomena being assessed. Hence we say that the perspective of each quadrant and zone is “enacted” through a specific methodology. For example, taking a patient’s blood pressure, viewing an x-ray, or measuring blood levels of creatinine is the enactment of the perspective of the UR quadrant. Those methodologies will reveal nothing about the patient’s belief system, hopes and dreams, or level of ego maturity, all of which fall in the domain of the UL as enacted through the patient’s introspection and related through subjective report, or as revealed in the LL through therapeutic rapport. Similarly, empathically feeling into the patient’s emotional state (UL) won’t tell you anything about their bone density or the functioning of their heart valves (except through association, inference, and intuition that will always need to be verified quantitatively). Hence the perspective and methodology we use brings forth the phenomenon we are studying.

“From an integral perspective, we appreciate that the more angles we can view a phenomenon from, the more perspectives we can embrace, and the more whole and nuanced our understanding of and response to it can be.”

If I take a patient’s blood pressure, the phenomena of the heart and circulatory system present as a ratio of two numbers. If I empathically contemplate their heart, what may arise is a sense of woundedness, betrayal, dysfunctional protection, and lack of compassion toward the self. Each perspective and methodology yields a “true but partial” view of whatever we are studying (in medicine, the patient). A great strength of CM is the number of perspectives it correlates to arrive at diagnosis, prognosis, and treatment plan (for example, asking, looking, feeling, pulse, tongue, eye, hara, face, history, quality of rapport, etc.).

From an integral perspective, we appreciate that the more angles we can view a phenomenon from, the more perspectives we can embrace, and the more whole and nuanced our understanding of and response to it can be. Wilber emphasizes the imperative of holding a 4Q8Z perspective and terms this “Integral Methodological Pluralism (IMP).” The salient point is that the perspective, methodology, and validity claim of each quadrant is irreducible to the others and any approach that leaves out any of the quadrants or zones “is a less than adequate approach according to available and reliable human knowledge at this time.”¹⁵

Figure 2: Four Quadrants, Eight Zones



Adapted from: Wilber K. Integral Spirituality. Shambhala: Boston; 2006.

Figure 2 Legend: Here each of the four quadrants is divided into an inner and outer zone (the zones are designated Z1-8), yielding a 4Q8Z perspective. The methodology for enacting the perspective of each zone is listed. An integral embrace recognizes the necessity of holding a 4Q8Z perspective on all phenomena, taking into account the “true but partial” nature of each perspective, methodology, and validity claim.¹⁶

Integral Methodological Pluralism as a Unifying Force in Medicine

Integral Methodological Pluralism (IMP) provides the strongest philosophical argument for the appreciation of CM on its own terms. The ecological view of CM offers us a relatively holistic picture of the human condition and our place in the Kosmos. Still, because the medicine arose in a pre-technological era, the strength of its methods and perspectives are significantly centered in the left hand quadrants (contemplation, UL; cultivation of therapeutic rapport, LL). Consider that if the fundamental contemplative insights of East Asian culture are taken as an absolute perspective, the entire form of the universe as revealed with great nuance by modern technology from the subatomic to the galactic scale of proportion is a mere illusion. From the standpoint of these contemplative traditions, the body, the material universe, is a thin veil stretched over an infinite metaphysical (qualitative, functional) sea. From a depth view of CM, the physical organs are merely the tip of a profoundly submerged functional iceberg.¹⁷ On the other hand, from the perspective of Western science, consciousness is a mere byproduct of the physical substrate of biochemical reactions. The inner states and stages of development described with breathtaking nuance by the contemplative traditions of the East simply aren’t revealed by x-rays, CAT scans, or electrophoretic gels. From the perspective of an upper right quadrant absolutist, consciousness, let alone soul and spirit, are so much metaphysical mumbo jumbo.

Note that I am not claiming that CM is strictly a product of the left hand quadrants, as physical observations (UR) such as tongue, abdominal palpation, face reading, and pulse play an important role diagnostically. However, all such observations are always being assimilated subjectively by the practitioner according to their own stage development. The capacity to gather nuanced data regarding the body’s physical structure has greatly increased in the technological era under the auspices of materialistic and reductionist sciences. In terms of the right hand quadrants, we can understand CM as a highly sophisticated and nuanced functional language of the inner zones (5 and 7). These zones relate to the inner self-organizing forces of autopoiesis within the body, society, and the environment that maintain homeostasis, self-renewal, and define the boundary between self and other.¹⁸

Chinese medicine’s analysis of physical structure is primitive compared to that of modern science. However, its analysis of the inner configurative forces within the self and their relationship to the body and to behavior is quite nuanced and advanced. Another

of Chinese medicine's great strengths is its synthetic capacity to assimilate the findings of reductionist science and medicine, a capacity that reductionist medicine lacks in relationship to the functional insights of CM.

Significantly, IMP does away with this seeming unbridgeable gap between the perspectives of East and West by offering us a "post-metaphysical" view of the self in all its assessable dimensions. The 4Q8Z perspective reveals that, all the way down and all the way up, for every exterior surface that can be measured, there is a corresponding interior dimension, and that for every inner state of being from the gross through the subtle to the highest of nondual experience and beyond, there are exterior surfaces (the brain, brain states, ecosystems, societal structures) of increasing complexity and integration. Consciousness and form, being and becoming, emptiness and luminosity, arise together as one. This view is wholly consistent with Buddhism's principle of *dependent origination*, the recognition that each thing that arises in a given moment is dependent on everything else that arises with it for its existence. This is a significant basis of the inductive synthetic view at the heart of CM as I've elaborated it in my texts.¹⁹

The use of the term "integrative" in relationship to medicine has most significantly been a metaphor for "assimilation."²⁰ The validity claims, methodologies, and left quadrant perspectives of CM have been largely ignored while it has been subjected to reductionist perspectives and methodologies suitable to study of the right hand quadrants. Hence the authentic nature of the medicine is compromised as it is assimilated into a societal system (LR) whose materialistic values have little to do with its own core values. Embrace of the integral perspective should foster mutual respect between all clinicians regardless of paradigm as we come to appreciate the validity claims and methodologies of each perspective.

Integral Methodological Pluralism should also have a unifying influence within the culture of CM. The clinicians in their contemplation of clinical experience (UL), the academics in the hermeneutic determination of textual meaning (LL), and those researchers concerned with "evidence based medicine" (UR and LR) are all invited to stop making ultimate validity claims for their perspectives and methodologies and appreciate the "true but partial" nature of their own and each other's insights. Hence, we may better value all contributions to the co-creation of our medicine.

"The UL specifies the patient's internal experience centered around the themes of pathology and virtue, excess and deficiency, associated with qualities of subjective experiences associated with the Wood element. The LL depicts shared social values relative to the Wood element. Some shared postmodern values include social justice, the importance of holding many perspectives, rejection of prejudice, and the relativistic notion that 'all perspectives are equal.'"

A Four-Quadrant Perspective on Acupoint GB-40

As a quick demonstration of how the four quadrants can be practically applied to CM, Figure 3 below depicts a four-quadrant (4Q) analysis of acupoint function.

Figure 3: Four Quadrant Analysis of GB-40

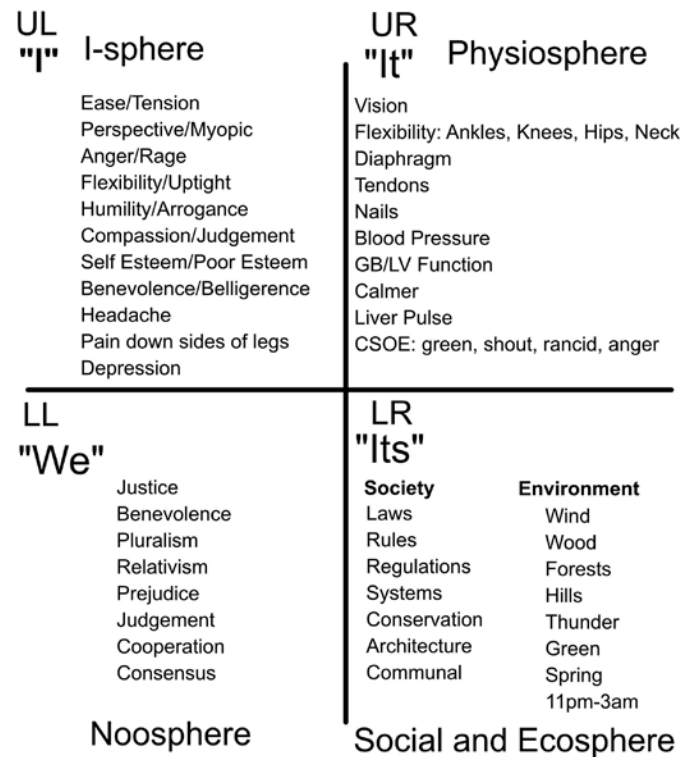


Figure 3 Legend: 4Q perspective on the function of GB-40, Qixu, "Wilderness Mound."²²

In Figure 3, I present a 4Q perspective on the function of acupuncture point GB-40 as inspired by Jungian theorist Erich Neumann's presentation of the different faces of the feminine archetype.²³ Points, herbs, syndrome patterns, exit/entry combinations, and *Yijing* hexagrams can all be differentiated in this way (as can any phenomena). Points can be thought of as archetypes (in the Jungian sense), strange attractors of specific types of content that coalesce around themes with manifestations from the primordial, through the gross, subtle, and causal realms in all four quadrants.²⁴

The UL specifies the patient's internal experience centered around the themes of pathology and virtue, excess and deficiency, associated with qualities of subjective experiences associated with

the Wood element. The LL depicts shared social values relative to the Wood element. Some shared postmodern values include social justice, the importance of holding many perspectives, rejection of prejudice, and the relativistic notion that “all perspectives are equal.” The UR lists locations, structures, and types of symptoms that can be measured and observed in the body and in behavior as associated with the Wood element. The LR depicts social structures relative to the enactment of justice, a theme for Wood. It also lists some environmental and cosmological associations of the Wood element.

Gallbladder-40, named “Wilderness Mound,” is situated by the lateral malleolus (UR, Structure) an embodied metaphor for climbing a hill to gain perspective (UL, Consciousness).²⁵ Consider the application of this point to the symptom of “depression.” The UL is the face of the patient’s inner subjective experience. Depression can often be a displacement for the repression of anger, the emotion associated with Wood. Repression of anger constrains perspective and can inflate and/or lower self-esteem. The patient may fluctuate between passive aggressive projection of their sense of victimization and outright belligerence. Physically, they may feel pain and reduced range of motion along the Gallbladder channel.

In the UR quadrant we can quantitatively assess parameters such as vision, blood pressure, liver enzymes, the presence of gall stones, degree of limitation in ROM in the joints associated with the GB official and channel, and the quality of their nails. Repression can present as tension in the diaphragm, the physical embodiment of “wall” as the demarcation between the unconscious and consciousness.²⁶ We can also note their relative expression of ease, tension, and arrogance through touch and observation. Observations are made on a continuum from subtle “energetic” emanations of CSOE, to more embodied expressions of Wood in terms of the continuum of flow and constraint on the pulse, up through more explicit embodiments revealed through abdominal diagnosis, posture, speech, and behavior.²⁷

In the LL quadrant we may determine that culturally given values such as “non-judgment” and moral relativism are constraining and depressing the expression of Liver *qi* and *yang*. The imperative of Liver *yang* is to rise, judge, and create clarity through establishing a hierarchy of motives in service of decisively choosing and striving toward what is higher and more wholesome.²⁸ In the LR quadrant we may determine that the patient is oppressed by certain cultural structures that contribute to their sense of victimization, rage, and low esteem. We may also note a vulnerability to wind as well as a love of heights, agitation at the sound of thunder, and attraction to the color green. Of course, any dynamic is possible, but it will center around these as GB-40 attracts and coalesces content involving these themes.

With treatment we expect wholesome, integrative, and evolutionary change in all four quadrants. Changes such as increased ROM, lower

“In the LR the patient is expected to have a more wholesome and less victimized relationship to social structures, eventually becoming a force for positive change.”

blood pressure, less tense pulse, decreased shout in the voice, healthier nails, and better vision can all be verified through measurement and observation (UR). In the UL we expect the patient’s subjective experience to change as a victimized relationship to perceived injustice is transformed into the virtues of benevolence, compassion, and humility.²⁹ The practitioner can assess the authenticity of the patient’s self-report, noting renewed creativity, increased perspective, ease in the face of stress, improved decision making, and less repression of anger with concomitant alleviation of depression.

We expect their quality of relationships (LL) to change as exemplified in real time through our subjective experience (UL) of them and in our relationship to them (LL). In this regard, I always take it as compelling when I meet a family member or associate of a patient who informs me of the magnitude of positive change witnessed and the wholesome effects in the family and at work (LL). This is evidence of better functional fit, indicating evolution in the LR as well.

In the LR the patient is expected to have a more wholesome and less victimized relationship to social structures, eventually becoming a force for positive change. In addition, they are expected to have less vulnerability to wind externally (LR) and manifest less wind internally. Internal wind may be evidenced in the UL as confusion and belligerence, in the LL as erratic communication, and in the UR as restricted blood flow and blurry vision.

The relevance of archetypes to point and herb function will be elaborated in my future writing. The salient point here is that any statement that we make in CM such as “Liver fire rising,” “deficient Spleen *qi*,” or “fire constitution” has manifestations in all four quadrants. Similarly, any biomedical diagnosis such as “headache” or “arthritis” will also have four quadrant implications. Every internal state and stage found through subtle “energetic diagnosis” is simultaneously expressed in all four quadrants just as any objective physical finding (UR) such as “high blood pressure” will have subjective (UL), inter-subjective (LL), and societal (LR) implications. Every physical finding has its interior correlation in thought, feeling, sensation, and emotion, just as every inner state is embodied physically. Congealed Blood, for example, exists on a physical continuum from subtle (initial silting of Blood felt on the pulse) through gross manifestations (tumor) as well as on an internal continuum from subtle feelings of betrayal, denial, and repression, all the way through the experience of extreme physical pain.

Conclusion

In Part I of this series, I've laid the foundation for understanding the integral perspective as a foundation for the emergence of an integral medicine, a medicine that leaves no significant dimension of the self behind. We've seen how methodologies enact perspectives to reveal true but partial insight into phenomena. Through adopting the 4Q8Z perspective of Integral Methodological Pluralism, we can begin to construct an integral medicine based on the value of evolution in all dimensions of the self. I have suggested that the practitioner's own evolving integrity is an important foundation for integral medicine's capacity to catalyze the emergence of a more deeply and highly integrated self.

In Part II of this series, I will discuss the relationship between state and stage development and the dynamics of stage pathology. I will examine repression, shadow, and projection as they manifest in stage specific allergies and fixations.

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1. "Thou shalt follow the laws of *yin* and *yang*."
2. Cosmos with a "c" denotes the material universe. Kosmos with a "k" includes all exterior surfaces, as well as the corresponding interior dimension of evolving consciousness, thus leaving no part behind.
3. Rosenberg, Z, 2018.
4. Aurobindo, 1999, p.47.
5. Aurobindo, 1970-75, p. 1071.
6. Aurobindo, 1999, p. 115.
7. Adapted from the Bible, Luke 4:23 (King James Version): "Physician, heal thyself"
8. Jarrett, LS, 1985, pp. 36–41.
9. Wilber, K (ed), 1982
10. For an overview see Wilber, K. (2000). In the field of transpersonal psychology, nearly all subsequent work is inspired by, or a reaction to, Wilber's contribution. The field of transpersonal psychology addresses subtle dimension of the self, such as soul and spirit beyond the realm of the purely personal, the ego.
11. As well as consideration of states, lines, and types.
12. The GAIA hypothesis postulates that the earth and all life upon it form an interwoven, synergistic, homeostatic system. See: J. E. Lovelock (1972).
13. These designations are a simplification. Each quadrant has its own kind of truth, methodologies, and validity claims. The right quadrants represent "objective" truth, and the upper left quadrant includes a line of personal moral development congruent with ethics.
14. Space here is limited. The reader is referred to Wilber, K, 2017. pp. 681–682.
15. Wilber, K, 2006, p.33
16. The methodologies are elaborated in Wilber, 2017.
17. For a comparison of the functional versus structural natures of the synthetic holistic view of Chinese medicine versus the causal reductionist view of Western science see the appendix in Jarrett 1999, pp. 435–454 and Jarrett 2004, pp. 707–770.
18. See Varela, FJ, 1992 and Luhman, N, 1986.
19. See Jarrett, LS, 2004, pp. 707–770.
20. For an in-depth discussion of acupoint function, see Jarrett, LS, 2004, pp. 323–334.
21. For a discussion of Wilderness Mound in relationship to perspective see Jarrett, LS, 2004, p. 541
22. Neumann, E, 1955, p.82
23. The issue of archetypes and their "pre-" and "trans-" faces is significant and I'll address it in detail in future writing.
24. For a discussion of Wilderness Mound in relationship to perspective, see Jarrett, LS, 2004, p. 541
25. For a discussion of consciousness, unconsciousness and the diaphragm, see Jarrett, LS, 2016.
26. "CSOE" is an abbreviation for "Color, Sound, Odor, Emotion," core diagnostics of constitution in the five-element system. See Jarrett, LS, 1999.
27. Chapter eight of the *Neijing* associates the character zheng with the Gallbladder, describing its function as "rectifier" and calling it the "officer of zhong zheng (中正)." *Zhen Lifan* tells us, "中正 is the title of an official responsible for assessing the moral standing of certain people." *Wang Bing* comments of the Gallbladder, "It is tough, upright, and determined; hence it is the official functioning as rectifier. It is straightforward and knows no doubts; hence judgments and decisions originate from there." See Unschuld & Tessenau, 2011, p.156.
28. For example, consider Nelson Mandela. For a detailed discussion of virtue and transformation, see Jarrett, LS, 1999, specifically figure 9.3, p. 153.



Case Report

Local Acupuncture and Distal *Gua Sha* for the Treatment of Recurring Ankle Sprains

By Mark Parzynski, DAOM, LAc

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Abstract

Ankle sprains are the most common form of sports injury and have a 38% rate of recurrence within three years. Treatment often focuses on the injury, with little attention paid to the underlying cause. In this case report, the extraordinary vessels are used to treat the injury locally and to diminish the likelihood of reinjury. *Gua sha* is used along the affected channels to treat the sinew channel and further reinforce the extraordinary vessel treatment. With this treatment strategy, the patient made a full recovery and was still pain-free with no instances of reinjury two years after the final treatment.

Key Words: *gua sha*, extraordinary vessels, recurring ankle sprain, acupuncture

Introduction

Biomedical Perspective

Ankle sprains are the most common sports-related injury¹⁻³ and among the most common recurring injuries.⁴ Up to 33% of patients continue to experience pain one year after an ankle sprain, and 38% of patients experience a re-sprain within three years.⁵ Studies of risk factors that may predispose a person to ankle sprain have been largely inconclusive.⁶ Inversion or lateral ankle sprains account for approximately 80% of all ankle sprains. The anterior talofibular ligament is involved in almost all lateral ankle sprains.^{6,7} They are generally caused by a single motion of inversion and plantar flexion.^{7,8}

Ankle sprains are graded on a 1-3 scale.^{2,9} A grade 1 sprain is considered mild and constitutes slight stretching and microscopic tears of the ligament fibers. There may be some mild swelling. A grade 2 sprain is considered moderate and constitutes partial tearing of the ligament. There may be moderate swelling and localized tenderness. Grade 3 is considered severe and constitutes a complete tear of the ligament. There may be severe swelling, bruising, and tenderness.^{3,10}

“The extraordinary vessels are the first meridians that form in the human body and make up the very core of who a person is. If they are out of balance... there will always be an underlying pathology.”

The current standard of care for grade 1 and 2 ankle sprains is protection, rest, ice, compression, and elevation (PRICE) during the acute phases of injury^{2,11} and over-the-counter pain relievers and non-steroidal anti-inflammatory drugs (NSAIDs) to manage pain and swelling.¹² Once swelling and pain have diminished, patients are instructed to resume movement. Grade 3 sprains are mainly treated with immobilization for several weeks^{2,11} or with surgery.⁹

Acupuncture and Oriental Medicine (AOM) Perspective

There are several AOM approaches to treating ankle sprains, with various rates of success.³ The two techniques used in this case were (1) local acupuncture accessing the extraordinary vessels and (2) distal *gua sha* on the affected channels. The extraordinary vessels are considered to be among the deepest layers in the body and are not often considered in the treatment of musculoskeletal issues. However, conditions beginning early in life may be constitutional in nature and related to the extraordinary vessels. If issues develop before the age of eight, the extraordinary vessels should be considered in order to stop the cycle of injury.¹³

In the case of recurring ankle sprains, it is possible that structural imbalances may exist in early years but not become obvious until the ligaments are stressed in competitive sports, often introduced in high school athletics. Imbalances in the extraordinary vessels may lead to recurring conditions or conditions that last the duration of a person's life. The extraordinary vessels are the first meridians that form in the human body and make up the very core of who a person is. If they are out of balance, no matter how much we compensate with other treatments there will always be an underlying pathology.

The *yang qiao mai* and the *yin qiao mai* are the most relevant extraordinary vessels when treating ankle sprains. *Qiao* translates as motility, heel, or agile movement. The name alone indicates its relevance in stepping and walking. The *yang qiao mai* pathway runs along the outside edge of the ankle, into the iliotibial tract, and up the side of the body. The *yin qiao mai* runs on the opposite side of the leg and balances out the structure. Inversion and eversion of the ankle are regulated by the *yin qiao mai* and *yang qiao mai* and are ideally suited for treatment of recurring ankle sprains.

The *du mai*, which translates as governing vessel, is also of note in this case. Its pathway starts at the perineum, travels up the back to the head, and ends at the roof of the mouth. The *du mai* has a relationship with back pain, posture, and a person's connection with the ground. It is paired with the *yang qiao mai*.

Gua sha may have its formal roots as far back as the *Ling Shu* (Spiritual Pivot),^{13,14} which describes the third of the nine needles, or *di zhen*, as

treating by rubbing and not inserting.^{13–15} Chapter 78 of the *Ling Shu* states, “The third is called the spoon needle. Its pattern is a tip like a grain of millet. The length is 3.5 cun. It controls by massaging the channels and by grasping the *qi*. This causes the evil to flow out.”¹⁵ The tool described in the *Ling Shu* is very different from most modern *gua sha* tools, but the technique and effect is similar. *Gua sha* can be used to release stagnation in the *cuo li* (spaces and textures). The *cuo li* is often related to fascia and connects the exterior of the body to its interior systems.^{16,17} It is this property that allows *gua sha* to make deep and lasting effects even when used distal to the site of injury.

Case History

A 35-year-old Caucasian female with a thin athletic build presented with a grade 2 right ankle sprain. The patient reported a long history of right ankle injury starting at age 12. She could not recall how many times she had injured her ankle but said she rolls it frequently. She had been a runner since her early teens.

The presenting injury occurred three days prior to the office visit when the patient stepped off a curb and inverted her right ankle while running. She had not been treated for this injury prior to the office visit. The patient reported warm throbbing pain around her ankle. She could not identify the epicenter of the pain, but reported that it had been on the lateral side of her ankle on the day of the injury and had gradually spread around the ankle since the injury occurred.

The pain was reported at a 4/10 at rest but became sharp at 8/10 if she moved incorrectly or when the right leg was bearing weight. The pain radiated into the dorsum of the foot and up the Gallbladder meridian on the lateral side of the leg to the head of the fibula. The lateral side of the ankle was warm to touch with grade 3 tenderness inferior to the lateral malleolus of the fibula at UB-62 Shen Mai and GB-40 Qiu Xu and grade 1 tenderness at GB-34 Yang Ling Quan and UB-56 Cheng Jin.

The patient had difficulty walking and supporting weight on the affected side. There was moderate swelling around the ankle with no redness or bruising.

The patient confirmed that she normally has a slightly tight and sore low back around the sacroiliac joints. This low back pain was very minor but constant. The right posterior superior iliac spine (PSIS) was higher than the left. When the low back was pressed, blanching of the skin occurred, indicating a positive *sha* test. Palpation revealed tightness in the left and right iliotibial tract.

The patient's hair had begun to gray prematurely and her complexion was pale. She reported being tired and having a high stress level. Her pulse was deep in the *chi* and *guan* positions and tight in the *cun*. Her tongue was pale with a dusky center and slightly red tip. Abdominal palpation revealed tightness at ST-25 Tian Shu and cold in the Kidney diagnostic area located 3 cun below the umbilicus with tension at the anterior superior iliac spine (ASIS) bilaterally.

Diagnostic Assessment

The early history of ankle injuries combined with premature graying of the hair points to the possibility of a congenital issue relating to extraordinary vessels. Her abdominal pattern was related to the *yang qiao mai* and *du mai* in Dr. Yoshiro Manaka's hara diagnosis system.¹⁹ The nature of the injury relating to mobility and walking further confirmed the diagnosis of *yang qiao mai*. The injury was also recurring in nature and had its main focal point directly inferior to the confluent point for the *yang qiao mai*. The ankle sprain was caused by inversion, which is generally thought of as *yin qiao mai*, leading to the conclusion that the *yin* and *yang qiao mai* were out of balance. Tension along the iliotibial tract with a positive *sha* test on the low back indicated stagnation in the Bladder and Gallbladder sinew channels.

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Treatment

The patient was treated using a combination of acupuncture and *gua sha*. All acupuncture was performed using Seirin brand, 18x40 mm, J type needles. Points were picked to access the relevant extraordinary vessels. For a detailed analysis of the point selection and technique used at each point, see Table 1. Needles were not retained at any acupuncture point after the needle technique was performed. Acupuncture was only administered on the affected side.

Gua sha was performed using a copper tool with smooth rounded edges measuring 0.0625 inch thick. The main goal of the *gua sha* was not to invoke *sha*, but *sha* was used as a diagnostic marker to guide the treatment. *Gua sha* was used to release areas of excess tension. Long, light, scanning strokes were applied along the Gallbladder and Bladder sinew channels to feel for areas of excess or areas that brought up *sha* quickly. Cross fiber friction was employed over these areas until tension was relieved, the area became excessively discolored, or the patient indicated the technique had become painful.

Gua sha was applied bilaterally, along the Gallbladder and Bladder sinew channels starting at the low back and moving down the legs to the calves. The areas used on the Gallbladder and Bladder channels generally overlapped with areas associated with the *yang qiao mai* and *du mai* channels.

Treatments were repeated once per week for seven weeks. The patient returned to my office two years after the last treatment on a separate issue, and her ankle was re-evaluated at that time.

Outcomes and Prognosis

On the second office visit, the patient reported that pain was diminished by 50%. On the third office visit, the patient reported no pain when the foot was in the resting position, but passive inversion and plantar flexion invoked a 2/10 below the lateral malleolus. By the fourth office visit the pain was gone completely and full range of motion was restored, although the patient reported feeling unstable and guarded. On both the fifth and sixth office visits, the patient reported a steady increase in stability and the guarded feeling was gone. She also indicated she no longer had any low back pain, and inspection showed that the right PSIS was now level with the left.

On the seventh office visit, full range of motion tests were conducted. All tests showed uninhibited, pain-free, passive and active range of motion. No tenderness was detected on palpation. The patient had returned to her full activities and felt stable even when running.

The patient returned to my office two years after the last treatment on a separate issue and her ankle was re-evaluated at that time. All range of motion tests showed uninhibited, pain-free, passive and active range of motion. She reported no ankle pain or weakness and no repeated instances of rolling her ankle. Her low back pain had not returned. The patient reported that she was running several times a week and had no feelings of instability or weakness.

Table 1. Acupuncture Points

Point	Action	Technique
GB-34 Yang Ling Quan Yang Mound Spring	This is an influential point of the tendons and sinews and is used to strengthen and relax tendons throughout the body. GB-34 Yang Ling Quan is located on the <i>yang qiao mai</i> .	This point felt tight on palpation and was needled until the tension began to relax. The needle depth was approximately 20 mm. The needle was not retained.
BL-56 Cheng Jin Sinew Supporter	Relaxes the sinews and invigorates the collateral.	Needled slightly distal to the traditional point location to access the muscle motor point of soleus and invoke muscular fasciculation. The needle depth was 40 mm. The needle was withdrawn directly after fasciculation occurred.
BL-62 Shen Mai Extending Vessel	Confluent point of <i>yang qiao mai</i> , used in coordination with KD-6 Zhao Hai to balance the <i>yang</i> and <i>yin qiao mai</i> . This is also a paired point to the <i>du mai</i> .	Needle depth was approximately 2 mm using vibratory needling technique. The needle was withdrawn when the practitioner felt an opening sensation at the tip of the needle.
KD-6 Zhao Hai Shining Sea	Confluent point of <i>yin qiao mai</i> . Used in coordination with BL-62 Shen Mai to balance the <i>yin</i> and <i>yang qiao mai</i> .	Needle depth was approximately 2 mm using vibratory needling technique. The needle was withdrawn when the practitioner felt an opening sensation at the tip of the needle.

Discussion

Diagnostics play an important role in this type of treatment. When ankle sprains occur, it is common and often appropriate to treat *qi* and Blood stagnation alone, but a careful assessment of the injury, along with patient history, can reveal an underlying root problem related to a deeper cause. Recurrence and onset early in life may be key markers indicating assessment for an extraordinary vessel approach to treatment.

The acupuncture in this case was targeted to treat local structures while accessing relevant extraordinary vessels. Local structures include the anterior talofibular ligament itself, as it is positioned directly under BL-62 Shen Mai and soleus, which is a key structural muscle for the ankle. The muscle motor point for soleus is at the slightly altered location used for UB-56 Cheng Jin.

A key factor in the assessment of this case was the constant dull ache the patient felt in her low back. This symptom may not have been reported by the patient if she had not been asked about it, yet it points to the possibility of long-term structural issues at her sacroiliac joint. This area is related to the *du mai* and plays an important role in the articulation of the hip joint. If the hip does not articulate properly, the knee will compensate; if the knee compensates, the patient's walking and running gait will be affected. This change in articulation may be very minor, but a small amount of structural imbalance in the kinetic chain over a long period of time can add up and cause recurring problems and constant minor aches and pains.

In this case, *gua sha* was used to break up soft tissue adhesions and increase fascial glide. In AOM terms, the *gua sha* was used to move stagnant *qi* and Blood in the Gallbladder and Bladder sinew channels. By aiding in the smooth functioning of the ankle, leg, and hip, the incidences of reinjury may have been reduced.

To understand the effects that the treatment of the extraordinary vessels through acupuncture and *gua sha* has on instances of recurring ankle sprains would require a long-term study with a large sample size. Any studies conducted for a recurring injury pattern would have to track patients over several decades to know if the instances of reinjury were reduced.

Before a long-term study can be conducted, several questions need to be answered. First, what is the relationship between structural functionality of the body and recurrence of ankle sprains? Second, is *gua sha* an effective treatment in correcting structural functionality of the sacroiliac joint to increase stability in movement? Third, what is the effect of local acupuncture on the stability of the ankle?

Conclusion

In this case, using acupuncture and *gua sha* to treat recurring ankle sprains through the extraordinary vessels and sinew channels appears to have completely healed the patient's ankle and increased stability so as to reduce the chance of reinjury. However, more studies of a narrower focus are needed to understand each component of this treatment, followed by a large long-term study on a large sample size to understand the effect on occurrences of reinjury.

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with Wen Jiang, PhD (China), LAc

Opioid Facts for Patients

by Jennifer A.M. Stone, LAc



This resource is intended to be distributed to your patients, especially seniors whose doctors are now weaning them off the narcotics they have been prescribed for many years. A downloadable, print-ready PDF is available at the Meridians: JAOM website: <http://meridiansjaom.com/author-research-resources.html>.

Why did this happen? Why was I prescribed a drug that is causing a national crisis?

Simply put, at the time they were becoming more widely prescribed, no one realized how dangerous opioids were. Doctors get their information from scientific research, conferences, National Institutes of Health guidelines, and agencies that accredit their hospitals. Previously, these sources led doctors to believe that opioids were safe, but new information shows that the risk of addiction is high and that other strategies for managing pain are preferable.

In January 1980, a letter published in the *New England Journal of Medicine* entitled "Addiction Rare in Patients Treated with Narcotics" generated much attention in the medical field.¹ As a result, doctors believed that it was safe to prescribe narcotics to their patients.

In the 1990s, the Joint Commission—a nonprofit company that accredits hospitals and other U.S. healthcare organizations—recognized pain as the fifth vital sign, giving pain equal status with blood pressure, heart rate, respiratory rate, and temperature as vital signs. The policy encouraged healthcare providers to ask patients about their pain. Unfortunately, the Joint Commission set pain management standards too high, which contributed to doctors overprescribing opioids to keep their hospital's Joint Commission accreditation.

The initial promotion and marketing of OxyContin was an organized effort throughout 1996-2001 to dismiss the risk of opioid addiction. Purdue Pharma hosted over forty promotional conferences in the United States. Coupling a convincing "Partners Against Pain" campaign with an incentivized bonus system, Purdue trained its sales force to convey the message that the risk of addiction was under 1%, ultimately influencing the prescribing habits of the medical professionals that attended these conferences.

Doctors eventually learned that the Joint Commission and the pharmaceutical companies were wrong. Addiction is common, but **dependence** is guaranteed. Daily use of opioid drugs causes **dependence** on the drug, and discontinuing them will result in withdrawal symptoms, such as restlessness, irritability, tremors, insomnia, and increased pain that lasts 2-10 days.

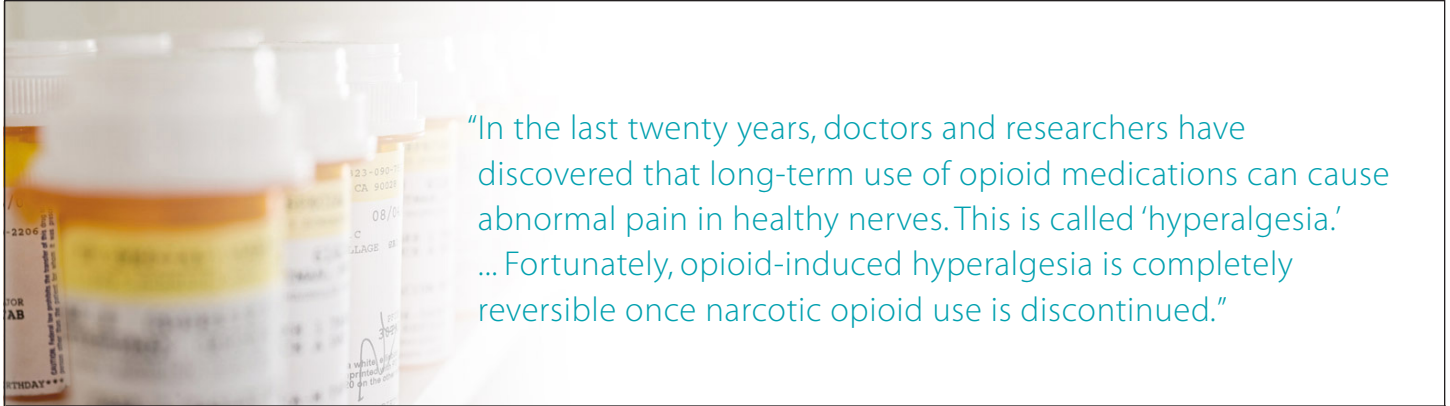
I have done nothing wrong, I always take my medication as prescribed. Why do I have to be weaned off of my medication?

In light of new information about the risk of opioid dependence, there has been a national effort to drastically reduce the number of opioid prescriptions. New state and federal guidelines designed to protect the public are making it more difficult for doctors to prescribe opioids, pharmacies are limiting the amount of opioids patients can receive, and pharmaceutical companies are making fewer opioids.

My pain is severe and has worsened over the years. I need my pain medication! What am I supposed to take for my pain?

Some of your pain might be caused by the opioid pain medication itself. In the last twenty years, doctors and researchers have discovered that long-term use of opioid medications can cause abnormal pain in healthy nerves. This is called "hyperalgesia." Opioid drugs can cause **morphine-induced hyperalgesia** or **opioid-induced hyperalgesia**. New research is exploring why opioids can increase pain.²

Fortunately, opioid-induced hyperalgesia is completely reversible. Nerves begin to recover and repair once narcotic opioid use is discontinued. One to three months after the opioid is out of your system and your nerves have had the chance to recover, your doctor will reassess your pain and prescribe new medication or non-pharmacological treatment for your pain.



“In the last twenty years, doctors and researchers have discovered that long-term use of opioid medications can cause abnormal pain in healthy nerves. This is called ‘hyperalgesia.’ ... Fortunately, opioid-induced hyperalgesia is completely reversible once narcotic opioid use is discontinued.”

What kind of withdrawal symptoms can I expect?

Opioid withdrawal systems last for 2-10 days and include insomnia, tremors, anxiety, palpitations, restlessness, irritability, hot flashes, chills, and increased pain. If you slowly wean yourself off the medication, you reduce the withdrawal symptoms. Your doctor can temporarily prescribe heart medication that will help reduce withdrawal symptoms. Acupuncture and melatonin can reduce symptoms of withdrawal.³

Are there other benefits to going off of opioid medication?

- Normal bowel function, less need for laxatives
- Increased energy/motivation
- Decreased pain
- More restful sleep
- Better focus and presence

What can I do for my pain? What can I take?

Joint pain and inflammation respond well to non-steroidal anti-inflammatory drugs and anti-inflammatory herbs such as turmeric, cayenne, and ginger. Tylenol and B-vitamins are better for nerve pain. CBD Hemp Oil has been shown to improve both nerve pain and pain from inflammation.⁴

Non-drug approaches: Researchers at the NIH reviewed 105 U.S.-based randomized controlled trials, from the past 50 years, that were relevant to pain patients in the United

States.⁵ The review focused on U.S.-based trial results on seven approaches used for one or more of five painful conditions—back pain, osteoarthritis, neck pain, fibromyalgia, and severe headaches and migraine—and found promise in the following for safety and effectiveness in treating pain:

- Acupuncture and yoga for back pain
- Acupuncture and tai chi for osteoarthritis of the knee
- Massage therapy for neck pain with adequate doses and for short-term benefit
- Relaxation techniques for severe headaches and migraine

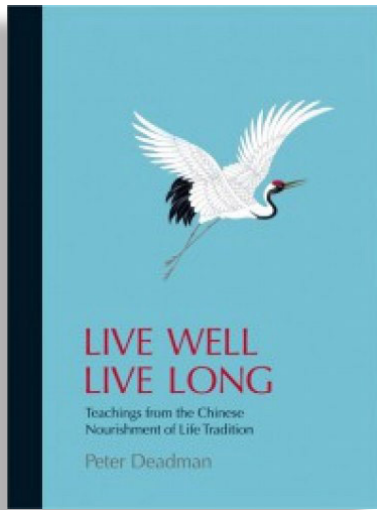
Though the evidence was weaker, the researchers also found that massage therapy, spinal manipulation, and osteopathic manipulation may provide some help for back pain, and relaxation approaches and tai chi might help people with fibromyalgia.

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BOOK REVIEW



Hardcover: 425 pages

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Live Well Live Long by Peter Deadman

Reviewed by Shane Haggard, LAc

In *Live Well Live Long: Teachings from the Chinese Nourishment of Life Tradition and Modern Research*, Peter Deadman takes a topic that often times can be confusing and complex to understand—how to live a nourishing life—and reduces it into manageable, bite-size pieces. Deadman begins the journey with *yangsheng*, which is translated into two words: “yang,” to nurture or nourish, and “sheng,” life or vitality.

The book is organized by sections, with a main topic leading into sub-categories that present more in-depth views about the main subject. Topics include diet and exercise, sleep and sex, aging and dying, and more. This layout offers the reader the ability to focus on a specific area of interest, although I found each chapter nicely blended into the next.

Deadman’s engaging writing style lets readers easily understand each concept and how it applies to their lives. The beginning chapters establish the basics, making proceeding chapters relatable and easy to comprehend. I wish I had such a resource available to me twenty years ago when I first started learning about Asian medicine.

The timing of this book is spot-on with the present health movement in the United States. The pendulum is swinging back to the basics: plant-based diets, work/life balance, and reconnection with the self. The information is as relevant today as it was more than two thousand years ago, when Asian cultures first began practicing *yangsheng*. The author has diligently done his research by consistently tying its scientific basis back to the subject matter.

Deadman does an amazing job of including data from pre-birth to death and every facet in between. Chapters 4, “Why We Get Ill,” and 5, “Cultivating the Mind and Emotions,” cover extremely important factors in understanding quality of life. Understanding why we become ill and what part emotions often play are essential to understanding the self. I found chapter 19, “Death,” especially interesting. I have often said that we do not teach one another how to grieve or accept death. This brief chapter prompts readers to further examine their beliefs around death.

I would recommend this book to anyone seeking a deeper understanding of Asian medicine. I have recommended it to many patients who have given me positive feedback about it. This book is now in my top three recommendations for beginners in this field.

Interview with Peter Deadman, author of *Live Well Live Long*

SH: What inspired you to tackle this subject matter?

PD: My first career was in natural foods—co-founding a macrobiotic/organic/natural foods restaurant to feed students in our local (Sussex) university in 1971, then expanding that into a shop, bakery, and distribution warehouse. We turned it into a co-operative in 1981, and it is now a thriving business supplying mostly organic products both to our city (Brighton & Hove) and nationwide (www.infinityfoods.co.uk). The motivation for all this was a belief that we can empower ourselves to maintain health and even cure some diseases through good diet, as well as benefit the natural environment through nature-friendly farming practices. In furtherance of

these aims, we also set up the Brighton Natural Health Centre charity (www.bnhc.co.uk) to teach (at the time hard-to-find) classes in other life- and health-enhancing practices (yoga, tai chi, nutrition, dance, meditation, qigong, etc.). My own interest in macrobiotic philosophy led to a fascination with first Japanese, then Chinese medicine, and I quit the business in the late 1970s (though I am still a co-op member) to study acupuncture and Chinese herbal medicine.

How long did it take to research and write *Live Well Live Long*?

PD: The book is really an expression of everything I've been interested in and studied since my discovery of dietary medicine... right on through my study of Chinese medicine and *qigong*. So in a sense I researched it for nearly 50 years, but the more focused research and writing took around two years.

What kind of research and preparation do you do? How long do you spend on writing?

PD: It varies book by book, but for *Live Well Live Long*, I started by setting out the list of subjects/chapters (of course it slowly grew over time), then researching them. That process is so much easier nowadays with the internet, especially the often unfairly maligned Wikipedia. I also spent many rich and happy days in the wonderful British Library, where you can request just about any book ever published in English (and it's free too). Since I don't read Chinese, I was indebted to the many scholars who had translated and written about sometimes obscure aspects of Chinese health practices and philosophy.

How did publishing your first book change your writing process for this book?

PD: Actually, my first book was a co-written 1973 diet book called *Nature's Foods*. That taught me that to write a book (like most achievements), you start with an idea, then just keep going. Inspiration plus perspiration, if you will. That lesson was enhanced by the long (eight years) and massive effort involved in writing *A Manual of Acupuncture*. After that, everything else seemed manageable. I should also mention that before starting *Live Well Live Long*, I'd written a young adult novel. Though I was happy with much of it, it became apparent that it needed a major redrafting. So in a sense, I wrote *Live Well Live Long* as an avoidance tactic since that rewrite seemed very challenging.

What is the most difficult part of your artistic process?

PD: I don't find it difficult. I saw a newspaper article once where famous writers were asked how much they enjoyed writing and most of them hated it. They might have loved the creative part and hated the editing, or vice-versa, but there was only one (Will Self) who loved the whole package, and I have to admit I feel the same.

What did you edit out of this book? Do you have any regrets for not including the edited matter?

PD: I can't recall editing much out—content-wise, at least, although I had absorbed one of the first lessons in a creative writing course I took,

“The book is really an expression of everything I've been interested in and studied since my discovery of dietary medicine... right on through my study of Chinese medicine and *qigong*. So in a sense I researched it for nearly 50 years, but the more focused research and writing took around two years.”

which is that good writing needs constant cutting of the superfluous to allow the gold to shine through more clearly. So I edited out lots of unnecessary words.

Do you read your own reviews? If so, what do you generally take away from doing so?

PD: Yes, I read all my reviews. I soak up any praise (it's nourishing) and also welcome—even yearn for—useful criticism, but it's rare to find it. I can give an example from the young adult novel I mentioned. I was very pleased with many aspects of it but also knew that something fairly major wasn't right. I asked friends to read it and let me know what they thought, and I also paid a professional to give me feedback, but none of it hit the mark. Then I found a professional critic of young adult and children's literature, and he spelled out very clearly what the problem was. It was a blow, as it went to the very heart of the book (the plot), but I was grateful too.

Do you find writing a spiritual practice?

PD: I don't like (and try to avoid using) the word “spiritual.” Its origin is in the separation of spirit and matter found in Christianity and other “sky god” religions that I find problematic. It's difficult to find another word, though... I sometimes use “transformational.” I do find writing one of the most richly satisfying experiences I have—whether it's poetry, short stories, longer fiction, nonfiction, or even emails. It's my preferred creative outlet.

Did you hide any secrets in this book that only a few people will find?

PD: No. But it's full of secrets hidden in plain sight, and they can be hard to see sometimes. What I mean is that the most profound ideas are often the simplest, but it usually takes a long time for us to grasp them, and in fact they can deepen every time we revisit them.

Is there any one section of the book you feel is more valuable than another?

PD: I think the three things that I felt I learned most about were how important it is to learn to manage our emotions, how important our connection with the natural world is, and what an incredible role the microbiota plays in our physical and emotional health.

continued on page 48



LU – 11 少商 *Shao Shang*. Lesser Shang

By Yair Maimon, DOM, PhD, Ac and Bartosz Chmielnicki, MD

Please see bios at end of the article.

Explanation of the picture:

LU-11, *Shao Shang*, is a *Jing/Well* point, a Wood point on the Lung meridian, and one of the *SunSiMiao* Ghost Points. All of these functions are shown in the picture.

Shang is a note related to Metal on the Chinese 5-tone music scale. *Shang* may also mean merchant or trader. Both possible translations are depicted in the form of a woman (*Yin* channel) merchant playing *Guqin*—the ancient Chinese zither. She pulls the strings by her thumb—a hint for the location of the point.

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LU-11 is used for releasing Heat, especially from the throat. Therefore, there is an extinguished bonfire drawn near the well, and the merchant has a red collar indicating presence of heat in this area.

The drum that lies nearby the tree is a rhythm-giving instrument, related to *Shang* position in ancient Chinese rituals. That function is similar to the function of the lungs. Additionally, the sound of a drum is similar to thunder, which was associated with military power and victory in battle—a symbol of *WeiQi*.

The ghost whispering in her ear reminds that LU-11 is the second of the *SunSiMiao* Ghost Points.

*The pictures are part of a project called the "Gates of Life" portraying the nature, action, and *qi* transformation of acupuncture channels and points made by the CAM team © (Chmielnick, Ayal, Maimon). Illustration by painter Mrs. Martyna "Matti" Janik.

Characters of the Name:

少 *Shao* – The character shows something small (*xiao* 小) divided even smaller and means little, few, lesser.

商 *Shang* – This character means to express inner feelings, to deliberate.

Shang is also a name of the second Chinese dynasty, from which is derived the meaning of exchange, trade, merchant.

Meaning of the Name:

Lesser *Shang*

ShaoShan is the *Jing/Well* and the Wood point of the Lung channel, the *Yin* of Metal, as opposed to *Shang Yang*, the *Jing/Well* point of the Large Intestine, the *Yang* of Metal.

The people of *Shang* were very much developed, and early in history they were able to build carts pulled by oxen so they could transport goods. They began to travel and exchange things with their neighbors. Gradually “the people of *Shang*” became synonymous with merchants. A good merchant must know the real value of a thing in order to sell or buy it for proper price. This knowledge is a physiology of Metal phase. A merchant also needs to be aware of what to keep in stock and what can be sold—another quality of Metal.

Additionally, etymologically *Fei* 肺 (Lung), by radical *Po* 市 is related to *Shi* 市 (market) and *Bu* 布 (distribute). As a Wood point, LU-11 controls the expanding movement of the Lungs, helping especially in distribution of Water in the Upper *Jiao*.

Other Names:

鬼信 – *GuiXin* – Ghost Symptoms, Ghost Faith

LU-11 is the 2nd of the *SunSiMiao* Ghost Points, indicated for “hearing voices”—accepting perverse ghosts’ advice and rejecting the correct (*yi*) advice of Heaven. Hence, when the ghost points are related to *ZangFu*, LU-11 is correlated to treat ghost in the Heart, the place of connecting heaven in man.

Main Actions and Indications:

This point initiates the functions of the channel: connecting with Heaven *Da Qi* and receiving Heavenly influences:

1. LU-11 is a *Jing/Well* point and the last point of the channel:
 - 1.1 Revives consciousness and influences the other end of the channel

Jing/Well points are characterised by very dynamic movement and change. LU-11 shares with other *Jing/Well* points the function of waking up consciousness. It also releases extreme Heat from the Lungs and the respiratory system and is effective in treating delirium resulting from high fever, especially in children. Preferable needle technique in this case would be bleeding the point.

LU-11 strongly affects the other end of the channel, in this case the throat and the respiratory system, and is effective in the treatment of any acute inflammatory processes, pain, and swellings.

1.2 TMM

The Sinew channels originate from the *Jing/Well* points. It travels through the thenar eminence and along the arm covering muscles: abductor pollicis longus, brachioradialis, brachialis, biceps brachii, deltoid, and then to the chest through serratus anterior and pectoralis major. Therefore LU-11 is used in the treatment of pain or sprain of these muscles.

2. LU-11 is a Wood point

The energy of Wood is reflected in dynamic movement and change. LU-11 strongly moves stagnations, especially on the other side of the channel: in the throat and chest. This function is empowered by the *Jing/Well* quality of this point.

LU-11 is a Wood point on the Lung channel characterized by the energy of Metal. Therefore on the psycho-emotional level it helps in balancing between *Hun* and *Po*, enhancing the Lung’s ability of controlling the Wood Phase. It is effective in the treatment of Heat stagnated in the body due to *Hun/Po* struggle resulting in strange, autoimmune diseases of the Lungs and skin.

As a Wood point, LU-11 also controls the pores of the skin and opens them in case of external pathogen invasion.

When reduced, especially bled, LU-11 releases Heat, especially from the other side of the channel.

3. LU-11 is the second of the *SunSiMiao*’s Ghost points, called *GuiXin*, Ghost Faith

The physiology of Metal phase and Lung organ expressed by the Hand *TaiYin* channel of the Lung is connecting man with heaven, or bringing in heavenly rules and order. As the second stage of possession, the ghost wants to block this connection by attacking the senses, especially the sense of hearing. Therefore LU-11 is indicated in the treatment of symptoms such as hearing voices, schizophrenia, multiple personalities and so on.

Yair Maimon, DOM, PhD, Ac

Dr. Maimon heads the Tal Integrative Cancer Research Center, Institute of Oncology-Sheba Academic Hospital, Tel Hashomer, Israel. He serves as the president of the International Congress of Chinese Medicine in Israel (ICCM) and the head of the Refuot Integrative Medicine Center. With over 30 years of clinical, academic, and research experience in the field of integrative and Chinese medicine, Dr. Maimon combines scientific research with the inspiration from a deep understanding of Chinese medicine. He has been a keynote speaker for numerous congresses and TCM postgraduate courses. Dr. Maimon is the founder and director of a new innovative eLearning academy, the TCM Academy of Integrative Medicine, www.tcm.ac.

Bartosz Chmielnicki, MD

Bartosz Chmielnicki is a medical doctor who has been practicing and teaching acupuncture since 2004. In 2008 he established the Compleo-TCM clinic in Katowice, Poland, and soon after he opened the Academy of Acupuncture there. Dr. Chmielnicki heads the ACUART International School of Classical Acupuncture, www.acuart.pl. He teaches at many international conferences as well as in schools in Poland, Germany, Czech Republic, and Israel.

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Which part of the book was the most difficult for you to write?

PD: The sex chapter. It's probably always hard to write about sex and—especially in this context. It's a potential minefield, particularly when presenting quite a few male-centric ideas (since I was committed to relating the tradition as accurately as possible) without offence. Also because the Chinese idea of loss of *jing* via male ejaculation is totally at odds with modern ideas about sex. That was a real exception in the book, as in most every other case, traditional teachings and modern research findings matched pretty well.

What do you hope the reader takes away from your book?

PD: Many different things: that traditional knowledge is a treasure chest (especially the Chinese tradition); that we have to find ways to love and care for ourselves before we can take care of this body-mind; that at the heart of it the tools for helping us be well and happy are pretty simple (based on those precious core theories of *yinyang*, the middle way, stopping before completion, learning from nature, etc.); and that these simple ideas can help us chart a smart way through the cacophony of health advice we are continually exposed to. I also hope that some of the Daoist (and my own) love and respect for nature helps teach us all to care for our environment better.

Shane Haggard, LAc worked for over 20 years as an administrator in the western healthcare system in administrative directorship roles before he became an acupuncture and Asian medicine practitioner. In 1997, he designed and implemented the acupuncture detox program at Fairbanks Hospital, which continues today. Shane was Indiana's first certified NADA trainer and served as a NADA consultant for the Acupuncture Task Force of the Medical Licensing Board. He also was responsible for both the NADA verbiage in the Indiana Practice Act and the rules and regulations that accompany the law.

Shane has participated as co-investigator in both animal and human studies acupuncture research projects at Indiana University School of Medicine. He is a former faculty member of the Indiana Therapeutic Massage School, where he enjoyed teaching and lecturing extensively on Asian medicine.

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