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The Journal of Acupuncture and Oriental Medicine

Letter from Editor in Chief Jennifer A. M. Stone, LAc

I'm very pleased and excited to present to you this 2016 fall issue. Robust with original research and resources for practitioners, this issue features Chinese herb studies and clinical pearls, a discussion of the Worsley five element perspective and an accompanying case report, commentaries on case reports themselves and economics of acupuncture and an interview of Matthew Pike, president of SEIRIN-America on requirements of California Pharmacy Board.

Our featured manuscript is a study using high-performance liquid chromatography to examine synergy in three common Chinese herbs. Please see "Evidence for Phytochemical Synergism in Classical Chinese Herbal Pairs" By Kirsten M. Wright, PhD and colleagues at the Helfgott Research Institute, National University of Natural Medicine, Portland, Oregon.

In Edward Chiu's case report, "Psoriatic Arthritis Managed with Multiple Styles of Acupuncture: A Case Report," a variety of acupuncture approaches were applied, including methods from traditional Chinese medicine, five element constitutional acupuncture, and Japanese styles of acupuncture. We have another case report by Celeste Homan, MS, MAc, LAc, "Acupuncture Divergent Channel Treatment as an Alternative Therapy for Cystic Acne: a Case Report." Homan discusses acupuncture treatment using the divergent channel system in a 37-year-old male professional presented to his physician with sudden onset of cystic acne.

Homan, assistant professor in the Acupuncture and Oriental Medicine Program at Maryland University of Integrative Health, also prepared a perspectives piece for our readers entitled "Understanding Channel Theory through the Clinical Application of Leamington Acupuncture." In this piece she describes point selection based on channel theory rather than pattern differentiation by discussing Leamington acupuncture protocols (also known as Worsley Five Element Acupuncture), which utilize deep pathways of the primary channels, the collateral channels, and the eight extraordinary vessels.

Another Perspectives piece, "Hospital Practice: Recognition of Acupuncturist as a Licensed Independent Practitioner (LIP)" by Megan Kingsley Gale, defines and discusses what a "licensed independent practitioner" is, how acupuncturists fit into this category, and how this (LIP status) streamlines the hiring and credentialing processes for LAcs who work in medical centers accredited by The Joint Commission (civilian or federal). It ties in how national standards, such as our BLS occupational code and state standards (scope of practice) relate to LIP status.

We are pleased to present the commentary by Timothy Suh, DAOM, LAc, "Case Reports: A Continued Discussion on Why our Profession Needs More of Them." Suh discusses the value and the need for writing and publishing case studies that he began in the first issue of MJAOM and the piece on this topic by Adam Gries continued this discussion in the summer 2016 issue. Suh writes…"We practitioners must continue to embrace this direction by writing and accumulating information that can be peer reviewed and thus become a strong and valid foundation of evidence for our field."

Public Health Editor Beth Sommers, PhD, MPH, LAc prepared a short commentary about the piece in the summer issue of MJAOM (v.3, #3, pp.15-21) prepared by the Joint Acupuncture Opioid Task Force to the Centers for Disease Control. This article discusses non-pharmacological alternative pain management treatment as a truly valuable and viable option to address this growing public

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health problem. Sommers defines and discusses the economic advantage of non-pharmacological therapies such as acupuncture so readers can clearly see the benefits on a societal level.

Conditions set by the California Board of Pharmacy regarding wholesale purchase of acupuncture supplies in California have been confusing for practitioners of acupuncture as well as companies that sell acupuncture supplies. To help to clarify and update our readers about the requirements of the California Pharmacy Board, I interviewed Matthew Pike, a principal at wholesale supplier LHASA OMS and president of SEIRIN-America about this topic.

Our book review for this issue is *Shonishin: Japanese Pediatric Acupuncture (A Text and Video Guide)* by Stephen Birch, PhD and is reviewed by Bob Quinn, DAOM, LAc, longtime scholar of Japanese meridian style acupuncture. Bob explains that Birch, a talented author of many books, delivers a second edition of this book that is, in several significant respects, an improvement over the already well-received first edition. New to this edition are twenty-five additional case examples, including some from practitioners other than himself.

Our clinical pearl topic for this issue is "How would you treat cuts, abrasions and local infections in your clinic?" Two of these pearls discuss use of Chinese herbs to treat them. Please take a look; you never know when you will be requested to treat this type of condition. Our new topic for our winter issue is "How do you treat dysphasia (difficulty in swallowing) in your clinic?"

As always, we invite your questions, submissions, feedback and letters: info@meridiansjaom.com.

In Health,

Editor in Chief Jen Stone, LAc

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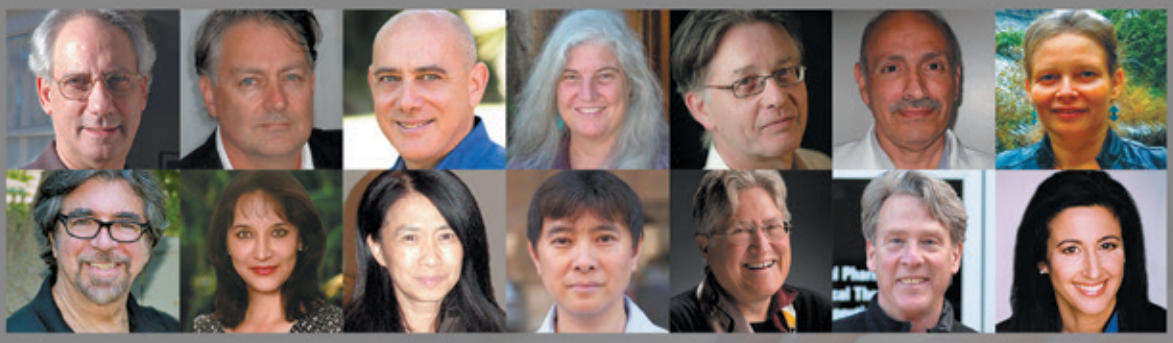

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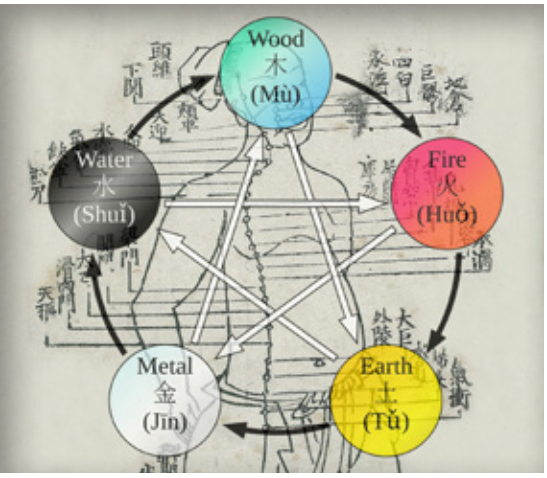


Understanding Channel Theory through the Clinical Application of Leamington Acupuncture

By Celeste Homan, MS, MAc, LAc

Celeste Homan, MS, MAc, LAc is an assistant professor in the Master's of Acupuncture Program at the Maryland University of Integrative Health (MUIH). She received her MAc degree from the Tai Sophia Institute (now MUIH) and has been practicing complementary medicine since 1993. Celeste holds a certificate in advanced massage and bodywork from the Baltimore School of Massage and is certified in Zero Balancing. She also holds a Master's of Science degree in Engineering from Johns Hopkins University.

Abstract

The study of acupuncture point selection based on channel theory rather than pattern differentiation has been uncommon in the West during the last several decades. Worsley Five Element acupuncture, also known as Leamington acupuncture, is one of the few traditions that teach a channel approach. This article explains Leamington acupuncture protocols, which utilize deep pathways of the primary channels, the collateral channels and the eight extraordinary vessels. Channel theory links point selection with the anatomical location of a symptom on the body, potentially improving patient oriented outcomes. Leamington acupuncture methods provide safe and effective clinical protocols for practitioners of other traditions who wish to learn a channel approach.

Key Words: Worsley, Leamington acupuncture, five element, extraordinary vessels, sanjiao triple heater mechanism, channel theory

What is Leamington Acupuncture?

The study of acupuncture point function based on channel theory rather than pattern differentiation has been uncommon in the West during the last several decades.[1] Leamington acupuncture (LA), the style of acupuncture developed by Professor J. R. Worsley at the the College of Traditional Chinese Medicine in Leamington Spa, England,[2] is one of the few traditions that teach a channel approach. These practices spread to the United States during the 1980s and 1990s.[i] The LA style is more commonly known as five element acupuncture because of its emphasis on five element theory. Among the strengths of the LA tradition are several treatment protocols or "treatment blocks" that demonstrate the principles of channel theory.

What is Channel Theory?

If a theory is a system of ideas used to explain something, and perhaps to justify a course of action, then:

Channel theory is the system of ideas within Asian medicine that employs the anatomy and physiology of the acupuncture channel system to justify the selection of points for treatment.

Channel theory explains how the channels:

1. Connect the internal organs to one another, to the surface of the body, and to the environment at large
2. Provide pathways for the flow of healthy physiological substances as well as internally and externally generated pathogenic factors
3. Convey *qi* or information about the external environment and the internal organs[3]

So it is by way of the channels, that we:

1. Access the organs and their shared functions
2. Intervene in the body's management of both resources and pathogenic factors
3. Understand the patient's internal and external response to life events

Like the organs or *zangfu*, the channels can be seen as anatomical structures that provide their own unique and equally important physiological functions, which are inseparable from organ physiology.

Channel Theory and TCM

In 2006, Giovanni Maciocia published his book, *The Channels of Acupuncture*. He suggests in his preface that there are two fundamental approaches to selecting points for acupuncture treatment: one that sees the points in isolation according to their unique function and one that sees them "within the context of a balanced combination of points making use of the dynamics of qi of the channels."[4] Blackwell suggests that channel theory describes "…the system of channels and collaterals, which we might describe as human energetic anatomy, or more abstractly as the anatomy of influences and inter-connections."[5]

To illustrate channel physiology, consider a function of the lung organ to "(control) dispersing…"[6] This complex function enables the body to release external pathogenic factors that threaten the body's interior. It involves a number of systemic activities, such as mobilizing the body's fluids to the exterior and opening the pores to release the pathogen as sweat. The lung channel makes this possible by providing the transport, and communication functions listed above. Ultimately, the trajectory informs point selection as the following discussion illustrates.

What is a Channel Approach to Point Selection?

To clarify the difference between a pattern approach to point selection and a channel approach, consider the example of a patient who presents with a lung pattern of "invasion of lungs by Wind-Cold."[7] Patients with this common pattern generally present with chills, sinus drainage, and cough. Understanding the acupuncture points in isolation, a practitioner might use LU-7 for its function of diffusing the lungs, BL-12 for its ability to release the exterior and expel Wind, and GV-16 also to expel Wind.[8] The circulations of *qi* that pass through these points are not conscious information considered in vitro phenomenon for point selection.

Utilizing channel theory, a practitioner might use the point combination LI-20, LI-4, LU-1 and LU-7. The sequence and combination of points is understood to support the primary channel circulations of the Lung and Large Intestine channels and to address the anatomical location of the main symptoms. These points taken together would direct the LU and LI channels to expel a pathogenic factor that has overwhelmed the body's defenses, as phlegm from the nose and throat. Conceptually, the channels serve as a conduit for the flow of a pathogenic factor (the Wind-Cold) away from the lung organ as suggested by Dr. Wang.

A channel approach requires viewing the points within the context of the circulations of *qi* that pass through them. It facilitates the selection of points based on the location of a symptom in the body.

Evidence of the Channel Approach within LA

The four points given in this example describe an entry/exit (EE) treatment from LA. It is one of several treatment blocks that are addressed routinely in the care of a patient. An LA practitioner would be directed to this treatment based on two findings: the location of the presenting symptoms, such as pain or discomfort, and pulse observations in the *cun* or distal position of the right hand. Returning to our example:

- The location of the presenting symptom of sinus drainage indicates LI-20
- The lung involvement including tenderness at the lung *mu* point indicates LU-1
- The command points (LI-4 and LU-7) complete the EE protocol and provide communication between the Lung and Large Intestine channels. The "exit" point of the Lung channel meets with the "entry point" of the Large Intestine channel. This connection appears as the source-*luo* collateral circulation in Cecil-Sterman as shown in Figure 1.

Figure 1. Source-*luo* connection between LI-4 and LU-7 *from Cecil-Sterman,[37] p. 65 (Permission granted by author.)*

The local/distal point combinations of this treatment demonstrate balanced point combinations that incorporate the *qi* dynamics of the channels as required by Maciocia. Rather than the 28 different qualities associated with pattern identification, an LA practitioner focuses on only two—excess (full) and deficiency (empty). The pulse finding that draws an LA practitioner to these points would be a "relatively full pulse" appearing at the LU and LI positions as compared with the ST and SP positions.[9] Because an LA practitioner routinely checks for this type of pulse imbalance, the EE treatment can be used to prevent illness before acute symptoms arise.

Use of the Channels to Prevent Illness

Pathology can and often does arise in the channels before it affects the organs.[10] This is perhaps their most important physiological role.[11] The channels are there to protect the organs and treatment of the channels can be used to maintain health and prevent disease. This is a wellness model approach to health care and a foundational principle of the philosophy that evolved from these practices. An LA practitioner would effectively prevent a Wind-Cold invasion by using the EE treatment even before the acute symptoms appeared. This is because diagnosis of an EE block is based on a variety of changes[12] that may precede an external invasion. These observations include "palpable changes on the body surface along the course of the channels."[13]

This example of an LA EE treatment illustrates the use of the Lung and Large Intestine channels to treat a commonly occurring pattern of disharmony and prevent disease. Clinical examples of the use of the EE treatment can be provided for each of the twelve primary channels. The reader is directed to *Five Element Constitutional Acupuncture*[14] for thorough and concise instructions on the clinical application of this treatment.

The Aggressive Energy Treatment

The aggressive energy (AE) treatment of LA is performed by inserting shallow needles at the BL *shu* points of the *zang* organs along the back. The appearance of redness at the site of the needle indicates the presence of AE. LA practitioners treat AE when the patient reports overwhelming emotions, usually from chronic stress.[15]

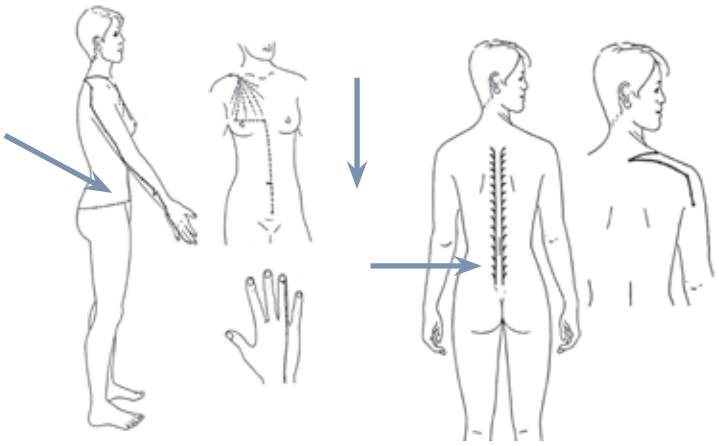
Bob Flaws argues that the shallow needling associated with the AE treatment would disperse pathological heat from the associated organ and that a more effective method would be to needle deeply to gradually draw the "evil *qi*" away,[16] but this would be a different treatment. Understanding the AE treatment from a channel perspective requires understanding the circulations of *qi* involving these points and the shallow needling method that Worsley recommended.

In his book on the traditional diagnosis, Worsley emphasized the importance of testing for AE during the course of main treatment and that the test itself also acts as a treatment for it. He further indicated that the presence of AE would influence diagnostic signs making them unreliable.[17] Within the context of the traditional diagnosis, the diagnostic signs Worsley was referring to are used to identify the patient's constitutional type or constitutional factor (CF). The following discussion offers an explanation for the physiology of constitutional type and its relationship to the AE treatment.

The Triple Heater Mechanism

In addition to the descending primary channel circulation of the BL channel, the BL *shu* points are also used by the Triple Heater (TH) mechanism, which is provided by the TH channel. Although not included in the TH channel diagram in Deadman's "A Manual of Acupuncture,"[18] this circulation does appear in the channel diagrams of Ann Cecil-Sterman[19] as illustrated in Figure 2.[ii]

Figure 2. Circulation of the triple heater mechanism. *Original illustrations from Cecil-Sterman[19] pp. 59-60 (Permission granted by author.)*



In terms of a circulation of qi, how we behave corresponds with the organ that is being prioritized by the *sanjiao* or Triple Heater (TH) mechanism. The TH mechanism distributes essential *qi* or *yuan qi* from *ming men* to the BL *shu* or transport points of the bladder channel. This empowers the person to manifest the emotions and behaviors that correspond with the functions of each organ. (Diagnosis and support of the patient's constitutional elemental type is central to the practice of LA but beyond the scope of this discussion.)

In health, the TH mechanism nourishes the organs with just the amount of essential *qi* needed for normal organ function. Shallow needling does not result in erythema. When an organ is distressed, additional essential *qi* is mobilized to meet the demands of the situation. Shallow needling offers a diagnostic tool for identifying the distressed organ by the appearance of redness. Only those organs that are "aggressively" mobilizing

essential *qi* would be affected by the shallow needling and only "evil" *qi* would clear. Deep needling would eliminate this diagnostic method by dispersing *qi* that may have been supporting the organ in a normal way.

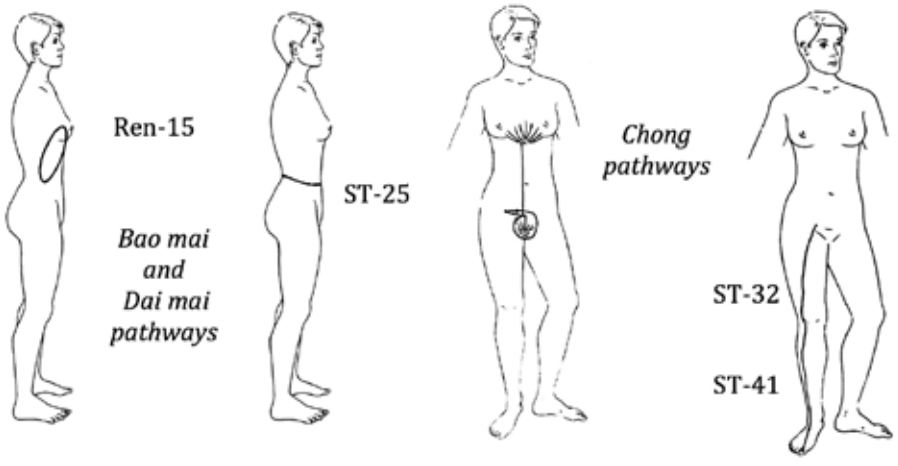
The circulations of *qi* described by the triple heater mechanism, which includes the BL *shu* points provides a better explanation for this treatment than the use of the *shu* points to provide direct access to the organs. Using the deep pathway of the Triple Heater channel in this way supports the appropriate interaction between a patient and her environment.

Both the EE treatments and the AE treatment can be used to understand the circulations of the primary channels, their deep pathways and collateral circulations. A third treatment protocol, the Worsley Internal Dragon treatment, can be used to understand the extraordinary vessels because it accesses the deepest level of *qi,* the *yuan qi*.

The Internal Dragons treatment

A general principle of channel theory is the selection of points along a specific trajectory. Figure 3 illustrates the points of the Worsley Internal Dragon (ID) treatment superimposed on the trajectories of two extraordinary vessels; the *dai mai* (and *bao mai)* and *chong mai* trajectories. These points include a master point below Jiuwei Ren-15, Tianshu ST-25, Futu ST-32, and Jiexi ST-41.

Figure 3. Points of ID treatment along trajectories of *bao mai* and *dai mai* (two left figures) and *chong mai* (two right figures). *Original illustrations from Cecil-Sterman[38] (Permission granted by author.)*



One important function of the extraordinary vessels is the discovery of one's nature.[20] The ID treatment is referred to as a "possession" treatment[21] within the LA tradition. It is said to benefit patients who have been unable to recover from physical or emotional shocks or who have a history of severe mental illness or substance abuse. LA practitioners are guided to consider these treatments when the patient's spirit is unavailable.[22]

In the words of Cecil-Sterman, "Needling into the *chong* is profoundly revealing. It's like inviting the patient to look right into the deep ocean of who they really are. When working with the *chong* we are working with one's nature—that which is born into your heart. The *chong*'s role is to express one's nature through one's heart."[23]

Accessing the Extraordinary Vessels

Although extraordinary vessel treatments commonly include the prescribed opening and couple points,[iii] their use is missing from this protocol. But opening and couple points were not suggested until the Ming Dynasty.[24] Earlier clinicians believed that the opening point was the point where the channel began its trajectory, which was also controversial.[25]

The opening or master point for this treatment[iv] lies below CV-15, suggesting the superior aspect of the *bao mai*. The first two points of this treatment connect the heart to the kidney via the *bao mai*/*dai mai* connection. When used in combination, these points along these trajectories bring Blood to the lower *jiao,*[26] a function known as consolidation.

ST-25 is also a point along the *chong mai*, which is not apparent from most channel diagrams. Although the *Su Wen* associates the *chong mai* with the kidney channel in this area of the body, the *Nan Jing* associates the *chong* with the stomach channel. Both texts indicate that the *chong* runs parallel or deep to these pathways. Neither sees them as true primary channel points.[27]

Figure 3 also shows that the *chong* trajectory descends along the stomach channel of the leg. This part of the pathway ensures that adequate nutrients are extracted from food to support the four seas[v],[28] This part of the ID treatment addresses the patient's underlying weakness, which often arises from excessive lifestyle issues.[29] A patient history of drug and alcohol abuse is a common indication for the use of the ID treatment,[30] but the treatment itself is very nourishing for anyone who receives it. Note that the use of the extraordinary vessels tends to exhaust *yuan qi* and should therefore only

"Acupuncture began as an attempt to understand the invisible currents of energy that gave life to the world and vitality to the human body…the acupuncture points themselves were merely the vehicles for adjusting the meridian, functioning like the holes of a flute that could be opened or closed to alter the "tone" of the meridian flow.[32]"

be used for conditions that justify accessing the constitutional level,[31] meaning conditions that relate to significant life events.

The trajectories of the channels were the starting point for the development of acupuncture theories. What separates this treatment from a Stomach primary channel treatment is the practitioner's intention to access the *yuan* level of *qi* and the functions that these extraordinary vessels provide. Pirog provides a valuable image of the practitioner's intention when implementing a channel treatment.

> Acupuncture began as an attempt to understand the invisible currents of energy that gave life to the world and vitality to the human body…the acupuncture points themselves were merely the vehicles for adjusting the meridian, functioning like the holes of a flute that could be opened or closed to alter the "tone" of the meridian flow.[32]

The points of the ID treatment can be seen as an integrated whole, stimulating the descending trajectory of the *chong mai* and supporting heart→kidney communication.

Needling Technique for the Internal Dragon Treatment

Reaves reports that there are a variety of needling techniques associated with the activation of extraordinary vessels.[33] Worsley recommended using a "dispersion technique" when needling the points of the ID treatment. Within the LA tradition, dispersion involves "contacting the person's *qi* and then leaving the needle in place for 20-30 minutes or until the pulse has changed sufficiently."[34] This describes the mechanics of the needling method. The "art" of LA needling relies on the practitioner's self-cultivation.

> The greater the practitioner's awareness of their own spirit…the deeper is their connection with the spirit of the patient. This in turn increases the depth of the effect attained.[35]

Cecil-Sterman suggests revisiting each point of an extraordinary vessel treatment to verify that the patient feels at least a slight vibration in each point. If they are not feeling a connection, the practitioner is directed to create this sensation "with intention rather than with depth."[36] LA practitioners commonly use this technique during the ID treatment.

Conclusions

This article has defined channel theory as the body of knowledge that explains the anatomy and physiology of the acupuncture channel system to justify the selection of points for treatment. Like the organs or *zangfu*, the channels provide their own unique and equally important physiological functions, which include managing pathogenic factors and transporting healthy physiological substances. This article utilizes channel theory to demonstrate the mechanisms behind the LA Aggressive Energy, Internal Dragon, and Entry Exit treatments. By similar arguments, a correlation can be made for the External Dragon treatment (*du mai/ yang qiao mai*) and the Akabane method (*luo* channel mechanism).

continued on page 40

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On July 21, 2016, the Bureau of Labor and Statistics (BLS) announced via the Federal Register that the Standard Occupational Code Committee (SOCPC) recommended to the Office of Business Management (OBM) an independent SOC occupational code, 29-1291 Acupuncturist. The BLS updates their ***Standard Occupational Code Handbook*** about every eight years. The last update was in 2010 and the next update will be in 2018. The process of getting an occupational code added to the registrar can take decades. NCCAOM started this process for our profession in 2008/2009 and the process was, thankfully, fast-tracked.

Over the past few years a detailed definition of our profession has been tracked on O*NET and now we have entered the stage of receiving a specific occupational code. Demographic and clinical practice characteristics data from the 2008 and the the 2013 NCCAOM job analyses have been very helpful in supporting this process. According to the SOC website, the 2018 SOC will be published online in summer 2017 and will be officially in use (for data-tracking by the BLS) at the beginning of 2018. [NCCAOM link to BLS updates: http://www.nccaom.org/bls/]

The following article is a shorter but thorough discussion about how to become a "licensed independent practitioner," what types of places hire LIPs, and what this actually means for practitioners.

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Public Protection Through Quality Credentials

Hospital Practice: Recognition of Acupuncturist as a Licensed Independent Practitioner (LIP)

By Megan Kingsley Gale, MSAOM, Dipl OM (NCCAOM)

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Abstract

One of the basic components of working as a healthcare practitioner in a hospital setting is to understand the credentialing process and what provider type you are. Healthcare professionals, including acupuncturists, who work in a hospital setting must first complete a credentialing process. Instead of creating a process whole cloth for a "new" profession such as acupuncture, there is a tried and true category that we already fit into called the "licensed independent practitioner." When this is understood, there is less confusion and therefore less work and less resistance to hiring a "new" profession into a system that may have no current acupuncturists or very few on staff. It is useful for both hospital LAc practitioners and their hospital sponsors to understand that LAcs fall into the category of licensed independent practitioner. This article explains what this is, why this is important, and what current standards support this category distinction. It is important that, as a profession, acupuncturists are recognized as licensed independent practitioners when working in systems that are accredited by The Joint Commission or have potential to be accredited by it. The Joint Commission states all in this category must be credentialed to be compliant with their quality assurance standard for healthcare systems.

Key Words: hospital practice, licensed independent practitioner (LIP), hospital credentialing process, hospital privileging process

What is a Licensed Independent Practitioner?

Only healthcare professionals recognized as licensed independent practitioners (LIP) are eligible for credentialing and privileging within a hospital setting. LIP status is a category of provider *specific* to the *hospital credentialing process*. All licensed acupuncturists (LAcs) need to know that recognizing licensed independent practitioner (LIP) status is integral to hospital practice; it allows an independence of practice commensurate with graduate medical education, similar to clinical psychologist or physical therapist. Keep in mind, as well, that in the hospital setting, all practitioners work as part of a larger team.

The Joint Commission (TJC), the authority on credentialing and privileging guidelines for all U.S. hospital and healthcare systems, defines it as such:

> "An 'LIP' is a licensed independent practitioner, defined as an individual, as permitted by law and regulation, and also by the organization, to provide care and services without direction or supervision within the scope of the individual's license and consistent with the privileges granted by the organization" [TJC's *The Who, What, When, and Where's of Credentialing and Privileging*,[1] emphasis added]

LIP status means that, when in hospital practice, we are credentialed and eligible for a delineation of clinical privileges. Like other LIPs, we participate in the professional practice evaluation processes (a quality assurance process guided by TJC) of "focused professional practice evaluation" (FPPE) and "ongoing professional practice evaluation" (OPPE), which includes peer record review.[2] It is important to make sure the hospital sponsors and administrators who work with or employ acupuncturists know that we fall into this particular category.

What are Credentialing and Privileging?

Credentialing and privileging processes are specific to hospital practice. Credentialing is a vetting process as well as a quality assurance factor that is done during the hiring process at a facility before an individual can begin practice. A delineation of clinical privileges (DOP) is granted by a facility to specific individuals. Generally, all LIPs are granted a delineation of privileges. All DOPs are approved by a credentialing committee, and privileges must be renewed or re-evaluated on a regular basis. The overarching quality assurance processes related to this are outlined by TJC as FPPE and OPPE. For more on these processes, see additional resources in endnotes.[3]

While systems vary, consistent factors that qualify a professional as an LIP include the following:

1) Health care practitioner (HCP) who has a National Provider Identifier (NPI)[4]

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2) HCP who works independently within their professional scope of practice
3) HCP whose clinical management follows a standard of practice that can be peer-reviewed:
   a. This level of professional work that qualifies for peer record review rather than clinical oversight is an important factor.
   b. If your work can be reviewed by a peer for quality assurance, this is different than having your work reviewed by a clinical supervisor who signs off on your notes and takes ultimate responsibility for your work.
4) *An LIP takes ultimate responsibility for his/her work, signs her own notes, and participates in peer record review*.

Every healthcare profession, except doctor of medicine (MD) or doctor of osteopathic medicine (DO), must go through the process to become recognized in a system as an LIP. This includes clinical psychologists, chiropractors, and physical therapists.

LIP Recognition Factors Related to Hospital Credentialing Process:

State Level	State Licensure (i.e., state scope of practice and state regulatory statutes)
National Level	• Bureau of Labor and Statistics (BLS) occupational code • The Joint Commission standards • Federal quality assurance manuals (VHA, DoDM, BUMED, Army) on healthcare practitioner credentialing • Board certification

State Recognition of LAcs as LIPs

Acupuncturists[5] are defined by the U.S. Department of Labor.[6] As of April 1st, 2016, 42 states plus the District of Columbia legally recognize acupuncturists as independent healthcare practitioners. As LIPs, all acupuncturists are required to carry malpractice insurance and have an NPI.

Forty-five states and D.C. have acupuncture practice acts. This recognition means that we, by state law, practice independently in 42 states and Washington, D.C. and therefore fall under the TJC's definition of LIP in those locales. There are three states where state law does not allow full independence of practice. Michigan and Ohio have caveats to LAcs practicing independently. In Louisiana, by state law, LAcs are "acupuncture technicians." See specific state law and state associations for details. States with no practice acts as of April 2016 are Wyoming, South Dakota, Alabama, Kansas,[7] and Oklahoma.

National Guidelines

The national guidelines for qualifying acupuncturists as LIPs are The Joint Commission (TJC) and the Bureau of Labor and Statistics (BLS). The Joint Commission (TJC) recognizes any individual practitioner—who provides health care without direction or supervision within their scope of practice and granted clinical privileges—as a licensed independent practitioner (LIP) and accordingly recommends LIPs be credentialed and granted clinical privileges.[8] The U.S. Department of Labor's Bureau of Labor and Statistics (BLS) classifies acupuncturists as "Health Diagnosing and Treating Practitioners" and "Job Zone 5: Extensive Preparation needed." This clearly supports the profession as LIPs.

Federal Credentialing Status Guidelines on LIP Professions

According to DoDM,[10] a federal standard (for Air Force, Army, and Navy/Marines) in credentialing and privileging healthcare practitioners, all healthcare providers must practice with a *current, unrestricted license*. If you have a restricted state license—often due to disciplinary action—as long as you are practicing, you must be supervised until that action is lifted or ended. This standard is echoed in other federal healthcare practitioner credentialing documents, including the *VHA Handbook*.[11]

Bureau of Labor and Statistics (BLS) Occupational Code for Acupuncturists makes Hospital Employment Simpler

The Acupuncturist Occupational Code, 29-1291, is in its final draft and can be viewed on O*NET.[9] BLS uses the O*NET system to track data on a profession. NCCAOM has been providing BLS data from the job task analyses collected in 2008 and 2013.[12] The code is due to be finalized in 2018.[13] The BLS updates their hard copy occupational manual about once every eight years. NCCAOM has taken the lead on keeping track of our code through this process and providing BLS with needed data and updates.

As noted, the BLS code supports LAcs as LIPs. The code notes the education and professional training of acupuncturists as "Job Zone 5: Extensive Preparation needed." Physicians and clinical psychologists are also in Job Zone 5. The code categorizes acupuncturists into the 29-series,[14] which is the "health diagnosing and treating practitioners" category. This category is consistent with healthcare providers practicing with independence. Practicing with independence is a qualifying factor in TJC's definition of LIP. While the code is not finalized yet, the detailed code description, available online (O*NET),[9] is comprehensive enough for a credentialing committee to use.

Several credentialing specialists have indicated that the code, as is and when finalized, makes creating a new profession credentialing packet simpler (than if O*NET's[9] data was not available).

Having an occupational code means you are a legitimate profession, uniquely identified. Your profession can be data-tracked.[15]

Federal Recognition of LIPs and How It Relates to Acupuncturists

Acupuncturists have been hired by VA and DoD as contractors and as GS employees. (GS is general schedule, a title 5 type employee.) However, there has generally been poor information and some confusion by facilities as to how to hire this profession since it is relatively new to U.S. hospital systems. Often an LAc may be the first one hired at the facility.

As a former federal LAc, I am personally familiar with the hire, credentialing, and privileging processes. I believe the tried and true path of the LIP route to credentialing and privileging is the best fit for any LAc desiring employment in this setting. These five federal instructions and regulations (see Table 1) focus on the credentialing and privileging processes used, the main sources they reference, and what professions are on their "recognized LIP" lists:

Table 1. Reviewed Federal Quality Assurance Documents on Credentialing of HCPs

Name	Date of Document	Federal Branch
The VHA Handbook 1100.10 Credentialing and Privileging	October 15th, 2012- 2017	Veterans Health Administration (VHA/VA)
DoD Manual (DoDM 6025.13) on Medical Quality Assurance, [Credentialing and Privileging Health Care Providers]	2013	Department of Defense (DoD)
AR 40-68 Clinical Quality Management	dated 2004, revised 2009	DoD: Department of the Army
BUMED 6010.30 instruction	March 2015	DoD: Department of the Navy, Bureau of Medicine and Surgery (BUMED)
Indian Health Service Medical Staff Credentialing and Privileging Guide	September 2005	United States Public Health Service, Indian Health Service

VHA/VA

The VHA Handbook for Credentialing and Privileging Health Care Providers (HCPs) 2012-2017,[17] defines credentialing process and privileging process[18] and defines LIP as:

> **Independent Practitioner "**. . . is any individual permitted by law (the statute that defines the terms and conditions of the practitioner's practice in the State of licensure) and the facility to provide patient care services independently, i.e., without supervision or direction, within the scope of the individual's license, and in accordance with individually-granted clinical privileges. This is also referred to as a licensed independent practitioner (LIP). NOTE: *Only LIPs may be granted clinical privileges."*[19]

In the VA system, if you are an LIP, you must be credentialed. TJC standards are quoted. The VHA Handbook says all LIPs are eligible for a delineation of clinical privileges and that the granting of privileges lies with the institution.

Table 2. VHA Handbook Standards on Credentialing and Privileging of LIPs

Profession Type	Credentialed	Eligible for Clinical Privileges?
Licensed, independent practitioner	Yes	Yes
Specifically: physician assistant, advanced practice registered nurses, clinical pharmacy specialists	Yes	No

As a profession relatively new to hospital practice, LAcs are not yet on these instructions' "recognized LIP lists." Considering that several of these instructions have not been updated for going on ten years, updating these instructions to include acupuncturists in these lists will be a long yet worthwhile process.

The language in these quality assurance standard documents clearly follows TJC standards. Therefore, if by state law you are identified as LIP, as LAcs are in 42 states and D.C., then for hospitals to maintain TJC compliance, they would hire and credential the LAc, following their well-worn LIP path.

During 2011-14 the Army hired acupuncturists as LIPs into their Interdisciplinary Pain Management Clinic (IPMC) specialty care programs as permanent, GS-12 employees. At that time each military treatment facility (MTF) followed the AR 40-38 guidance on credentialing and privileging LIPs and "new procedures." New guidance on credentialing of LIPs was issued by the DoDM in 2013. An abbreviated list of recognized LIP professions from the DoDM instruction includes chiropractors, audiologists, clinical psychologists, dentists, pharmacists, physical therapists, podiatrists, social workers, speech pathologists, and optometrists. Facts about LIP status related to acupuncturists and these federal instructions are available from *The Hospital Handbook Project.*[21]

In the BUMED instruction, any profession on their recognized LIP list may apply for extended privileges in acupuncture, whether abbreviated or full training. Acupuncturists are not on their LIP list but may practice acupuncture as "physician extenders."[22]

If You are Not an LIP, What are You, and What Does This Mean?

If LAcs are not recognized as LIPs, then your hospital staff position defaults to "technician." This presents problems for acupuncturists—one being lower pay that is not commensurate with a master's or doctorate level education. Ethical dilemmas related to supervision are also presented when, as a technician, you are receiving clinical supervision of your acupuncture practice from a non-LAc. Do you do what is best by your training, education, and professional judgement or do you do as you are directed? It is problematic when what you are directed to do conflicts with what you, as a trained professional, believe is ethically correct for your patient's health and safety. This may be complicated if you find yourself in a hostile work environment.

Who is Qualified to Supervise the Clinical Work of an LAc?

Just as with other LIPs, only another provider with the same level of training is qualified to supervise an LAc's work. This would be a provider who has graduated from an ACAOM-accredited program and holds a current, unrestricted state license in the field of AOM. Just as with other LIPs, an acupuncturist receives administrative supervision in the hospital setting and, as an LIP, participates in quality assurance activities, including professional practice evaluation (OPPE).

In the hospital setting, an LAc often consults with the staff physician when it comes to matters outside her scope of practice or comfort zone. This is common when interpreting more complicated medical diagnoses, ordering labs or radiological images, and doing medical exams (that are not orthopedic assessments). This consultation with staff physician is common practice for other LIP types, including physical therapists and clinical psychologists.

Recommendation to Hospital-Practice Acupuncturists and Their Sponsors

It is also important to educate all LAcs now in hospital practice, their hospital sponsors, and their hospital administrators on the facts about The Joint Commission and LIP status as it relates to LAcs. Professional activities expected of an LIP, whether or not they also have the traditional full or partial medical/dental staff appointment, include:

Standard:

- Professional practice evaluation (FPPE and OPPE). Peer record review is part of this..
- Staff consultations—consulting with other provider type staff on your services—from in-person conversations or over the phone to follow up notes to referring provider on patient progress or return to PCM care and follow up care-future recommendations, etc.

Extracurricular: When you work in hospital practice, remember that you are an ambassador to the profession. Consider at least one of the following "ambassador" tasks:

- Participate in other committees in the hospital (usually as a volunteer) that are likely not directly related to AOM but are common activities for other medical staff positions
- Act as a subject matter expert in your specialty—brown bags on how your work complements other provider work
- Provide outreach to the acupuncturist/East Asian medicine profession, conventional medicine practitioners, students of these professions, and other allied health professions
- Participate in research or clinical outcome assessment and future research design

Table 3. Federal Branches that Recognize Acupuncturists as LIPs

Branch	Recognize LAc as LIP?
U.S. Department of Labor, Bureau of Labor and Statistics (BLS)	Yes. This code: 29-1291 Job Zone 5: extensive preparation needed 29- series is "Health Diagnosing and Treating practitioners." See prior section on BLS for details.
Army	No. The Army recognized LAcs as LIPs until OPM directed them not to in June 2015. This decision is in the multi-year appeal process.
Navy	No. The Navy (BUMED) 2015 instruction does not yet recognize LAcs as LIPs, but may in the future. Current instruction sees LAcs as physician-extenders [enclosure 4, part 8.] In contrast to some state law, ABMA recommendations, and WHO standards, this instruction allows non-physician LIPs with limited training to practice acupuncture.
VHA/VA	No. The VA has been updating their policies on integrative health practitioners. Positive news regarding an LAc hiring policy may be published soon.
Indian Health Service	No. Not yet recognized. Manual last updated 2005.

- Participate in continuing education in your related profession, as appropriate, at your discretion
  - For example, if you work in a chronic pain clinic, take courses in this discipline that are CMEs, not PDAs, to improve your understanding of how to integrate your practice with conventional practice and/or practice of your integrative med colleagues. Attend pain care conferences.

Conclusion

When employed in a hospital practice, follow the path of the LIP. This route is guided by The Joint Commission standards; it is a well-worn route for other non-physician healthcare providers who practice independently. This simplifies the credentialing and privileging process and follows already set professional standards for similar non-physician healthcare professions that are already established in the system (such as clinical psychologists and chiropractors). LIP status in hospital practice is supported by state scope of practice in 42 states and the District of Columbia. LIP status is supported on the national level by our occupational code (see draft on O*NET[9]) and will be finalized in 2018.

All accredited healthcare facilities, civilian or federal, follow The Joint Commission standards when credentialing and privileging any health care practitioner. All federal services reference TJC as their main resource for this process. It is very important for any medical facility to obtain and keep TJC accreditation. *Therefore, it follows that if LAcs are recognized as LIPs by state law, then, to be consistent with TJC standards, a healthcare facility (federal or civilian) should hire and credential an LAc as an LIP.*

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1. Full title is *The Joint Commission Ambulatory Care Program: The Who, What, When, and Where's of Credentialing and Privileging*. It discusses the basic guidelines for credentialing and privileging providers, particularly providers designated as "licensed independent practitioners" or LIPs. *The Joint Commission Ambulatory Care Program: The Who, What, When, and Where's of Credentialing and Privileging*: p. 8. Available from: http://www.jointcommission.org/ahc_credentialing_privileging_tips/)
2. See the following *Hospital Handbook project post* for links to more about FPPE, OPPE, The Joint Commission, and peer record review. https://hospitalhandbook.blogspot.com/2016/05/meridians-jaom-published-journal.html
3. Hospital practice credentialing and privileging processes. https://hospitalhandbook.blogspot.com/2016/05/meridians-jaom-published-journal.html
4. http://hospitalhandbook.blogspot.com/2016/05/what-is-national-provider-identifier-npi.html
5. "Licensed Acupuncturist" is the most commonly used state license title for a healthcare practitioner with a master's degree or higher in the field of acupuncture and Oriental medicine. Other state titles include: East Asian Medicine Practitioner (Washington), Acupuncture Physician (Florida), Doctor of Acupuncture (Rhode Island), Doctor of Oriental Medicine (New Mexico), Registered Acupuncturist, RAc (Michigan).
6. U.S. Department of Labor, Bureau of Labor and Statistics (BLS) Occupational Code. The BLS creates and tracks occupational codes for professions within the U.S. 29-1199.01—Acupuncturists. http://www.onetonline.org/link/summary/29-1199.01
   Group 29-0000 is the major group, "Healthcare practitioners"
   Group 29-1000 is the minor group, "Health Diagnosing and Treating Practitioners"
   Note that BLS lists the occupation of "Acupuncturists" 29-1199.01 as "Job Zone Five: extensive preparation needed." These all support a licensed acupuncturist as an LIP.
   To compare Acupuncturist with other health care professions practicing in the hospital setting and how they are practicing (technician, independent provider, provider with delineation of clinical privileges), see the "U.S. Dept. of Labor occupation codes L.Ac. Comparison Chart," an Excel file, available from *The Hospital Handbook project*, http://hospitalhandbook.blogspot.com/. As of July 22, 2016, the BLS assigned a final code for Acupuncturists: 29-1291. A detailed summary can still be found at O*NET link above.
7. Recent acupuncture practice act legislation being passed in May 2016 may have changed this. See Kansas state acupuncture association for details. http://www.ksaom.org/
8. "An 'LIP' is a licensed independent practitioner, defined as an individual, as permitted by law and regulation, and also by the organization, to provide care and services without direction or supervision within the scope of the individual's license and consistent with the privileges granted by the organization." From *The Who, What, When, and Where's of Credentialing and Privileging,* a document by The Joint Commission. Available from: http://www.jointcommission.org/ahc_credentialing_privileging_tips/ This *WhoWhatWhenWhere* document discusses the basic guidelines for credentialing and privileging providers, particularly providers designated as "licensed independent practitioners" (LIPs). This is the same quote as on p.12
9. Occupational Code. 29-1291 Acupuncturist. U.S. Department of Labor, Bureau of Labor and Statistics. Available from: http://www.onetonline.org/link/summary/29-1199.01 See previous end note #6.
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Psoriatic Arthritis Managed with Multiple Styles of Acupuncture: A Case Report

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Abstract

This single case outlines the acupuncture treatment of a 34-year-old female patient with chronic pain from psoriatic arthritis. She presented with multiple painful and inflamed joints, including in the hips, shoulders, lumbar spine, jaw, fingers, and toes. She experienced significant pain, which interrupted her sleep and kept her from focusing her attention on a daily basis. Concurrently, she and her partner hoped to conceive and were concerned with pregnancy risks associated with her pain medications. After 21 acupuncture treatments over the course of 14 weeks, the patient experienced relief to the extent that she was able to completely eliminate the use of pain medication before conceiving with her partner. At various stages in this case, a variety of acupuncture approaches were applied, including methods from traditional Chinese medicine, five element constitutional acupuncture, and Japanese styles of acupuncture. This case demonstrates the clinical choices made in the application of various acupuncture modalities along this patient's treatment course. Using case reports such as this to discern the strengths, weaknesses, and best applications of each style may be useful in guiding the evolution of acupuncture practice.

Key Words: acupuncture, psoriatic arthritis, Oriental medicine, Japanese acupuncture, five element acupuncture

Background

Psoriatic arthritis (PsA) is an inflammatory joint disease causing pain, swelling, and stiffness in a pattern resembling rheumatoid arthritis (RA). PsA typically presents with pain, swelling, and stiffness in small and large joints, beginning at the average age of 37.[1,2] By definition, all patients with PsA must have psoriasis, and, most commonly the psoriasis precedes the onset of the arthritis by around ten years.

The prevalence of PsA is estimated at 2–3% of the general population, but the exact incidence is unknown, possibly due to a lack of clear diagnostic criteria and to

misdiagnosis.[3] A recent study from Sweden suggests that PsA occurs in 30% of patients with psoriasis.[4] There are five main patterns: arthritis of distal interphalangeal joints (30%), asymmetric oligoarthritis (30%), symmetric polyarthritis (40%), axial involvement (intervertebral joints or unilateral sacro-iliac joints, 5%), and arthritis mutilans (highly destructive, 5%).[5]

Nail changes in fingers or toes occur in 87% of patients with psoriatic arthritis, compared with 1–3% for other types of arthritis.[2] Within two years of onset, 47% of patients demonstrate at least one joint erosion. After 10 years of follow-up, about 20% develop destructive and disabling arthritis, with 55% developing five or more deformed joints.[3]

The presentation of PsA is different from RA in several ways. Rheumatoid factors, detected in more than 80% of patients with RA, may be detected in about 13% of patients with PsA.[3] Enthesitis, the inflammation of tendon or ligament insertions into bones, is also a typical feature of PsA, but not of RA.[2] PsA deformities may include severe joint or bone lysis, leading to the telescoping of digits when severe. Radiologic findings reveal ill-defined new ossification near joint margins in PsA, especially along the shafts of the bones in the hand and feet.[2] Dactylitis, the inflammation of all joints in a finger, is also typical.[3]

The etiology of PsA is unknown, although immunological, environmental, and genetic factors are likely to play a role.[1] Immunological findings include the infiltration of joint synovium by T cells, B cells, and macrophages, and the upregulation of leukocyte homing receptors. Interferon gamma, tumor necrosis factor (TNF) alpha, and interleukins 1B, 2, 6, 8, 10, 12, 13, and 15 are also found in the synovial fluid of joints affected by PsA.[2] Environmental factors, such as viral and bacterial infections, have been implicated as causative agents in PsA.[2] Genetically, there is an increased risk of 30 to 50 times among family members, and a number of genes have been identified to contribute to susceptibility. Over 50% of those affected by PsA report a family history.[2]

Biomedical treatment regimens are symptomatic, relying in the past on treatment with non-steroidal anti-inflammatory drugs. More recently, TNF inhibitors, such as etanercept and infliximab, have been shown to be dramatically effective for both arthritis and psoriasis.[6] Disease-modifying anti-rheumatic drugs, such as methotrexate and sulfasalazine, may be helpful in resistant cases but are not used in the long term due to their liver toxicity.

If the psoriasis is treated with ultraviolet light therapy, arthritis symptoms often improve.[7] Cyclosporine is also highly effective in patients with severe disease, yet resultant nephrotoxicity and hypertension complicate its use.[2] There is a lack of study testing the efficacy of acupuncture in treating PsA, possibly due to the relatively low prevalence of the condition. By contrast, acupuncture efficacy for a condition similar to PsA, RA, has been tested

"Biomedical treatment regimens are symptomatic, relying in the past on treatment with non-steroidal anti-inflammatory drugs. More recently, TNF inhibitors, such as etanercept and infliximab, have been shown to be dramatically effective for both arthritis and psoriasis.[6]"

in a handful of clinical trials, although the evidence from these placebo-controlled trials is conflicting.[8]

In Oriental medicine theory, there is no single disease diagnosis that can be correlated with both the inflammatory joint symptoms and the dermatological symptoms of PsA, although there are some commonalities in the pathogenesis of these two aspects. Psoriasis by itself is referred to as white dagger sore (*bai bi*). The cause of psoriasis is a deficiency at the nutritive and Blood levels, provoking Wind and Dryness, so that the skin loses its nourishment. In early psoriasis, Wind Cold or Wind Heat may be involved. As it progresses, Damp Heat may smolder and accumulate, causing lesions. The Wind Cold, Wind Heat, or Damp Heat eventually transforms into Heat or Fire Toxin, consuming *yin* and injuring *qi* and Blood. As the condition becomes more protracted, Liver and Kidney deficiencies develop, causing further disharmony at the level of the *chong mai* and *ren mai*. The condition may also be exacerbated by unresolved emotional disturbance. Traditional therapies for psoriasis include bleeding, cupping, plum blossom needles, medicinal fumigation, and herbal soak.[9]

The inflammatory joint symptoms of PsA have not been specifically explored in the Chinese medicine literature; however, RA, as a condition, which has similar signs and symptoms, has seen a bit more attention in modern texts. Common pattern differentiations for RA which might also apply to PsA include Wind Cold Damp *bi* syndrome (swollen and painful joints without redness or heat), Wind Damp Heat bi syndrome (swollen and painful joints with redness and heat), a mixed Cold and Heat pattern (swollen and painful joints with redness and heat, relieved by application of heat), *qi* and Blood deficiency with Phlegm and stasis (swollen and painful joints with deformity), and Liver Blood/Kidney *yin* and *yang* deficiency with Phlegm and stasis (swollen and painful joints with deformity, with increased pain with cold exposure).[10] The concurrence of inflammatory arthritis with psoriasis may lead the practitioner toward diagnoses that contain shared elements of Wind Cold, Blood stasis, and Kidney and Liver deficiencies, with an added element of Fire Toxin seen in psoriasis.

Case History

The 34-year-old female patient was diagnosed with psoriasis at age 29. Her skin lesions varied in severity and their location on the scalp never exceeded the hairline. Two years later she began to experience arthritic pain, redness, and swelling in the left second toe and in the middle finger of the right hand. Her primary-care physician diagnosed her with psoriatic arthritis by positive findings on x-ray combined with a history of psoriasis. He prescribed etanercept, which provided moderate relief. As she and her partner began to consider having a child, she decided to discontinue her medication, which is included in pregnancy risk category B.[11] Her arthritic pain then flared in severity and spread to more joints. Because of the increased pain severity, she restarted her medication.

At the time of her first acupuncture treatment, the patient was experiencing pain between the second and third lumbar vertebrae and in bilateral hip joints, the right glenohumeral joint, the left acromioclavicular joint, the right temporomandibular joint, the distal interphalangeal joint of the left second toe, and the proximal interphalangeal joint of the right third finger. The affected joints were sensitive and painful with light palpation. The affected finger and toe joints were noticeably swollen and warm. All of the affected joints ached and throbbed intermittently, interrupting her sleep. The pain was most severe in the morning and differed in severity from joint to joint, with the overall pain level rated 6/10 on a numerical pain scale on waking, and averaging about 5/10 during the day.

Six months before beginning acupuncture treatment, the patient endured an ectopic pregnancy, with partial rupture of one fallopian tube. Her periods were regular, 28–30 days, with flow of 5–7 days. Bleeding started as bright red and slowly changed to dark brown, with clotting in the menstrual flow. Other significant signs and symptoms included strong thirst and a history of frequent urinary tract infections. The patient was somewhat sensitive to heavily flavored foods, which would cause urgent diarrhea. The patient appeared flushed, and the tongue was slightly purple with a red tip. The pulse was slightly rapid, slippery on the right side and weak on the left. Prominent abdominal findings included bilateral subcostal tension, discomfort with palpation on bilateral Huangshu KD-16, on the left Tianshu ST-25, and on the midline of the abdomen.

The patient's goals for treatment were to alleviate joint pain and eliminate the need for pain medication so that she could attempt a second pregnancy. She did not want to risk taking strong medications while pregnant.

Diagnostic Assessment

This patient showed signs of Blood Heat and Blood stasis. The Blood Heat signs and symptoms included skin eruptions, a rapid pulse, and a flushed complexion. The Blood stasis manifestations included a purple tongue, clotting during menstruation, fixed pain, and a wiry pulse. Prolonged Blood heat also causes Blood stasis.[12] *Ren mai* disharmony was diagnosed through palpation, with tension on the abdominal midline; *chong mai* disharmony was also diagnosed through palpation, with bilateral subcostal tension.[13] The patient's history of ectopic pregnancy further supports the diagnosis of *ren mai* and *chong mai* pathology.[14]

Treatment and Outcomes

The patient received her first 14 acupuncture treatments over seven weeks (twice per week), followed by treatments once per week for an additional seven weeks. The total number of treatments was 21. The needles used (Kingli brand, China) had lengths ranging from 30 mm to 50 mm according to the point needled. Seirin needles (Japan) were used for points used in the Japanese techniques (e.g., in Manaka extraordinary-vessel strategies).

When the patient began her treatments, her pain concentrated in her lower back and left hip/lateral thigh, rated at a level of 6/10. The first four treatments were each performed in two phases, prone and supine. The first set of needles was inserted with the patient in prone position. Prone treatment included local and distal points for back pain—Shenshu BL-23, HuatuoJiaji at L-2, Kunlun BL-60, and Jinmen BL-63—and hip and thigh pain: left Huantiao GB-30, Fengshi GB-31, Yanglingquan GB-34, and Zulinqi GB-41. *De qi* was obtained at each point, and the needles were retained for 20 minutes and then removed. The patient shifted to supine position, and a second set of needles was inserted. The supine treatment points were as follows: *ashi* location near Shousanli LI-10 was chosen to regulate immune function[16], and Hegu LI-4, Quchi LI-11, Xingjian LV-2, and Xuehai SP-10 were chosen to clear heat. *De qi* was obtained at each point, and the needles were retained for 20 minutes, after which this second set of needles was removed.

After the fourth treatment, the lower-back and hip pain improved to level 3/10, and focus was then shifted to the jaw and left second toe, which had begun to flare to 6/10 during the day. Treatments 5–13 were performed in supine position, with a needle retention time of 30 minutes. Again, the *ashi* location near Shousanli LI-10 was needled to regulate immune function, and Hegu LI-4, Quchi LI-11, Xingjian LV-2, and Xuehai SP-10 were chosen to clear heat. Gongsun SP-4 and Qichong ST-30 were added to regulate the *chong mai*, and local/distal points were needled to address the flare-up in the left second toe and jaw. In addition to being a local point for the toe, Neiting ST-44 was also a distal point for the jaw.

At treatment 5, because the patient had undergone several treatments and was comfortable with acupuncture needles and because of the severity and focused area of the toe pain, electroacupuncture (Pantheon Research 8c.Pro, mixed frequency

Acupoint	Function/Rationale	Needle Type	Technique Used
Shousanli LI-10	Regulate immune function[11]	0.20x30 mm, Seirin	Even, needle into gummy texture
Hegu LI-4	Clear Heat	0.25x30 mm, Kingli	Lifting and Thrusting - Draining
Xingjian LV-2	Clear Heat	0.25x30 mm, Kingli	Lifting and Thrusting - Draining
Xuehai SP-10	Clear Heat, Cool Blood	0.25x40 mm, Kingli	Lifting and Thrusting - Draining
Shenshu BL-23	Local point for lumbar pain	0.25x40 mm, Kingli	Lifting and Thrusting - Even
Huatuojiaji L-2	Local point for lumbar pain	0.25x40 mm, Kingli	Lifting and Thrusting - Even
Kunlun BL-60	Distal point for lumbar pain	0.25x30 mm, Kingli	Lifting and Thrusting - Draining
Jinmen BL-63	Distal point for lumbar pain	0.25x30 mm, Kingli	Lifting and Thrusting - Draining
Huantiao GB-30	Local point for hip pain	0.25x50 mm, Kingli	Lifting and Thrusting - Draining
Fengshi GB-31	Distal point for hip pain	0.25x50 mm, Kingli	Lifting and Thrusting - Draining
Yanglingquan GB-34	Stiffness of muscles and joints	0.25x40 mm, Kingli	Lifting and Thrusting - Draining
Zulinqi GB-41	Distal point for hip pain	0.25x30 mm, Kingli	Lifting and Thrusting - Draining
Qichong ST-30	Regulates *Chong Mai*	0.25x40 mm, Kingli	Lifting and Thrusting - Even
Xiaguan ST-7	Local point for jaw pain	0.25x30 mm, Kingli	Lifting and Thrusting – Draining
Xiangu ST-43	Local point for toe pain; Distal point for jaw pain	0.25x30 mm, Kingli	Electroacupuncture (see text for detail)
Neiting ST-44	Local point for toe pain ; Distal point for jaw pain	0.25x30 mm, Kingli	Electroacupuncture (see text for detail)
Tianzong SI-11	Local point for scapula pain	0.25x40 mm, Kingli	Lifting and Thrusting - Draining
Yanglao SI-6	*Xi*-Cleft of SI channel, distal point for shoulder pain	0.25x30 mm, Kingli	Lifting and Thrusting - Even
Zhongchong PC-9	*Jing-Well* of PC channel, Clear Heat and move Blood	Lancet	Bleeding technique
Zhiyin BL-67	Protocol for 5E Husband-Wife[12]	0.25x30 mm, Kingli	Supplementation, no retention
Fuliu KD-7	Protocol for 5E Husband-Wife[12]	0.25x30 mm, Kingli	Supplementation, no retention
Taixi KD-3	Protocol for 5E Husband-Wife[12]	0.25x30 mm, Kingli	Supplementation, no retention
Zhongfeng LV-4	Protocol for 5E Husband-Wife[12]	0.25x30 mm, Kingli	Supplementation, no retention
Gongsun SP-4	Master of *Chong mai*	0.20x30 mm, Seirin	Ion Cords (see text for detail)
Neiguan PC-6	Couple of *Chong mai*	0.20x30 mm, Seirin	Ion Cords (see text for detail)
Lieque LU-7	Master of *Ren mai*	0.20x30 mm, Seirin	Ion Cords (see text for detail)
Zhaohai KD-6	Master of *Ren mai*	0.20x30 mm, Seirin	Ion Cords (see text for detail)

Note: Unless otherwise noted, all acupuncture point functions are referenced from Deadman P, Baker K, Al-Khafaji M. A manual of acupuncture. London: Journal of Chinese Medicine; 1998.

100/2 Hz microampere stimulation) was applied between Xiangu ST-43 and Neiting ST-44, but it yielded little additional relief. Thus, electroacupuncture was discontinued and manual stimulation was applied to these two points in treatments 6–13.

The patient continued to see improvement with regular treatment. While her jaw and toe pain improved to level 3/10, the pain in the interphalangeal joint of her right third finger began to flare up to 6/10. Her back pain began to slowly return, though at a reduced severity (4/10). She complained of posterior right scapular pain (4/10) at treatment 9, which was addressed through local and distal point acupuncture (Tianzong SI-11, local *ashi* points, and Yanglao SI-6) and cupping therapy. Treatment 13 included bleeding therapy using a lancet at Zhongchong PC-9 on the right hand, which resulted in minor improvement in the finger joint. At this point, treatment resembled "putting out fires" when pain diminished temporarily where treated, but old pains elsewhere resurfaced and required attention.

Because pain relief from the TCM treatments was only temporary, during treatment 14 the treatment principle was shifted from a local and meridian-related approach to address a more global imbalance using a protocol from five element constitutional acupuncture. In the five element tradition, a treatment block can prevent positive and lasting effects from acupuncture treatment unless the treatment block is removed. The husband–wife imbalance is one such treatment block. The signs and symptoms of this disharmony often include serious illness, extreme internal conflict often involving relationship issues, deep resignation or fear, and mind in turmoil.

A defining characteristic of the husband–wife imbalance is a strong pulse on the right, which represents excess in Metal, Earth, and Fire (Triple Burner / Pericardium), and a weak pulse on the left, which represents deficiency in Wood, Water, and Fire (Small Intestine / Heart). Because this patient's pulse matched the strong right pulse / weak left pulse configuration, the husband–wife treatment was applied as follows. Bilateral Zhiyin BL-67 and Fuliu KD-7, both Metal points on Water channels, were used to transfer excess from the Metal element to supplement vacuity in the Water element. Taixi KD-3, the Earth point on the Water channel, was supplemented to keep excess Earth from controlling the deficient Water element, and Zhongfeng LV-4, the Metal point on the Wood channel, was supplemented to keep excess Metal from controlling deficient Wood.[17] The needles were inserted, rotated 180 degrees clockwise, and removed immediately.

The patient responded quite well to this treatment; her pain levels in all joints decreased to 3/10. She slept more consistently through the night. Following this breakthrough, treatment frequency was decreased to once per week. For the remaining treatments (15–21), the focus was shifted to resolving underlying disharmony in the *chong mai* and *ren mai*.

"On a deeper level, psoriasis can indicate disharmony in both the *chong* and *ren mai*,[9] and physical findings for this particular patient included both subcostal tension (indicating *chong mai* disharmony) and abdominal midline tension (indicating *ren mai* disharmony).[13]"

On a deeper level, psoriasis can indicate disharmony in both the *chong* and *ren mai*,[9] and physical findings for this particular patient included both subcostal tension (indicating *chong mai* disharmony) and abdominal midline tension (indicating *ren mai* disharmony).[13] This diagnostic pattern was also confirmed by the history of ectopic pregnancy. Extraordinary vessels were addressed to resolve underlying issues that may have contributed to her PsA, while secondarily supporting conception and pregnancy.

The approach chosen to address the *chong mai* and *ren mai* was treatment using the Japanese Manaka extraordinary-vessel protocols because of the matching abdominal palpation patterns found. Observing abdominal palpation patterns can provide additional verification beyond patient reporting that underlying pathologies are being resolved. The Manaka extraordinary vessel protocols were applied through ion-pumping cords, wires assembled with a diode, allowing electrical current to flow only in one direction. The end clips of the cords were attached to needles at the master and couple points of the affected extraordinary vessels.

For *ren mai* treatments, cords were applied with black clips attached to needles at bilateral Lieque LU-7 and red clips to ipsilateral Zhaohai KD-6. For *chong mai* treatments, cords were applied with black clips attached to needles at Gongsun SP-4 and red clips to ipsilateral Neiguan PC-6.[13] For these last remaining six treatments, either the *chong mai* or the *ren mai* points were treated with the ion-pumping cords, with the choice of master/couple pair determined by the more prominent abdominal finding on the day of treatment. The needles were retained with the wires connected for about 10 minutes until subcostal or midline abdominal reactions were reduced.

The Manaka extraordinary vessel treatments were followed immediately by a symptomatic local and distal acupuncture treatment with a 30 minute needle retention time in the same style detailed in the earlier treatments to manage what pain remained. The abdominal tension and discomfort associated with *chong mai* and *ren mai* disharmony resolved gradually over the six final treatments.

Through this last phase of treatment, the patient's overall pain gradually improved to the point where she no longer needed

medication, maintaining at level 1/10 throughout the day. Physical palpation of affected joints did not cause pain, and redness and swelling of her finger and toe joints had decreased. She was able to sleep through the night without waking due to pain.

At treatment 21, the patient reported that she was pregnant. At that point, she decided to discontinue acupuncture treatment because her main goal of pain relief and elimination of pain medication had been achieved. Several weeks later, through a phone conversation, the patient reported that the 1/10 pain had resolved even further, bothering her only occasionally. At the latest update, the patient was 35 weeks pregnant with minimal pain and a healthy pregnancy.

Discussion

During the treatment course of this patient, acupuncture techniques were applied from a variety of traditions. Traditional Chinese medicine (TCM) acupuncture techniques and point choices worked fairly well for alleviating symptomatic pain, specifically during the time of flare-ups. However, as these techniques offered only temporary relief, another approach was attempted. Clearing the five element husband–wife treatment block provided a more stable decrease in all affected joints. In cases where any style of acupuncture does not provide consistent or lasting relief, it may be useful to consider clearing treatment blocks first. In this case, clearing the treatment block improved symptoms by itself. Notably, there were not any significant pain setbacks for this patient after this particular treatment, and further treatment with both TCM and Japanese styles of acupuncture seemed to be more effective.

Manaka extraordinary-vessel treatments were yet another non-local approach which seemed to benefit the patient. Abdominal palpation revealed *chong* and *ren mai* disharmonies; interestingly, a dermatological expert in TCM states that psoriasis can, on a deeper level, indicate disharmony in both the *chong* and *ren mai*.[9] Both these channels are also implicated in ectopic pregnancy, which was present in this patient's history.[14] Treating the *chong* and *ren mai* gradually reduced tension in the abdomen, which also would have been theoretically helpful in preparing the patient for conception and pregnancy.

In summary, several acupuncture approaches were applied at some point in this patient's care, including TCM, five-element constitutional acupuncture, and Manaka extraordinary-vessel treatments. While these specific treatment protocols may have been effective for this individual, other PsA patients are likely to have a unique history and a different set of physical findings. No biomedical evidence links fertility issues and PsA; this patient simply happened to have both conditions. Patient individuality requires that treatment choices, including the selection of an appropriate acupuncture approach, be made to fit the specific case.

This case was not written to suggest that all PsA patients should be treated with the five-element husband–wife treatment or that all PsA patients could benefit from treatment with Manaka ion-pumping cords. Due to the complexity of each case, it may be useful for practitioners to consider shifting treatment goals as the case unfolds and changing the acupuncture approach accordingly.

Conclusion

The patient in this case experienced relief from her symptoms through a variety of approaches to acupuncture treatment. As her case unfolded, these different approaches were applied depending on her response and on Oriental medicine diagnostic criteria. The practice of acupuncture in the United States reflects the "melting pot" nature of this country. Throughout the history of acupuncture, creative and dedicated practitioners from all over the world have carefully observed and applied classical theory to create new techniques and approaches. We now have at our disposal many styles of acupuncture, and practitioners often draw upon this diversity of approaches when managing difficult cases. Using case studies to discern the strengths, weaknesses, and best applications of each style will be useful in guiding the evolution of acupuncture practice.

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Regarding "Acupuncture as a First line of Treatment for Pain: An Evidence-Based Option to Decrease Opioid Dependence," a Position Paper Sent to the Centers for Disease Control

By Beth Sommers, PhD, MPH, LAc

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The summer issue of MJAOM (v.3, #3, pp.15-21) included a piece from the Joint Acupuncture Opioid Task Force to the Centers for Disease Control that discusses non-pharmacological alternative pain management treatment as a truly valuable and viable option to address this growing public health problem.

I want to briefly define and discuss the economic advantage of non-pharmacological therapies such as acupuncture so readers can clearly see the benefits on a societal level. This involves an understanding of two economic principles:

Cost-Effectiveness Analysis evaluates clinical benefits as well as costs of an intervention. This is often considered a practical approach to decision-making because it does not require placing monetary values on life or health.

Cost Utility Analysis is a variation of cost effectiveness approach that incorporates values placed on health. This involves using metrics such as the Quality-Adjusted Life Year (QALY). QALYs are based on a weighting system that takes into account the value of health and individuals' preferences for health.[1]

The article states (p.19): A UK study using eight economic evaluation studies (namely, seven cost-utility analyses and one cost-effectiveness analysis covering the conditions of low back pain, neck pain, dysmenorrhea, migraine and headache, and osteoarthritis) was used to provide the background for economic analyses. In the UK the National Institute for Health and Clinical Excellence (NICE) sets a threshold for the cost of a quality adjusted life year (QALY) of £20,000 to £30,000. If a therapy can provide 1 QALY for less than £20,000 to £30,000, it is considered cost effective.

In the seven cost-utility analyses, acupuncture was found to be clinically effective but cost more than western medical treatment. The cost per quality adjusted life year (QALY) gained ranged from £2527 to £14,976 per QALY, well below the threshold and *thus determined to be desirable from a cost perspective*. The cost-effectiveness study indicated that there might be *both clinical benefits and cost savings* associated with acupuncture for the treatment of migraine headache.

These evaluations provide important evidence about the potential economic advantages of acupuncture treatment and should be appreciated from a public health perspective. Acupuncture is not only consistently providing beneficial health outcomes to patients, but it also may offer important cost-savings to consumers, insurers and other payers.

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Evidence for Phytochemical Synergism in Classical Chinese Herbal Pairs

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Please see bios at the end of this article

Abstract

Ethnopharmacological relevance: In classical Chinese medicine, herbs are predominantly prescribed in pairs within the context of a larger herbal formula. The biochemical framework for why these pairs exist has not been fully evaluated. Current botanical medicine research has predominantly investigated herbal constituents in isolation and not the chemical interactions between herbs when extracted together. This study aims to investigate the potential synergistic relationships using three herbs commonly found in pairs within classical Chinese medicine.

Materials and Methods: Dried herbs were decocted in deionized water for 30 minutes at 100 ºC either independently or in pairs of licorice with ginger and licorice with bupleurum, at varying ratios. The supernatant from the decoction was centrifuged and filtered for remaining botanical particles and analyzed by high-performance liquid chromatography (HPLC). Peak area, retention time, and peak shape were collected and compared between samples of individual herbs and the herbal pairs.

Results: Licorice, ginger and bupleurum, when decocted in pairs rather than in isolation, showed differences in chromatograms, including increases and decreases in peak area, and new peak formation.

Conclusions: Decoction in pairs versus single decoctions showed variation in the chemical signature indicating potential synergy among classical Chinese medicine herbal pairs. Future studies are needed to determine the chemical structure of these novel peaks as well as their potential for clinical application.

Selected Key Words: 2.136 Botany; 2.480 Phytochemistry; 2.536 Saponins; 2.564 Synergy; 2.642 Traditional Medicine Asia & Oceania

Additional Key Words: Ginger; Licorice; Bupleurum; Herbal Pairs; HPLC; Classical Chinese Medicine

1. Introduction

Chinese herbal therapy uses formulas based on the concept of synergistic relationships between herbs. In theory, these relationships may increase clinical effectiveness by modifying properties of the herbs and the decoction mixture as a whole. The combination of herbs within a decoction has also been shown to produce or increase compounds such as flavonoids, which may be pharmaceutically relevant (Liu et al., 2005). Formation or enhancement of such compounds may attribute to clinical effectiveness when compared to single herb usage (Liu et al., 2005). Evidence of new compounds found in herbal pairings corroborates classical Chinese medicine philosophy and indicates further herbal combination research.

Studies of pharmacognosy are rapidly turning towards understanding synergistic relationships between herbs. This is based upon the empirical use of traditional botanical medicines by cultures around the world who have emphasized multiple herb combinations rather than application of single herbs. Such investigations also follow the trend towards reverse engineering modern pharmaceuticals through examination of medical practices of traditional cultures using herbal medicines (Kong et al., 2009).

Synergistic relationships between herbs hold many diverse avenues of action for creating potentially therapeutic outcomes. Synergy may also help to provide explanations for the function of traditional medicines and their clinical and therapeutic relevance.

One of the simplest definitions of synergism is that the whole is greater than the sum of the individual parts rather than an additive or antagonistic (reducing) effect. Often this form of synergism has been established in relation to multiple constituents found within the same plant or similar species of plants (Duke and Bogenschutz-Godwin, 1999). Synergism between herbs is better described in terms of relationships, which can then allow for varied dynamics between agents in different systems.

Wagner (2011) lists four possible means by which synergism may occur: first, through multi-target effects where a drug or herb may be affecting several systems *in vivo* simultaneously; second, through the improved solubility of one constituent via the presence of another; third, through antagonizing or breaking down resistance mechanism of pathogens; and fourth, through the elimination or neutralization of some toxic effect.

A dilemma facing clinical application of herbal pairs revolves around establishing an effective justification for herbal synergism within current biological, chemical, and physiological frameworks. As Gerstch (2011) has pointed out "…so far there is relatively little sound data (including clinical data) that would provide a strong scientific basis to justify the mixing of plant extracts to improve pharmacological efficacy." This is a valid concern, both for researchers and clinicians. It proves a particular challenge to classical Chinese herbal medicine, which is founded upon the use of multiple herbal agents for efficacy.

One way to help simplify the scientific study of herbal synergism may be to divide it into two categories. In the first category, the herbal constituents have chemical relationships to one another. In the second category, the constituents act separately *in vivo*, thereby creating therapeutic effects by either targeting similar receptors or by effecting different physiological systems. The first category has been illustrated by the research of Liu et al. (2005) where researchers used HPLC to show the extraction of new flavonoids during the decoction process when multiple herbs are combined in the formula Sini tang.

These findings warrant further investigation into Chinese herbal pairs to evaluate the potential for synergy and the formation of novel compounds within a decoction. The second category is broader, and may require further differentiation from researchers to determine the action of each herb within a formula.

This study explores the chemical relationships and potential synergistic relationships between three herbs used commonly in classical Chinese medicine—licorice (*Glycyrrhiza uralensis*), bupleurum (*Bupleurum chinense*) and ginger (*Zingiberis officinalis*). Each of these herbs was decocted individually and then in combination with licorice at ratios found in classical Chinese medicine formulas. Comparisons of the HPLC chromatograms were made between individual herbal decoctions and the paired herbal decoctions. This study found differences between the individual and paired herbal decoctions in chemical constituent concentrations and presence.

2. Materials and Methods

2.1 Herb selection

Licorice (*Glycyrrhiza uralensis; Gan cao* (*Radix et Rhuzoma Glycyrrizae*), one of the most commonly used herbs in the Chinese materia medica, is found in up to 80% of classical Chinese herbal formulas (Wang and Yang, 2007). Practitioners regard it as a "harmonizer" that helps to bring the various herbs in a formula together through its unique chemical structure. Licorice root contains many bioactive constituents, one of which is glycyrrhizin, a triterpenoid saponin glycoside (Blumenthal et al., 2000; Brielmann, 1999).

Saponins such as glycyrrhizin are known to have many different pharmacological properties including active hydrophilic and lipophilic binding sites (Brielmann, 1999). This allows the agent to communicate between molecules of differing solubility offering the possibility of the formation of new molecules in solution (Hoffman, 2003). Such a unique chemical profile and broad usage in classical Chinese medicine make licorice an ideal herb for investigating potential herbal synergy.

Ginger (*Zingiberis officinalis*; Ginger (dried): *Gan jiang* (*Rhizoma Zingiberis*) and bupleurum (*Bupleurum chinense); Bei Chai Hu* (*Radix Bupleuri Chinensis*) are two additional herbs used in a number of Chinese formulas often in combination with licorice. Ginger is used in Chinese formulas, such as *Gui Zi Tang* and *Si Ni Tang*, where it can "release the exterior" or "warm the interior," depending on variety and preparation. Zxhao et al. (2012) found using HPLC that the chromatogram of licorice in sini decoctions was heavily influenced by the presence of ginger and the other formula component Aconite.

Bupleurum, like ginger, acts to "release the exterior" and is used in combinations with licorice such as *Yi Gan Tang* for conditions that contain heat such as liver and gallbladder disease (Bensky et al., 2004). Liu et al. (2013) found in a systematic review that bupleurum is among the most common of 75 different herbs used to treat fatty liver disease (Liu et al., 2013). Given its common use in Chinese interventions, bupleurum was selected as the third herb in this study. Licorice, ginger, and bupleurum were selected due to their wide variety of clinical applications and their frequent pairing within Chinese medicine formulas.

2.2 Plant materials

Each of the herb materials were obtained in crude dried form from the National College of Natural Medicine Medicinary (Portland, Oregon, USA) to maintain consistency between the herbs used in clinical practice and this study. Herbal material was purchased from Spring Wind Herbs, Inc. (Berkeley, California, USA) and tested for purity using thin layer chromatography and the Pharmacopeia of the People Republic of China 2005, Volume I for comparison (licorice lot number G01-015 from China, bupleurum lot number C09-021 from China, ginger lot number G03-010 from China). All plant material was stored in the dark in individual sealed containers at 4 °C until decoction to prevent deterioration and cross contamination.

2.3 Preparation of sample

There were five decoctions performed: licorice, ginger, bupleurum, licorice with ginger, and licorice with bupleurum. Dried plant material was weighed in duplicate. Each herb was weighed and decocted as a single herb and also according to classical Chinese medicine formulations having a ratio of either 3:1 or 2:1 with licorice being the lesser of the two substances. Weighed plant material was added to 300 mL of de-ionized water in a sterile glass beaker for decoction. The mixtures were\ extracted at 100 °C for thirty minutes with constant stirring and no supplementation of water.

This process mimics the traditional practice of boiling herbs in water for medicinal preparations and reflects the most probable constituent extraction occurring in Chinese herbal decoctions (Hou et al., 2005; Peter et al., 2013). Ending volume after decoction was approximately 150 mL for each sample. The decoction mixtures were filtered through a sterilized metal sieve to remove large pieces of plant material before being aliquotted into three separate sterile 50 mL Falcon tubes (BD; San Jose, California, USA) for centrifugation.

Samples were centrifuged in a Rotanta 460R centrifuge (Hettich; Tuttlingen, Germany) at 5000 rpm for 15 min at 4 °C to remove remaining plant material. Supernatant was transferred to a fresh sterile 50 mL Falcon tube and frozen at -20 °C for storage before transport to the Oregon Health and Sciences University Bioanalytical Shared Resource Pharmacokinetics Core (Portland, Oregon, USA). A single 50 mL tube of each sample was thawed to room temperature and centrifuged at 10,000 rpm for 5 minutes to remove precipitants and remaining particulate. One hundred µL of supernatant was filtered through a 0.22 µm Ultrafree Durapore PVDF spin filter (Millipore; Billerica, Massachusetts, USA) before injection into the HPLC instrument.

2.4 Chemicals and reagents

HPLC grade acetonitrile and deionized water were purchased from Fisher Scientific (Pittsburgh, Pennsylvania, USA). ACS grade phosphate buffer was also purchased from Fisher Scientific.

2.5 Apparatus and chromatographic conditions

Each decoction sample was analyzed in duplicate on an Agilent 1100 HPLC system (Agilent; Waldbronn, Germany) equipped with solvent degasser, refrigerated autosampler, column oven, and dioade array detector. The column used was a Bio-Sil C18 HL 90-5S; 5 µm; 4.6 mm in internal diameter and 250 mm in length (BioRad; Philadelphia, PA, USA).

The mobile phase was composed of 25 mM phosphate buffer (pH 2.5)-acetonitrile with gradient elution steps as follows: 0 min, 100:0; 10 min, 80:20; 50 min, 70:30; 73 min, 50:50; 80 min, 20:80; 85 min, 20:80, 88 min, 100:0; 100 min, 100:0. Injection volume was set at 50 µL per sample. The flow rate of the mobile phase was 1.2 ml/min with UV absorbance detection set at 254 nm. The operating temperature of the instrument was maintained at 40 °C throughout data collection (Wang and Yang, 2007).

2.6 Data analysis

Chemstation for LC, Revision B.04.03 software (Agilent; Waldbronn, Germany) was used to collect the peak integration for each sample. Peak area, retention time, and peak shape were used to determine peak area change and novel peaks in each chromatograph of herbal pairs as compared to single herb decoctions. All peaks in the herbal pair samples with an area of less than 100 mAU, or that were not present in duplicate runs, were not used for comparative analysis. Peak area change, as determined by the difference in peak area between a single herb decoction and an herbal pair decoction, of less than 100 mAU was disregarded from further analysis and determined to be due to instrumental variation.

3. Results

An average of 100 peaks were analyzed for each herbal pair and compared to each of the individual herb decoctions. Varying numbers of constituents increased and decreased in peak area when compared to the herbs decocted in isolation in all of the herbal combinations regardless of ratio (Table 1). Novel peaks were found in each combination and in each ratio that could not be found in any of the individual herb chromatographs. Peaks were not further evaluated for chemical structure or bioactivity as that was not the aim of this study.

Table 1. Summary of peak area change and novel peaks in classical Chinese herbal pairs.

Sample	Peak Area Increased > 100 mAU	Peak Area Decreased > 100 mAU	Novel Peaks	Peaks Eliminated Due to Integration Error*	Total Peaks Analyzed**
Bupleurum 9 g + Licorice 3 g	37	14	10	7	97
Ginger 9 g + Licorice 3 g	26	13	8	2	96
Ginger 6 g + Licorice 3 g	5	43	3	8	108

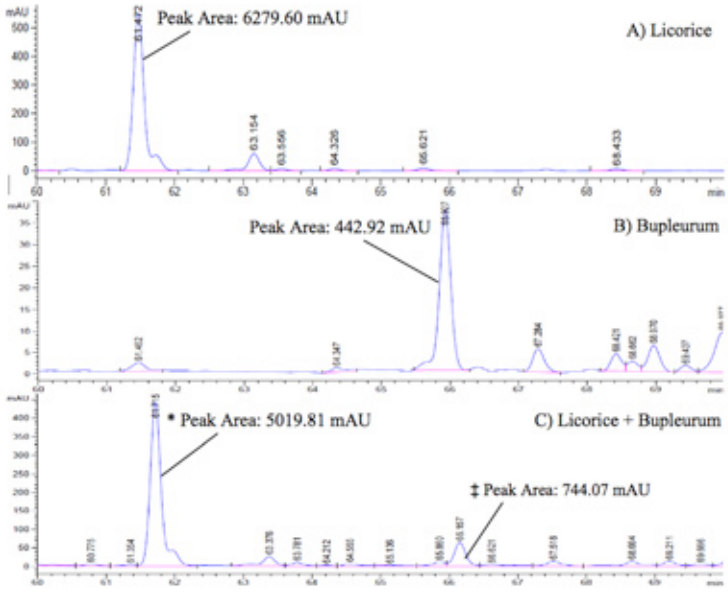
* Computer integration software was used to analyze peak area. Computer error in integration was determined based on chromatograph images and area differences between duplicate samples. The error was determined when the computer software incorporated two separate peaks or did not include the entire peak area determined by visual inspection of the chromatograph. These peaks were eliminated from analysis.

** All average peak changes between the duplicate samples less than 100 mAU were deemed to be insignificant and due to instrumental variation.

3.1 Bupleurum and licorice

The combination of bupleurum with licorice in a ratio of 3:1 resulted in the greatest number of changes between the herbal pair and the single extractions of all the combinations analyzed. This chromatograph in duplicate revealed an increase in peak area of 37 peaks and a decrease in peak area of 14 peaks (Table 1, Figure 1).

Figure 1. HPLC chromatographs of Chinese herbal decoctions of licorice and bupleurum. A) Single herb decoction of 3 g dried Licorice root decocted for 30 minutes at 100 °C in deionized water. B) Single herb decoction of 9 g dried bupleurum root decocted for 30 minutes at 100 °C in deionized water. C) Combination of the dried herbs bupleurum and licorice in a 3:1 ratio (9 g:3 g) decocted for 30 minutes at 100 °C. * Indicates a peak from licorice that decreased in total peak area greater than 100 mAU when decocted in combination with bupleurum. ‡ Indicates a peak from bupleurum that increased in total peak area when decocted in combination with licorice greater than 100 mAU. Variation in chromatograph axis height between the bupleurum chromatograph and the other two is due to differences in concentration of extracted constituents between bupleurum and licorice, whereby axis changes were needed to adequately visualize peak shape within the chromatograph. Due to variation of axes between sample runs, chromatograph integration software was used to evaluate changes in area and peak formation.



3.2 Ginger and licorice

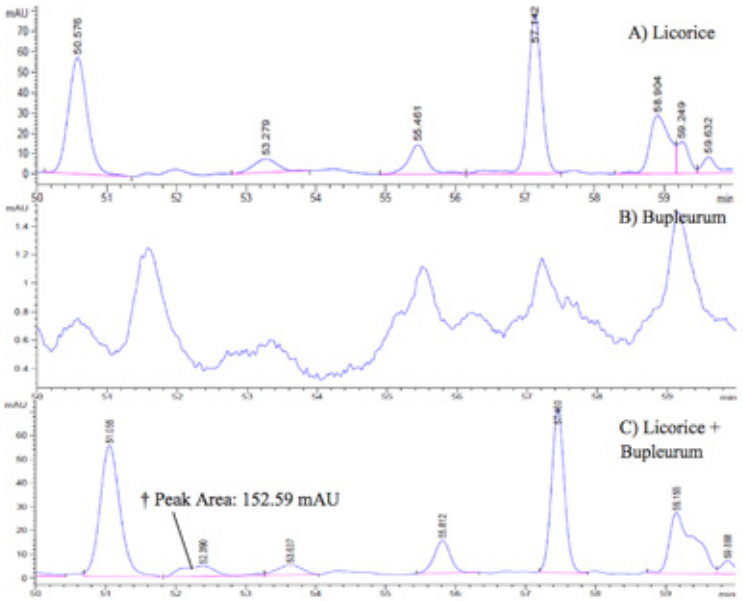
Similar results were found when ginger was combined with licorice in the ratio of 3:1. Increased peak area was found in 26 peaks and decreased peak area was found in 13 peaks in the duplicate samples (Table 1). Conversely, peak area change was very different when ginger and licorice were decocted in a ratio other than 3:1. When decocted in a ratio of 2:1, the number of peaks that increased

in area was less that the number of peaks that decreased in area, which is the inverse of the 3:1 sample. In the 2:1 ratio chromatograph, the licorice signature predominated overall causing a change in the scale and potential overshadowing of the ginger peaks within the licorice peaks.

3.3 Novel peaks

Novel peaks were found in all decoctions regardless of the ratio of licorice to bupleurum or ginger (Table 1, Figure 2). These novel peaks were determined to be novel because they could not be traced back to the individual herb chromatographs based on retention time, peak shape and peak area. In addition, each novel peak was located in the sample duplicate and possessed a peak area greater than 100 mAU, suggesting each peak is not due to instrumental variation or error. The ratio of 3:1 in the ginger:licorice combination yielded more novel peaks than any the 2:1 ratio (Table 1). The licorice signature was much less predominant in this chromatograph when compared to the 2:1 ratio upon visual inspection.

Figure 2. HPLC chromatographs of Chinese herbal decoctions of licorice and bupleurum. A) Single herb decoction of 3 g dried licorice root decocted for 30 minutes at 100 °C in deionized water. B) Single herb decoction of 9 g dried bupleurum root decocted for 30 minutes at 100 °C in deionized water. C) Combination of the dried herbs bupleurum and licorice in a 3:1 ratio (9 g:3 g) decocted for 30 minutes at 100 °C. † Indicates a peak that is novel to the combination sample and cannot be traced back to a specific herb based on retention time, peak area and peak shape. Variation in chromatograph axis height between the bupleurum chromatograph and the other two is due to differences in concentration of extracted constituents between bupleurum and licorice, whereby axis changes were needed to adequately visualize peak shape within the chromatograph. Due to variation of axes between sample runs, chromatograph integration software was used to evaluate changes in area and peak formation.



This study did not aim to prove the concept of synergism. Rather, the goal was to compare HPLC chromatographs between single and paired herbs within a decoction to explore potential synergism by comparing chemical relationships that result between herbs in solution. The intention was to investigate changes in the extraction of constituents and synthesis of new compounds when ginger or bupleurum are decocted in unison with licorice. In addition, this study aimed to establish basic analytical research strategies for studying herbal pairs based upon clinical practice and the cultural history of classical Chinese medicine.

This study found that when ginger and bupleurum were decocted in combination with licorice both sets of herbal pairs had observable increases and decreases in peak area (Table 1, Figure 1). Increases in peak area may be due changes in the chemical environment of the decoction or due to instrument limitations. When the chemicals were extracted through decoction, interactions may have taken place between different constituents to increase the extraction of specific constituents due to changes in the hydrophobicity of the solution. This was observed by Peter et al. (2013) when investigating the formula Sini Tang in which the constituent aconitine, a toxic alkaloid found in *Aconitum carmichaelii* complexed with liquiritin found in *Glycyrrhiza uralensis* in solution reducing the amount of toxic alkaloid present in the mixture (Peter et al., 2013).

An additional possibility is that the relationship between the constituents within the solution was such that some constituents may have been acting to prevent extraction of other compounds. However, once these constituents were used in the formation of novel compounds or degraded, these constituents no longer regulated the extraction of other compounds resulting in an increase in peak area. This is an unlikely possibility given what was observed by Peter et al. (2013).

The observable peak increase may also have been due to the peak area from each individual herb having a partial-additive effect on one another within the chromatograph. Two constituents with very similar retention times found in the chemical signature of each individual herb may have overlapped on the chromatograph when extracted together thereby increasing the peak area but not necessarily indicating an increase in the extraction of either constituent. This would be a partial additive effect because during analysis the peak area of the increased peak was not equivalent to the two peak areas from the individual herbs added together.

The observed decreases in peak area of the herbal-pairs may be due to constituents being used in the formation of novel compounds, changes in the hydrophobicity of the solution during extraction thereby preventing constituent extraction, or due to product degradation through sample preparation. Further studies using 1H-NMR and other similar techniques to identify and characterize each peak that demonstrated an increase or a

decrease when in an herbal-pair may help determine which of the above scenarios has taken place within the decoction.

The presence of novel peaks when ginger and bupleurum were decocted with licorice was also observed in this study (Table 1, Figure 2). Formation of the novel peaks may be due to a chemical interaction between constituents found in each individual herb that when present together form a new constituent. This may be evidence for the role of glycyrrhizin and other unidentified saponins within chemical formulas due to the dual hydrophobic nature of the compound. More investigation is needed.

It is notable that the 3:1 combination of ginger with licorice, which is the ratio most commonly used in Chinese herbal formulas, had a greater number of novel peaks when compared to the 2:1 ratio. This change may be due to the decreased domination of the licorice signature within the chromatograph making it easier to read or due to variations in constituent extraction from differences in the chemical relationship affecting concentration.

Another possibility for the novel peaks is the breakdown of other compounds in the sample preparation process resulting in pieces with new molecular weights. Peak isolation and characterization is necessary to determine if the novel peaks are new compounds or the result of constituent breakdown during sample preparation.

Data analysis has demonstrated the principle that there is a change in constituents present within a decoction when herbs are decocted in water together versus singly, and as such it belongs to the first category of research into synergism. The observed changes in the kinds and ratios of constituents present may be therapeutically valuable. They may signify changes in the therapeutic actions of these herbs when combined together in water decoctions.

As such they offer a window into understanding how herb-pairs that have been identified within Chinese herbal medicine may act to create unique therapeutic effects when compared with herbs being used in isolation. It also further demonstrates the value of the empirical body of knowledge passed on through the history of Chinese herbal medicine and the need to study herbal combinations based on historical usage.

While this study did establish basic analytical methodology for investigating herb-pair chemical relationships in solution, future investigation is necessary to understand the relationship between chemical constituents and therapeutic outcomes. Additional studies using synergy directed fractionation and 1H-NMR are needed to isolate, identify, and characterize the novel peaks found in the herbal combinations to further understand what it taking place within solution (Junio et al., 2011, Peter et al., 2013). This will allow for the understanding of the role of the saponin and other chemical constituents within an herbal formula and to determine

"...they offer a window into understanding how herb-pairs that have been identified within Chinese herbal medicine may act to create unique therapeutic effects when compared with herbs being used in isolation."

their role in the formation of novel compounds that may be therapeutically active. Once these compounds are characterized, in vivo studies are needed to determine if these constituents are in fact therapeutically active and what may result in differing health outcomes between single herb interventions and herbal fomulations.

5. Conclusion

Chinese formula science has much to offer research into the synergistic activity of herbs, both in terms of the underlying science of herb-pairs and of pharmacologically relevant herb-pairings. By studying herb-pair relations we can provide frameworks to understand what kinds of relationships we might expect to be

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taking place between herbs, how to use those relationships therapeutically, and what kinds of herbs may be examined together in the search for novel medicines. We may also come to understand how to combine herbs in new ways, based on their underlying chemistry to produce the desired therapeutic effects. This study is the beginning of investigation into herb-pairs and the possibility of herbal synergism while also holding true to the cultural use of the herbs using modern scientific methods.

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Acupuncture Divergent Channel Treatment as an Alternative Therapy for Cystic Acne: A Case Report

By Celeste Homan, MS, MAc, LAc

Celeste Homan, MS, MAc, LAc is an assistant professor in the Master's of Acupuncture Program at the Maryland University of Integrative Health (MUIH). She received her MAc degree from the Tai Sophia Institute (now MUIH) and has been practicing complementary medicine since 1993. Celeste holds a certificate in advanced massage and bodywork from the Baltimore School of Massage and is certified in Zero Balancing. She also holds a Master's of Science degree in Engineering from Johns Hopkins University.

Abstract

Background

Severe acne presents as pustules or pus-filled lesions and nodules or cysts. The side effects of commonly prescribed medications suggest the need for alternative therapies. This case demonstrates acupuncture channel physiology as an explanatory model and therapeutic approach.

Case presentation

A 37-year-old male professional presented to his physician with cystic acne of sudden onset one month after receiving dental work in 2010. He had no prior history of acne. He received antibiotic and nutrition therapies for two years with no improvement. He did not want to take isotretinoin due to common side effects and was referred by his physician for acupuncture in 2012. The patient's presentation was atypical of the organ patterns associated with cystic acne, which justified a differential diagnosis based on the channel systems.

Intervention

The patient received acupuncture treatment of the divergent channel system three consecutive days followed by four days of rest for 3 weeks in July 2012 and again in March 2013. He received ongoing acupuncture treatment of the primary channels during the months between the divergent channel treatments. He received no other type of therapeutic intervention after beginning acupuncture treatment.

Outcomes

Based on visual inspection, the lesions were significantly reduced in number and were no longer raised after the initial divergent channel treatment. Subsequent treatment of the primary channels to address ongoing weaknesses of the organs and substances resolved lingering discoloration. Symptoms were reduced but recurred slightly in the spring of 2013. After the 2nd series of divergent channel treatments, all lesions were resolved. The patient continues to be symptom free four years later with ongoing monthly acupuncture care.

Conclusion

This case suggests that acupuncture channel physiology may help to explain otherwise confusing presentations and to direct treatment strategies.

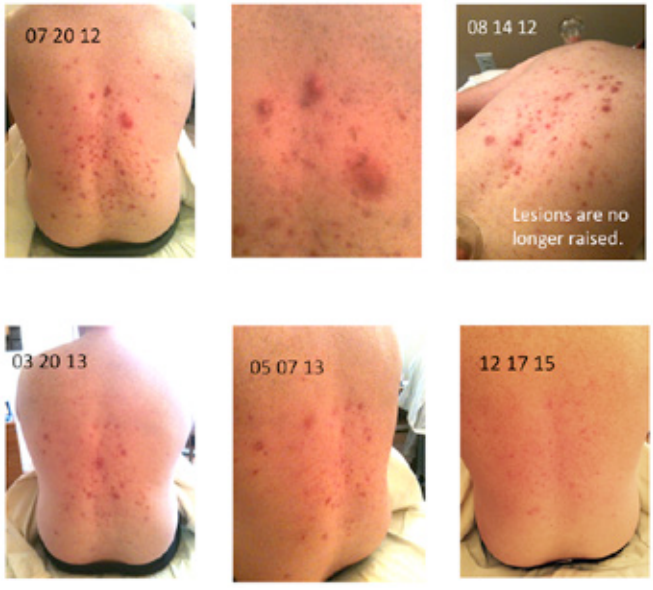
Key Words: acupuncture, channel theory, divergent channels, acne, autoimmune

Introduction

Isotrentinoin is a medication used to treat severe cystic acne with known common severe side effects including eye irritation, joint pain, nosebleed, rash, skin infection and bone tenderness.[1] Ipledge, a mandatory marketing distribution program intended to minimize potential fetal exposure because of the drug's known teratogenicity resulted in the denial of 40% of the prescriptions written within a one-year period[2]. The combination of severe side effects and drug compliance difficulties may lead patients to seek alternatives.

Four months of isotretinoin therapy typically results in an 85% improvement in patient symptoms[3] with 39% of patients relapsing within three years.[4] Based on photographic evidence (Figure 1), this patient exhibited a dramatic improvement of symptoms within one month of beginning acupuncture treatment with no adverse side effects and continues to be symptom free four years later.

Figure 1. Outcome of treatment over time



The main organ patterns associated with cystic acne include Lung channel Wind Heat, Intestine and Stomach Damp Heat, Blood stasis, Heat toxins, Spleen vacuity-phlegm Dampness, *yin* vacuity, and Liver Depressive Heat.[5] This patient's history, the location of his symptoms, and his pulse and tongue findings did not clearly support any of these patterns.

Like the organs, the acupuncture channels are anatomical structures that provide their own unique and equally important physiological functions. Yet a differential diagnosis based on the channels is uncommon.[6] One important function of channel physiology is to provide a pathway for the flow of internally and externally generated pathogenic factors.[7] For this patient, the sudden onset of symptoms after receiving dental work indicated the release of a latent pathogenic factor and a need to assess the channel pathways.

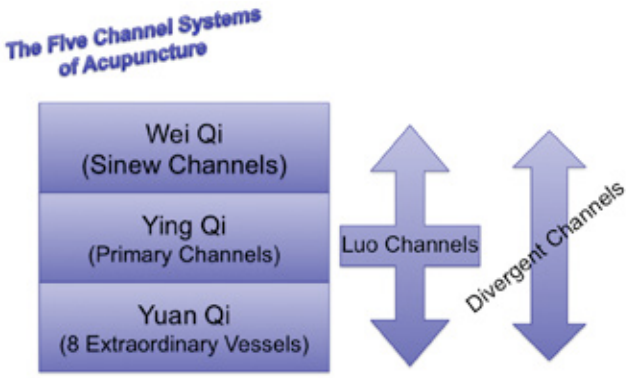
Recent research suggests that needling points along a channel trajectory "may influence the spatial distribution of local connective tissue cellular responses following acupuncture needle manipulation."[8] These studies can be seen as evidence of channel mechanisms from a Western perspective since channel trajectories generally follow the fascial planes. A recent systematic review suggests the use of acupuncture to treat acne[9] but the included studies were protocol driven and did not indicate a channel approach to treatment.

Channel physiology:

There are five channel systems in Chinese medicine that date back to the classical period. They include the primary channel system and four complementary or secondary systems: the muscle-sinew channels, the *luo* channels, the extraordinary vessels and the divergent channels. Together with the primary channel system and its organs, the complementary channels generate the network of circulations that produce our energetic anatomy and physiology.

The channel systems are organized according to three energetic layers. The muscle-sinew channels reside at the *wei qi* layer and are closest to the exterior of the body. The extraordinary vessels occupy the deepest *yuan qi* layer, providing the most internal or constitutional functions. The primary channels occupy the moderate layer, and have access to both the deeper *yuan qi* layer as well as to the more superficial wei *qi layer*.[10]

Figure 2. The Five Channel Systems of Acupuncture



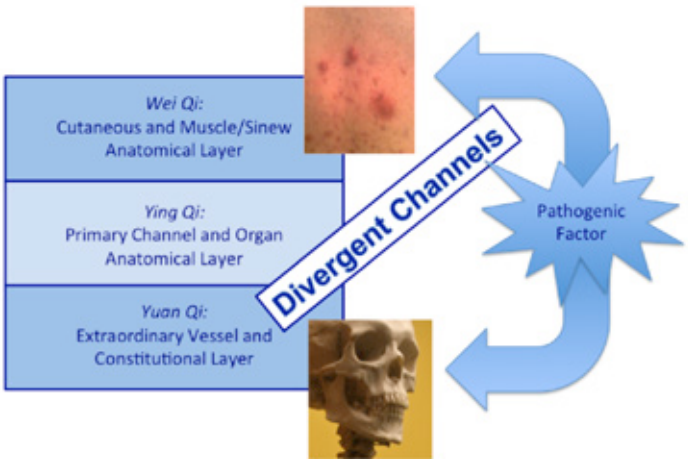
"The main organ patterns associated with cystic acne include Lung channel Wind Heat, Intestine and Stomach Damp Heat, Blood stasis, Heat toxins, Spleen vacuity-phlegm Dampness, yin vacuity, and Liver Depressive Heat.[5] This patient's history, the location of his symptoms, and his pulse and tongue findings did not clearly support any of these patterns."

The divergent channels have access to the deep *yuan qi* layer and the most superficial *wei qi* layer. Their purpose is to divert pathogenic factors between these layers in order to protect the primary channels and their organs.[11] When a pathogen is being held in the body by these mechanisms, it is said to be latent. A latent pathogen is suspected in patients with chronic symptoms that come and go, a sign that the body is not strong enough to fully clear it from the body.[12]

The channel systems address symptoms of the structures that are located within these anatomical layers. The sinew meridians address issues with the muscles and tendons (*jin*), the *luo* meridians relate to the vessels (*mai*), the primary channels correspond with the flesh (*ji*), the divergent meridians correspond with the bone (*gu*), and the extraordinary vessels correspond with the marrow (*sui*).[13] The cutaneous regions reside at the *wei qi* anatomical layer and correspond loosely with the sinew meridians.

For this patient, the appearance of pathology on the skin after receiving dental work indicated a divergent channel mechanism, which had been maintaining a pathogen in latency at the *yuan qi* layer of the bone or teeth. Once released, the pathology was diverted to the *wei qi* layer where it appeared on the skin. This was the basis for a differential diagnosis of the divergent channel system.

Figure 3. Management of latent pathogenic factors by the divergent channel system



The following *waike* strategy ensures the safe release of a pathogenic factor regardless of the channel system being used:[14]

1. Ensure the availability of adequate humors (*jing*, blood, or fluids)
2. Ensure the proper function of the sensory portals above and the organs of elimination below
3. Move the pathogen out

Ensuring the availability of adequate humors:

For trajectories within the divergent channel system that are used to clear pathogenic factors, the bladder-kidney channels use the mediumship of *jing*, the gallbladder-liver channels use blood, and the stomach and spleen channels use body fluids. These are the six channels generally used to clear pathology from the body.[15] Insufficiency of a particular humor would make treatment of that divergent channel contraindicated.

Opening the orifices above and below:

Guasha and cupping are used in the upper shoulder and neck area and in the sacral area in order to ensure proper functioning of sensory orifices and the organs of elimination so that pathogens that are released by the divergent channel treatment can be moved out of the body.[16]

Moving the pathogen out:

Points are selected along the divergent channel trajectory that has been chosen for treatment in order to activate the channel's unique functions. Specific points are chosen along the trajectory according to local findings and the unique functions of the point.

Patient Information:

A 37-year-old male professional presented to his physician in 2010 with cystic acne of sudden onset one month after receiving dental work. Lesions were distributed over 60% of his back and on the soft skin of the anterior surface of his elbows, axilla, and inguinal areas. He received antibiotic and nutrition therapies for two years with no improvement. He did not want to take isotretinoin due to concerns about side effects and was referred by his physician for acupuncture in 2012. Additional concerns included shoulder pain, frustration and alopecia. He also had a history of childhood asthma, and cysts in his sinuses, gallbladder and testicles, but no prior history of acne. He had migraines in 2008.

Clinical Findings:

Clinical observations were made to support a differential diagnosis utilizing the five elements, the *zangfu* and substances, the channels, and pathogenic factors.

Constitutional five element acupuncture involves diagnosis of the patient's constitutional type according to the patient's complexion or *color*, the *sound* of their voice, their subtle body *odor*, and

emotional temperament (hereafter CSOE). The correspondences between CSOE and the five elements appear in Table1. Initially, the patient's CSOE were green, shout, rancid, and lack of joy, which correspond predominantly with the constitutional type of Wood.

Table 1.
Diagnosis of Five Element Constitutional Type and CSOE

Element	Color	Sound	Odor	Emotion
Water	Blue	Groan	Putrid	Fear
Wood	Green	Shout	Rancid	Anger
Fire	Red	Laugh/ Lack of Laugh	Scorched	Joy/Lack of Joy
Earth	Yellow	Sing	Fragrant	Sympathy
Metal	White	Weep	Rotten	Grief

Initial pulses were generally slow and slippery. Left hand pulses were full and slippery in the heart/ small intestine position and weak in the liver/ gallbladder position. A hidden pulse was observed in the left *chi* or kidney *yin* position. A hidden pulse appears as an empty pulse at the deep level of 15-18 beans of pressure, but then it suddenly appears after squeezing the bone and lifting slightly.[15] Right hand pulses were weak in the Lung/ Large Intestine position, thin in the Stomach/ Spleen position and weak in the Pericardium/ Triple Heater position.

Initial tongue findings: Pale, wet, swollen with scalloping, thin yellow coating, dark veins beneath

Channel Findings: Lesions were distributed primarily over the *taiyang* cutaneous region of the back with minor lesions along the *jueyin* cutaneous region of the anterior elbow and inguinal areas. There were lypomas near BL-25. There were no sensitive alarm (*mu*) points. The patient reported chronic pain deep to the left shoulder joint. He reported migraines with visual flashing in 2008 that have resolved.

Additional History: He recalled acute stomach pain 20 years ago that resolved by eating oatmeal.

Toenails had vertical ridges with some fungal malformation of the great toe. Fingernails had white spots.

Diagnostic Assessment:

An individual treatment plan was developed for each treatment the patient received, including observations, assessment, treatment strategy, channel/point selection, final observations and reflective thinking. What follows is the initial assesment that lead to a differential diagnosis of the divergent channel system.

Five Element assessment:

The patient presented initially with a Wood temperament based on CSOE. After the first series of Divergent treatments, CSOE shifted to FIRE (pericardium), with red, laugh, scorched, and lack of joy.

Zangfu and substances assessment:

The hidden pulse in the kidney position confounded assessment of the bladder and kidney organs because the pulse at first appears empty and then reappears when pressing to the bone and releasing slightly. A true empty pulse would not reappear. The patient did not report any specific bladder or kidney organ issues and the alarm (*mu*) points were not sensitive.

The pale tongue and the slow, weak and slippery liver pulse indicate liver *qi* deficiency. While the history of migraines and the presence of sublingual veins may indicate Liver *yang* Rising and/ or Blood stasis, the patient presented with deficiency symptoms at the time of treatment. It is difficult to assess the cause of symptoms that are not present at the time of treatment, but these highly variable and ongoing symptoms in the liver/ gallbladder may be explained by ongoing taxation of these organs in managing a latent pathogenic factor according to the divergent channel mechanisms. The medium-ship of the liver/gallbladder divergent channels is blood.

Although initially the pulse was slow, as treatment progressed and the turbidity cleared from the skin, heat signs began to arise. These signs indicated heat originating from the heart based on pulse (rapid in the heart position) and tongue findings (red tip). Bowels were fine with no digestive complaints. The presence of a slippery and thin pulse indicated some spleen *qi* and blood deficiency. This did not seem to be the result of a poor diet.

Lung was weak but sweat was normal. There were no respiratory issues although the patient reported some sinus drainage as the divergent channel treatments progressed offering a possible explanation for the body's repsonse to treatment and its mechanism for clearing dampness.

The nail findings indicate blood deficiency and dampness. The thin spleen pulse indicates blood deficiency. The slow slippery pulse and pale tongue indicate insufficient *qi* to move fluids in an orderly fashion. The distended veins beneath the tongue indicate blood stagnation specifically in the upper *jiao*.

Assessment of pathogenic factors:

On his health inventory, the patient reported not smoking. When cupping the upper shoulders during one of the divergent channel treatments, a strong odor of cigarettes arose and the patient was again asked if he had ever smoked cigarettes. He repeated that he had never smoked, but then added that his father had smoked near him when he was a child, aggravating his asthma and creating conflict between his parents. His father died of lung cancer in 2008. Both the exposure to second-hand smoke and the emotional stress that the patient reported are pathogenic factors that may be held in latency by divergent channel mechanisms.

In general, latent pathogenic factors are indicated with symptoms that come and go. This patient reported that his shoulder pain was

intermittent and that his acne would flare and subside periodically, although it was consistently painful and always covered a majority of his back. The lesions on the anterior surface of his arm, indicating the *jueyin* cutaneous region was periodically clear, but the *taiyang* region was always symptomatic.

The *taiyang* region represented the more superficial manifestation of his symptoms and the flare-up on the *jueyin* area represented periods of time when the pathology was moving deeper.[16] The appearance of the acne one month after receiving dental work also indicated a latent pathogen since the teeth are a major area of latency.

The generalized deficiency symptoms may have indicated taxation on the body's resources to maintain latency. The body responds to heat with dampness and it responds to dampness with heat. The appearance of red, inflamed, pus-filled cysts demonstrated the presence of both heat and dampness so as one resolved, the other became more apparent, indicating a need for ongoing assessment of the interplay between body fluids and heat as treatment progressed.

Assessment of the channels:

The skin symptoms and shoulder pain, and the sudden onset of symptoms after receiving dental work, indicated the divergent channels. The allopecia, which is an auto-immune condition, also indicated divergent mechanisms.

The manifestation of symptoms along the *taiyang* cutaneous region indicated the bladder/ kidney divergence channels within the divergent channel system. The appearance of a "hidden" pulse in the *chi* position on the left side (kidney *yin* position) which resolved with treatment also indicated the bladder/kidney divergent channel.

This report highlights only those treatments that used the divergent channels, which were understood to address the latency that was released by the dental work (*yuan qi* anatomical layer) and began appearing on the skin (*wei qi* layer). Divergent channel treatment was seen as an intervention that would address the root cause of the patient's main concern.

Diagnostic Reasoning:

Diagnosis of Constitutional Factor:

The bladder divergent channel diverts the *jing* to manage a latent pathogen. This may explain the change of CSOE and therefore the change of constitutional assessment after the divergent treatment.

Diagnosis of constitutional type or constitutional factor was based on an assessment of CSOE according to the tradition of Leamington acupuncture (LA). It is interesting to note that several of the LA treatment blocks can also be understood to affect the distribution of essential *qi* to the organs, and a change of patient presentation from a constitutional standpoint.[6] But this author has been unable to identify a divergent channel treatment within the LA practices.

Diagnosis of the *zangfu*:

The patient's presentation did not fit with any of the organ patterns typically associated with acne. Lung channel Wind Heat is characterized by lesions on the face , a red tongue with yellow fur and a rapid floating pulse. This patient's lesions were on his back, his tongue was pale with a thin yellow coat and his pulse was slow and slippery. his patient did not have the dry bound stools, bad breath, strong appetite and oily skin characteristic of Intestine and Stomach damp Heat and the lesions did not correspond with the *yangming* cutaneous zone.

Although his leasions were large, inflamed and painful, he did not have the dry, yellow fur, and bowstring, slippery, rapid pulse associated with heat toxins. Spleen vacuity-phlegm Dampness was indicated by the slippery and slow pulse that was weak in the spleen position, but he did not have loose stools or slimy white fur on his tongue and he did not have the lifestyle issues and dietary habits of spleen-vacuity. He did not have the dryness, red tongue or fine bowstring rapid pulse associated with *yin* vacuity.

Although there were signs of liver depression, there were initially no signs of Liver Heat and liver depression by itself does not cause acne.[5]

This patient had a relatively healthy lifestyle in terms of diet, rest, exercise and social support. The general deficiency of the substances and organs was understood to represent prolonged taxation of the body's resources to maintain latency of the pathogenic factor, which may occur when divergent mechanisms are protecting the organ systems of the body as described in the introduction.

Diagnosis of the channels:

Within the divergent channel system, the bladder and kidney divergent channels were selected for treatment for three reasons. First, the location of symptoms on the *taiyang* cutaneous zone indicated the bladder divergence and its *yin/yang* paired kidney channel. The lesions on the *jueyin* cutaneous region were less severe and were intermittent. Second, the hidden pulse, which is a special pulse indicating a divergent channel mechanism, was found in the bladder and kidney pulse position. Third, the patient's age and general health indicated sufficient *jing* to support a bladder/ kidney divergent channel treatment. The patient's weak liver and spleen pulses indicated that the patient's blood may not be sufficient to support the gallbladder and liver divergents. The spleen and liver pulses had recovered sufficiently the following spring to support treatment of these channels at that time.

Therapeutic Intervention:

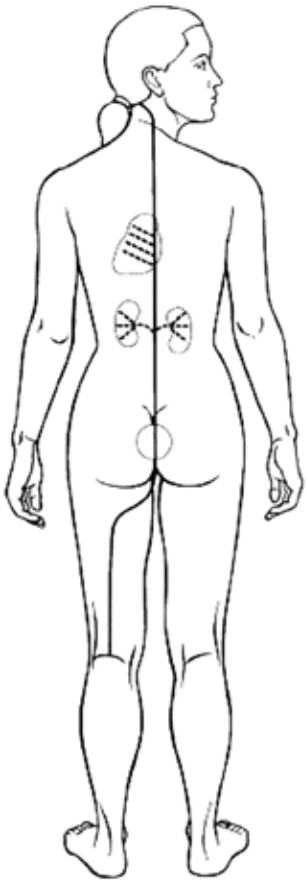
Once a differential diagnosis of the divergent channel was made, points are selected along the trajectory based on their individual function and physical findings such as symptoms that were local to the point.[6] Associated effect points of the Bladder channel are commonly added to treatment.

Table 2. BL divergent channel points[20]

Confluent points: BL-40, BL-10
Trajectory points: BL-36, GV-1, GV-4, BL-23 (*hua to*), CV-4, CV-3, BL-32, BL-28, up the *hua to* line to BL-15 (as a *hua to* point) and GV-11, BL-1, BL-44 and CV-17, BL-15 (to BL-10)
If SDS: *jing well*: BL-67

Treatment included 10-15 minutes of cupping and *guasha* of the upper shoulder area and *guasha* of the sacrum according to step 2 of the *waike* strategy described above. The confluent points of the BL channel were included as were points along the BL divergent trajectory as follows: (Note: L=left side, R=right side, B=bilateral needling)

Figure 4. Bladder divergent channel pathway. Illustration from Deadman[19]



Points utilized for BL Divergent Treatment: BL-40L, BL-34L, BL-25L, BL-15L, BL-44L, BL-10L, BL-10R, BL-44R, BL-15R, BL-25R, BL-34R, BL-40R, BL-67 B, SI-1B

BL-40 and BL-10 are the confluent points, which activate the divergent channels. Other points were selected based on local symptoms such as tenderness. *Jing well* points are commonly added to divergent channel treatments because of their ability to strengthen *wei qi*.

The minor involvement of the *jueyin* cutaneous region led to treatment of the gallbladder divergent channel six months after the start of treatment to address lingering symptoms.

Points utilized for GB Divergent Treatment: GB-34L, GB-30L, BL-25L, Ren-17, ST-12L, ST-5L, TH-16L, GB-1L, GB-1R, TH-16R, ST-5R, ST-12R, Ren-17, GB-25R, GB-30R, GB-34R, TH-1, GB-44 (Note: Ren-17 was not needled twice. It was gently stimulated the second time it is listed.)

The confluent points for the gallbladder channel are GB-30 and GB-1. The remaining points were selected based on local symptoms such as tenderness. *Jing well* points were added because of their ability to strengthen the *wei qi*.

Both of the divergent treatments were repeated three days in a row followed by four days of rest for three consecutive weeks. There were a total of 18 divergent channel treatments.

Needling Method:

A special needling method was used for the confluent points of the divergent channel treatment. When a pathogenic factor is being cleared to the *wei qi* level the needling method is "superficial-deep-superficial" (SDS). The method requires inserting the needle at first superficially to approximately 3 *fen* depth, where it is manipulated in a circular motion to engage the *wei qi*. Once the *wei qi* is obtained, the needle is inserted to a greater depth (5-7 *fen*) and vibrated to engage the *yuan qi* level. Once the *yuan qi* has been obtained based on the patient report of *de qi,* the needle is returned to a superficial.

The remaining needles were inserted and gently manipulated until the patient reported a sensation of *de qi*. Needles were retained for 30-40 minutes and were removed when pulses stabilized and were relatively balanced. This needling method may be necessary to create the tissue and neurological effects associated with acupuncture treatment.[17] Patient feedback indicating an experience of *de qi* was obtained for all treatments.[18]

Needles used were Korean DBC spring singles .16 X 30 and .16 X 15

Administration of Intervention:

The patient received acupuncture treatment of the divergent channel system three days in a row followed by four days of rest for 3 weeks in July 2012 and again in March 2013. Divergent treatments were administered in 60-minute sessions. Needles were retained for 30-40 minutes.

Outcomes:

After the first series of 9 divergent channel treatments (four weeks), the lesions were no longer raised, swollen, and painful although the skin was still discolored (Figure 1.). The skin continued to heal over the following months with a brief flare-up six months after the start of treatment. After the second divergent channel treatment, the patient was symptom free and he remains symptom free four years after beginning treatment.

"The patient's weak liver and spleen pulses indicated that the patient's blood may not be sufficient to support the gallbladder and liver divergents. The spleen and liver pulses had recovered sufficiently the following spring to support treatment of these channels at that time."

Discussion:

Strengths: This patient received no other medical intervention while receiving acupuncture treatment. Photographs used to illustrate his response to treatment over time limited observational bias of the patient and the practitioner. The patient responded favorably within one month of starting acupuncture therapy. The fact that his symptoms were unchanged during the previous two years of antibiotic and nutrition therapy suggests a correlation. The fact that he remains symptom free four years after the start of treatment also suggests a successful therapy.

Limitations: The patient's symptoms may have improved without any intervention. The patient received additional acupuncture treatment at two to four week intervals during the time that he was not receiving the divergent channel treatments. These treatments supported the patient's constitutional type and any concerns that presented at the time of treatment, such as an invasion of Wind Cold, mild back pain related to his posture at work, and one occurance of food poisoning. The effect of these treatments confounds the importance of the divergent channel treatments in his overall care and long term outcomes.

But these treatments did not begin until after the first series of divergent treatments. While causation can not be determined by a single case report, the patient received no other intervention during this time that could explain his initial improvement during the first month of treatment. The lesions were still discolored, but they were no longer raised, swollen, and painful.

The limitation of confounding factors for long term outcomes may be unavoidable within the context of the Chinese medical model, which emphasizes revised treatment planning based on ongoing observations and a holistic approach to patient care that includes the practitioner's healing presence.

Conclusions: This case demonstrates the critical thinking involved in providing a differential diagnosis based on the channel systems of acupuncture and the divergent channels in particular as a guide for future research. Divergent channel approaches could be studied within the context of chronic symptoms that may indicate divergent channel mechanisms such as arthritis, autoimmune diseases, Lyme disease, and other chronic infections.

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Case Reports: A Continued Discussion on Why our Profession Needs More of Them

By Timothy Suh, DAOM, LAc

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The summer issue of *Meridians: Journal of Acupuncture and Oriental Medicine*[1] includes a short piece by Adam Gries, DAOM, LAc that emphasizes the importance of case reports as one of the most valuable research tools for the acupuncture and Oriental medicine (AOM) profession today. In the premier issue of Meridians: JAOM, I authored a piece that also discusses the paramount need for the writing and publication of this type of research format.[2]

Case reports have for a number of years documented both the ways our medicine works and does not work for a variety of medical conditions. We practitioners must continue to embrace this direction by writing and accumulating information that can be peer reviewed and thus become a strong and valid foundation of evidence for our field. The accumulation of knowledge from this approach will ultimately be regarded as scientific theory that will unify our medicine as it moves into the mainstream.

Acupuncture, only one modality of AOM, is now considered a part of integrative medicine and no longer as merely complementary nor alternative. The number of hospitals that promote it both in-patient and out-patient is increasing. It is used in emergency rooms. More and more insurance plans throughout the country provide coverage for it. NCCAOM has a hospital-based practitioner taskforce (See p. 10 of this issue). A majority of states have an acupuncture practice law on their books.

One critical problem, though, is that the movement of AOM into the mainstream is actually in jeopardy. As you know, our modality is being used by physical therapists, first taught to this profession by an acupuncturist (although based in acupuncture principles, it was named "dry needling.") Commonly, physical therapists even use acupuncture research to validate its use and they actually get reimbursed by insurers by billing dry needling as **something else** because there is no code except "acupuncture" that exists for what they do. In fact, MDs and DCs are trained in acupuncture, although their exposure to the field is very limited, but at least they call it what it is. How can our profession allow this to happen and not defend it with our own properly done *acupuncture* research and evidenced efforts?

"I often hear that a patient has received dry needling and therefore does not want acupuncture. For whatever reason, they have come to believe that dry needling is more effective or superior to acupuncture. Or worse, they don't want acupuncture because they were treated with dry needling and they were injured. As a consequence they don't want to try acupuncture because the patient thinks acupuncture and dry needling are essentially the same thing. We must correct this perception through evidence-based published articles."

In my hospital work, when treating chronic migraines, for example, I often hear that a patient has received dry needling and therefore does not want acupuncture. For whatever reason, they have come to believe that dry needling is more effective or superior to acupuncture. Or worse, they don't want acupuncture because they were treated with dry needling and they were injured. As a consequence they don't want to try acupuncture because the patient thinks acupuncture and dry needling are essentially the same thing. We must correct this perception through evidence-based published articles.

In my essay referenced above, "Why do Case Reports? How These Can Benefit our Profession," I outlined and provided a reference for David Riley, MD's criteria for case reports. I also mentioned Sivarama Prasad Vinjamury, MAOM, MPH, MD's concise outline for writing case reports. (These resources are on the MJAOM website: http://www.meridiansjaom.com/index.php?_a=category&cat_id=10) There is no reason we cannot all use these simple steps and write up the evidence to support and enliven our medicine as a true partner of the modern healthcare system.

Most recently, Peter Deadman has published his opus, *Live Long Live Well,* in which he defends the art of Yuan Sheng by supporting the classical text with modern investigative findings. Also, Zhang Zhong Jing left us the *Shang Han Lun*, the review of cases and theories he clearly saw in his lifetime of practice. We are fortunate enough to be able to read these ourselves and test their relevance and clinical significance to this day. By writing case reports, we can carry on this important tradition. We must shed the aura of secrecy about our points and combinations and share repeatable, affective treatment protocols and strategies so all of us can succeed in healing our patients.

I also believe that the Accreditation Commission for Acupuncture and Oriental Medicine should require all schools to teach this writing skill by introducing it to students at the master's level. Too few schools specifically promote and teach case report writing as part of the AOM curriculum. There are three AOM schools in Chicago; none that I know of teach a course that focuses on case report writing. I attended Oregon College of Oriental Medicine, a school that focused very much on research and case report writing as a primary skill along with western and eastern medicine training. How can we share information if we don't teach our practitioners the vehicle by which to do so?

We must also require externships that promote successful practice. I believe that externships should be required by the Accreditation Commission for Acupuncture and Oriental Medicine as part of the AOM curriculum. Externships with a practicing clinician would give the students a real-life, first-hand perspective of how the medical delivery systems function in a day-to-day setting. They would see the true value of all the tools that they are learning.

We must create a strong body of evidence that supports our medicine and, rather than be hesitant and fearful, we must stand strong and document the efficacy of our medicine. The evidence is there in every clinical note that we write. We have the information. We just need to take a little time and effort to put the information together in a creditable format that is publishable. Every clinician has cases that are worth sharing and promoting. It is not as difficult as you may think.

The Bureau of Labor Statistics has just given our profession a code. This is a great step. Now we need to document what we do and how we do it. One of the best ways to do this is through case reports. Our profession is getting stronger by the work of a few. Just imagine its strength when many more of us are working to fortify and move it to new heights!

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Leamington acupuncture's emphasis on the channels offers practitioners a practical approach for cultivating an understanding of the channel systems of acupuncture. They lead to safe and effective clinical experiences that can be integrated with the practitioner's developing medical model and clinical skills.

Suggested Research

The LA ID treatment protocol provides a clearly defined and reproducible method for treatment of post-traumatic stress disorder and could be used within the context of a clinical trial. From an ethical standpoint, it is recommended that such research be observational and include ongoing support that includes more advanced LA methods to address the unique needs of each patient.

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During the early years of my training, I was fortunate to learn from Professor Worsley and to observe the clinical practice of Niki Bilton in a setting that most closely resembled the apprenticeships of the past. I acknowledge Jeffrey Yuen for weaving together centuries of Chinese medical history and theory into a coherent and comprehensive medical model.

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i. The Traditional Acupuncture Institute in Columbia, Maryland, was one of several schools that developed from the Worsley tradition. Later named The Tai Sophia Institute, the school is now the Maryland University of Integrative Health (MUIH). The Worsley Five Element practices continue to provide many foundational principles of the MUIH curriculum.

ii. Cecil-Sterman reports that her primary channel illustrations reflect the original trajectories as provided in the classical texts. These include chapter 59 of the *Su Wen* and chapter 10 of the *Ling Shu*.[36]

iii. Master and couple points are specific to each of the 8 extraordinary vessels. They include the following points: SP-4, PC-6, LU-7, KI-6, SI-3, UB-62, GB-41, and SJ-5.[37]

iv. Jacobs also refers to the opening point of the extraordinary vessels as a "master" point.[37]

v. The four seas include the sea of food and drink, the sea of *qi* and blood, the sea of marrow, the sea of *zangfu* and postnatal *qi*.

RECOGNITION OF ACUPUNCTURIST AS AN LIP CONTINUED FROM PAGE 16

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24. Forty-two states out of 45 states and D.C. have acupuncture practice acts. LAcs are recognized by state law, as LIPs in more states than are nurse practitioners. TJC's *WhoWhatWhere* document (see end note 1) notes that nurse practitioners are recognized by state law as LIPs in 17 states [*WhoWhatWhere* p. 1 under the "who?" section].

CLINICAL PEARLS

The topic discussed in this issue is:

How Do You Treat Cuts, Abrasions and Local Infections in Your Clinic?

The topic for this issue is "How do you treat cuts, abrasions and local infections in your clinic?" We present three different approaches by western practitioners. For quick help for minor cuts, abrasions or local infections, common, western-style first aid is generally what is needed. However, in the course of daily life in East Asia, cuts, lacerations, and possible concomitant bruises and pain are commonly treated with herbs, acupuncture, and moxibustion.

When bleeding has been reduced and the wound is clean (which today can be done with typical first aid applications), Yunnan Paiyao, an excellent and well known Chinese herbal powder is still in use for application to immediate wounds. It helps to stop the bleeding, close the wound, and decrease scarring. This patent formula also helps the flesh regenerate and prevents blood stasis and infections. It can be used externally and taken internally.

"To hasten recovery after initial healing has begun, East Asian medicine practitioners can choose from a great variety of topical herbal applications, such as liniments, oils, and salves that boost circulation, reduce pain and stimulate healing."

To hasten recovery after initial healing has begun, East Asian medicine practitioners can choose from a great variety of topical herbal applications, such as liniments, oils, and salves that boost circulation, reduce pain and stimulate healing. Many of these patent topical herbs move stagnation of *qi* and blood. If using an alcohol-based mixture, caution must be used to avoid open wounds. *Ching wan hung*, a traditional burn cream, can be used to "generate flesh." Any authentic Chinese herbal shop or online sources now carry numerous versions of these "hit medicines" and burn creams in their most popular varieties.

Internal herbs can also be taken to speed up healing. East Asian practitioners give careful consideration to distinguish helping an injured area that may have *qi* and Blood stasis versus one that may have or be building Heat or toxic Heat (infection) as blood-moving herbs will have to be balanced with heat clearing herbs for appropriate treatment and adjusted to the patient's constitution.

A well-known acupuncture technique for local treatment, "surround the dragon," typically uses five points around the area of injury. Needles are inserted in healthy tissue, aiming towards the wound. Application of channel theory not near the site of injury is also an acceptable and safe method of treatment as it stimulates "healthy *qi*" in an uninjured area to create movement in a "sick" meridian. Mapping out areas of trauma with auricular acupuncture is a common focus—for example, the knee zone for knee pain paired with other points for trauma and inflammation.

Various methods of moxibustion can be used for cuts and infections from stick to direct and other Japanese moxibustion styles, including heat-sensing moxa (see Tom Hurrle's

Practitioners, we welcome your Clinical Pearls about each of our topics. Please see our website for the topic and submission information for our fall v.4 #1 issue: www.meridiansjaom.com Also check us out on Facebook.

Clinical Pearl). A layer of healed tissue forms very soon after applying moxa. Positive signs, such as dry skin beginning to drop off, the cessation of bleeding, and a layer of fresh new, pink skin appearing around the edges of injuries will become apparent. Done safely and with proper training, moxibustion can be a primary tool to help heal wounds, cuts, and infections.

Refer the patient to an allopathic medical doctor if there is any possible suspicion of a local or systemic infection based on symptoms and signs (rapid heart rate, increased pain fever, unusual change of tissue color, etc). Look for cellulitis or sepsis in patients who are unware of these issues or not enthused about going to the hospital or an allopathic doctor. Sepsis can be fatal and the very first hours are critical for antibiotic treatment.

Tetanus lives in soil, dust, and manure and can get into cuts. If suspected and the patient has not had a vaccination or booster, refer them immediately. Look for jaw pain and muscle spasms. In any of these situations, make sure the patient goes to a hospital. While tetanus and local or systemic infections do not pass between people, any open wound being treated requires universal precautions to protect the practitioner against any potential blood-born illness.

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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.

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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How Do You Treat Cuts, Abrasions and Local Infections in Your Clinic?

By Dylan Jawahir, LMT, LAc

Dylan Jawahir, LMT, LAc, Dipl OM (NCCAOM) focuses on injury, rehabilitation, and pain management at his San Diego, California clinic, August Point Wellness, LLC. Dylan created Battle Balm®, a TCM-based topical herbal analgesic, and is introducing it to the western market. Dylan has served on the Board of Directors of the California State Oriental Medical Association (CSOMA) and was an editor of *All Things Healing*. Jawahir balances his medical practice with martial practice of Korean Tae Kwon Do and Brazilian Jiu Jitsu. He has practiced acupuncture since 2010 and massage therapy since 2004. He can be reached at: dylan@augustpoint.com or visit his website: www.AugustPoint.com

I have actively participated in martial arts for many years. In my clinic, I treat a number of athletes, most of whom practice some form of hand-to-hand combat. Among their most frequent complaints are treatment for broken fingers, muscle strains, tendon sprains, and dislocations.

"For cuts, abrasions, and infections, I normally stick to external remedies but refrain from using alcohol-based herbal liniments, which can dry the skin, slow local fluid drainage and cause pain when applied to an open wound. "

These martial artists rarely seek out treatment for a skin condition unless it interferes with their training or has worsened significantly—most are aware of the higher risks of skin injury and the associated "gym germs." The most common skin issues that plague fighters are staphylococcus, streptococcus, ringworm, Candida, and athlete's foot. (Though also common in the gym, we won't go into the herpes virus here.)

I use one particular external balm for treating skin trauma, a product called Battle Balm®. This is a traditional Chinese medicine-based topical formula designed to treat pain along with skin damage that may occur with irritation, itching, bruising, swelling, and/or infection. I must disclose that I am the creator of Battle Balm® and for years I've used this formula with excellent results to treat fighters. This versatile product has many sports-related applications and is easy to use and transport. These combined characteristics have resulted in higher than average patient compliance.

For cuts, abrasions, and infections, I normally stick to external remedies but refrain from using alcohol-based herbal liniments, which can dry the skin, slow local fluid drainage and cause pain when applied to an open wound. An oil-based herbal formula, though slightly warming, can be much more appealing. Oil can also serve as an additional layer of protection during the wound closing/scabbing process.

Hong hua is an herb that has been commonly used in traditional Chinese medicine for moving blood and clearing stagnation. It is considered warm and is also abundant in two useful fatty acids, linolenic and linoleic acid, better known as omega-3 and omega-6, respectively. Both of these fatty acids have a tremendous effect on wound healing at the cellular level.[1,2]

Tian qi (*san qi*) is another herb that is commonly used in topical application where there is a need to move blood as well as stop bleeding or, in other words, regulate blood. There is plenty of evidence that concurs with its efficacy in clotting blood and cardiovascular healing.[3]

A cool herb, *bo he,* is a useful addition to a topical formula as well. It tends to cool the inflammation and redness that can accompany a skin injury. *Bo he* is a valuable herb for

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How Do You Treat Cuts, Abrasions and Local Infections in Your Clinic?

By Tom Hurrle, LAc

Tom Hurrle, LAc has studied and practiced Japanese acupuncture styles exclusively since 1998. He completed the Toyohari Association training in 1999. Since then his teachers have included the meridian therapy masters Shudo Denmai and Masakazu Ikeda, the moxibustion specialist Junji Mizutani, and recently Shoji Kobayashi. He teaches this subject at PCOM Chicago and in seminars. He can be reached at tom@vitaldirections.com

I specifically treated a non-healing surgical wound with moxibustion. The subject was 38-year-old woman undergoing treatment for breast cancer. Her treatments included chemotherapy, radiation, and a mastectomy. Following completion of her bio-medical treatment, about 16 months after I first saw her, she had plastic surgery to reconstruct her breast. The final step was to construct a nipple. Following this surgery, the area became a non-healing wound. A sunken area of hard, dry yellow tissue with an irregular shape 1-2 cm in diameter was surrounded by red, inflamed tissue. After several weeks with no improvement, she consented to my treatment of the area.

Two methods of moxibustion were used: Heat-sensing moxa (*Chinetsukyu*) directly on the sunken area in the center, and thread diameter direct moxa surrounding the perimeter of red skin. Healing progress was immediately apparent; the tissue became softer and the color improved in a few days. These two treatments were repeated weekly for the next 12 weeks until the lesion was well healed. The patient was very happy with the result and has continued as my patient for other health issues.

My treatment for her breast was one part of a Japanese classical acupuncture/meridian therapy session, which also included a root treatment and attention to other complaints. The root treatment is considered essential to the overall result. It supplements the most deficient *yin* organs according to the rule from chapter 69 of the *Nan Jing*. Additional points balance the pulse as needed. Root treatment typically moves the patient quickly to parasympathetic dominance, mobilizing the body's healing functions and improving response to symptomatic treatment.

"My treatment for her breast was one part of a Japanese classical acupuncture/meridian therapy session, which also included a root treatment and attention to other complaints. The root treatment is considered essential to the overall result."

The blood chemistry effects of direct moxibustion were first described by Dr. Shimetaro Hara about 90 years ago. They include an increase in the production of white blood cells and of their phagocytic activity. [1] With heat-sensing moxibustion, semi-pure moxa is firmly compressed into a cone shape 1-2 cm at the base.[2] A small dab of burn cream or a drop of water is placed on the point, the moxa cone is placed and the tip is lit. It should not get hot, so it is removed when the patient feels warmth or when the cone is about 75% burned.[3] A bowl of water is kept handy to extinguish the burning cone.

Thread moxibustion is the use of very small direct moxa cones, approximately 1mm in diameter.[4] Use of thread moxa around the perimeter of inflammation or ecchymosis is always effective. I have used it with all sorts of musculoskeletal injuries as well as with wounds. Even with a severe injury, the combination of thread moxa on the perimeter plus heat-sensing moxa where the injury is greatest and tenderness is pronounced will move blood, reduce pain, and accelerate healing.

Direct moxa penetrates more deeply; it works on the blood level. Heat-sensing moxa is used to move stuck *yang qi;* it works on the *qi* level. The non-healing wound is a good example of stuck or excess *yang qi*. In this case use of only direct moxa around the perimeter would help but would take longer to bring the desired result.

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How Do You Treat Cuts, Abrasions and Local Infections in Your Clinic?

By Elaine Vozar, LAc

Elaine Vozar, LAc received her Master's of Science from Pacific College of Oriental Medicine, where she now serves as the chair of their herbal department. She practices in Chicago, Illinois, specializing in pain, neurological disorders, hormone disorders, and acute trauma. Elaine can be reached at elainevozar@gmail.com.

Pu huang (Typhae Pollen) is also known as cattail pollen, an herb that works alone or is commonly added to liniments to help stop bleeding. It also maintains blood invigoration. Through practice, we have found that when used as a single, it not only stops bleeding but changes the pattern of wound healing. It appears that *pu huang* blocks the formation of a seal or scab over the wound and encourages appropriate skin growth, while still continuing the body's healing capabilities.

If *pu huang* is applied to an injury, a scab does not form; instead, a *pu huang* mixture forms a barrier. It can be utilized in the first moments following injury or at any point after, especially if a wound is not healing optimally.

To use *pu huang* in the moments after an injury, or if an injury will not stop bleeding and thus may result in an open wound, follow this process:

1. Wash your hands, then wash the cut with water
2. Pack the *pu huang* into the cut while applying pressure. The *pu huang* will mix with the blood and form a barrier between the inside of the body and the outside. If blood continues to leak from the wound, add more *pu huang* and apply more pressure.
3. Apply a bandage
4. Remove the bandage each day and wash the *pu huang* out of the wound. Note that the wound will start to bleed again with fresh red blood but the wound should be smaller. The *pu huang* must be removed daily because the skin will start to grow around the *pu huang*.
5. Repeat steps 1-4 as needed

For an injury that is not healing properly or forming a keloiding scar:

1. Follow the same steps as above but mix coconut oil in a 1:1 ratio with *pu huang*. The oil will help to connect the *pu huang* to the area more effectively.
2. If the wound looks like it is also creating dampness or is warm to the touch, *huang lian* (scutellariae rhizoma) can be added to *pu huang* in a 1:2 ratio. This combination would then be mixed into the coconut oil.
3. Apply the coconut oil and *pu huang* combination (and huang lian, if used) directly to the injury or scar before bedtime. A bandage can be applied to protect clothing worn over the area. (Note that *huang lian* can stain clothing and bedding.)

"At each fresh application, the wound or scar will be smaller. *Pu huang* encourages angiogenesis (the growth of new blood cells), as well as the final stage of wound healing, in addition to epithelialization."

At each fresh application, the wound or scar will be smaller. *Pu huang* encourages angiogenesis (the growth of new blood cells), as well as the final stage of wound healing, in addition to epithelialization. In this process, epithelial cells at the wound's edge continue to proliferate and form a new surface layer similar to the original tissue that was destroyed. The *pu huang* mixture creates a clot that acts as a scab in and of itself, preventing both further external bleeding and the growth of a scab.

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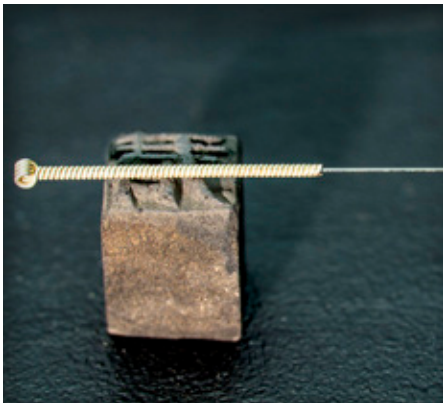


Buying and Selling Acupuncture Needles in California

An Interview by Jennifer A.M. Stone, Editor in Chief and Matthew Pike, Principal at Lhasa OMS and President of SEIRIN-America

Matthew Pike is president of SEIRIN-America, Inc. and a principal of Lhasa OMS, Inc. and has served on the boards of both companies for over 15 years. He holds a BS in Computer Science from the University of Minnesota Institute of Technology and brings his previous experience at Digital River, an e-commerce outsourcer, to his current positions.

This past year has been a confusing one for practitioners of acupuncture as well as companies that sell acupuncture supplies. Much has been said, even outside of California, about the conditions set by the California Board of Pharmacy regarding wholesale purchase of acupuncture supplies in California.

A bit of background: Beginning in early 2015, the California Board of Pharmacy emphasized regulation of the wholesale distribution of acupuncture needles. Inspectors for the Board determined that all organizations operating in the state of California, which distribute acupuncture needles, must obtain specific licenses in order to continue selling. The net result was that many companies stopped distributing acupuncture needles while waiting for licenses. Lhasa OMS, for example, does not have facilities or sales personnel in California. Rather, operating exclusively out of Weymouth, Massachusetts, it is an FDA-registered initial importer and interstate distributor of medical devices. Lhasa OMS is now and always has been legally allowed to sell acupuncture needles in California.

To further update and clarify the requirements of the California Pharmacy Board, Editor in Chief Jen Stone, LAc interviews Matthew Pike, a principal at wholesale supplier Lhasa OMS and president of SEIRIN-America about this topic.

JS: Does the California Board of Pharmacy have jurisdiction over out-of-state acupuncture suppliers?

MP: The answer to this is complicated. On one hand, out-of-state acupuncture suppliers are protected by interstate commerce regulations. But on the other hand, the California Board of Pharmacy is demanding that unlicensed, out-of-state acupuncture suppliers cease selling needles in California unless they are FDA-registered manufacturers or "manufacturers' representatives" or they obtain the appropriate licensure.

The process to obtain a California Pharmacy license requires principal owners to be fingerprinted, a pharmacy technician to be included on staff, a surety bond must be obtained, as well as several other requirements that need to be met. Because of the complexity of the application process, many of the FDA-registered Chinese herbal supplement suppliers have stopped offering acupuncture needles to their licensed acupuncturist customers.

Because Lhasa OMS is a FDA-registered manufacturer's representative, we are not subject to the same requirements as other out-of-state acupuncture suppliers.

JS: Does the California Board of Pharmacy regulate acupuncturists?

MP: No. Acupuncturists are subject to the regulations and licensing requirements of the California Acupuncture Board—not the Pharmacy Board. The Pharmacy Board has jurisdiction over California wholesalers but not over acupuncturists.

JS: Are all acupuncture suppliers selling to California acupuncturists required to have a pharmacy license in order to legally sell acupuncture supplies?

MP: No. All wholesalers that are manufacturers or "manufacturers' representatives" who sell into California do not need a pharmacy license.

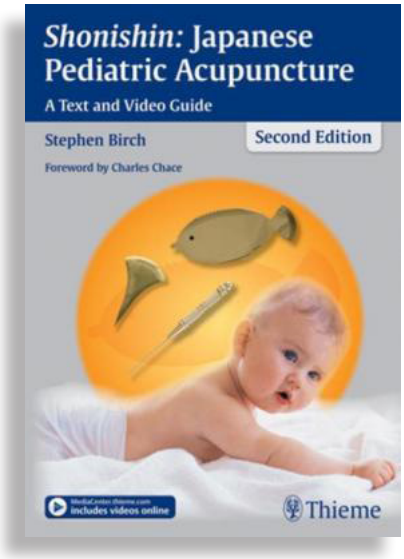
JS: Should I be concerned about purchasing acupuncture supplies from an out-of-state supplier if I practice in California?

MP: I cannot speak for other companies, but I can tell you that it is completely legal for an acupuncturist to purchase supplies from Lhasa OMS because we meet all the requirements set forth by the California Board of Pharmacy as well as those of all other states across the U.S. With the growing popularity of acupuncture comes the demand for associated products and, yes, their regulation. These challenges we face will help determine the success of our industry.

The whole situation has brought up questions about what this type of regulation means for acupuncture in the United States. To ensure the future of our industry, acupuncturists, suppliers and our professional associations need to speak as one voice on this important topic.

NOTE: This is not intended to be legal advice. This is our interpretation of the situation. If you have legal questions, you should consult your attorney.

BOOK REVIEW



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Shonishin: Japanese Pediatric Acupuncture (A Text and Video Guide) By Stephen Birch, PhD

Book Review by Bob Quinn, DAOM, LAc

Writing a book on *shonishin*, Japanese pediatric needle therapy, presents a unique challenge. The author is immediately faced with the problem alluded to in Charles Chace's forward to this second edition of Stephen Birch's *Shonishin*: How does one write a text about a technique that is described by so little theory and so much emphasis on "knack?" As Chace describes it, *shonishin's* "knack is rewarded over theory." But Birch, a talented author of many books, rises to the challenge and delivers a second edition of this book that is, in several significant respects, an improvement over the already well-received first edition.

This new edition of Shonishin is divided into five sections:

I. Overview and History
II. Treatment Principles and Tools of Treatment
III. Root Treatment Approaches and Techniques
IV. Symptomatic Treatment Approaches and Techniques
V. Treatment of Specific Problems/Diseases

The writing is thoroughly professional in tone, yet accessible and almost conversational. One of Birch's strengths is his ability to cite chapter and verse from the Chinese medical classics to demonstrate continuity between *shonishin's* goals and techniques and those of traditional theory. Chinese medicine in the West finds itself in a bit of a classical revival, and this feature of *Shonishin* will undoubtedly find many fans. New to this edition are twenty-five additional case examples, including some from practitioners other than himself.

These additional examples give a fuller view of the potential practice of *shonishin* than could be gotten from the cases of one single practitioner and represent a fairly wide swath of complaints, ranging from the common place to the more serious. Aside from these case examples, Birch provides guidance on how to treat a wide variety of conditions in Sections IV and V.

This new edition has an expanded section that describes how to combine the thinking and strategies of Japanese meridian therapy and *shonishin*. In a concise manner, Birch manages to capture the essence of meridian therapy—no mean feat. In this way, the author equips his readers to include a "root treatment," a rebalancing of the five-phase dynamics, in their *shonishin* treatments.

He also cleverly includes exercises that readers can use to further their skills in delivering these root treatments. When symptom-relief strategies in Sections IV and V are also taken into account, what emerges is a three-pronged approach to treatment: a core treatment involving channel stroking and perhaps some tapping, a meridian therapy root treatment, and symptom-focused techniques.

The art of *shonishin* is a bit of an enigma, and if we were at all open-minded about embracing its reasonably long history of impressive clinical results, we would realize our understanding of physiology has to somehow shift to provide an explanatory model to accommodate it. Our current understanding of the body and how it functions makes it somewhat difficult to explain the effectiveness of *shonishin*. How can it be that such minimal stimulation—a little gentle

"The writing is thoroughly professional in tone, yet accessible and almost conversational. One of Birch's strengths is his ability to cite chapter and verse from the Chinese medical classics to demonstrate continuity between *shonishin's* goals and techniques and those of traditional theory."

tapping here and there, lightly stroking some channels, and so on—can contribute so much to a child's health when it is performed sensitively? It is perplexing if we remain mired in our current level of understanding. Clearly more basic research on this approach is called for.

Also implied, if we seriously consider *shonishin*, is that we ought to be thinking about the question of dosages in acupuncture in general, not just for children. Birch goes into this issue both in the video as well as in the text, clearly laying out Dr. Manaka's model of dose. This may have to bear on the fact that some acupuncture schools do a good job of monitoring patient numbers in their student intern clinics and yet find that approximately half of the new patients stay for only 1 or 2 treatments and never return. No clear answer emerges as to why they fail to come back for follow up appointments.

When one considers the dose model Birch presents, one is compelled to entertain the possibility that perhaps the patients did not return due to being over-treated. Perhaps they were exhausted for days after a strong treatment that used too many needles inserted too deeply? This is possible and, unfortunately, likely not uncommon. This, too, calls for more examination.

My years of learning about and teaching *shonishin* have led me to believe that very few TCM colleges recognize this problem. I will say from my perspective, it remains unaddressed in the education that the majority of students of acupuncture and Oriental medicine receive. Simply inserting fewer needles is not sufficient as a strategy for working with sensitive patients and children; entirely different techniques should be employed in working with these populations

For the practitioner of *shonishin*, however, explaining its effectiveness is not the main goal; the goal is to learn to deliver these simple techniques to people of all ages as carefully and pain-free as possible. In this respect, Birch's book should be considered a must-read for those working in hospices or otherwise with seriously ill patients. By including a DVD (now online in this new edition) with the book, Birch has done his best to help aspiring *shonishin* practitioners master their craft.

It would actually be impossible to learn *shonishin* if all one had were a description in a book. That would be like learning to play trumpet by reading an instructional manual. The visual element that the DVD brings is crucial, and Birch is to be commended for its inclusion. In the DVD, the specific *shonishin* tools are introduced one by one and the various techniques are demonstrated with camera close-ups.

The DVD also describes a number of sample treatments. Birch demonstrates how to do normal insertive needling on a child in a comfortable manner and direct moxa is demonstrated as well. The wise reader will watch the DVD over and over as he endeavors to duplicate the techniques demonstrated by the author.

As a field of study, *shonishin* is rapidly progressing in the West, in large part due to Birch's efforts in offering seminars but even more so due to the first edition of this book. Other teachers have been active in the U.S. as well, such as Brenda Loew and Soma Glick. Also available for some time has been a DVD from Miki Shimi (available from Kenshin Trading).

Another book, The Art of Non-Invasive Paediatric Acupuncture—the very first one published in the West—is by Thomas Wernicke, a German MD and long-time student of Masanori Tanioka, widely considered to be one of the top *shonishin* practitioners in Japan. His work is touched on by both Birch and Wernicke.

Birch's own roots in the art trace back to his study under Kodo Fukushima and other teachers in the Toyohari tradition, although it should be pointed out that there is no Toyohari style of *shonishin* per se; each Toyohari senior teacher approaches *shonishin* in a slightly different way.

If Portland, Oregon, is any measure of what is occurring in the West in general, then we are witnessing an explosion of interest in this art. *Shonishin* seminars offered in Portland by Brenda Loew, and more recently Koie Kuwahara, have for the past seven years consistently booked out quickly with eager people turned away.

For six years, the National University of Natural Medicine (NUNM, formerly NCNM) has had a thriving *Shonishin* Club run by motivated students; its student members have the opportunity to log many hours of observed skill practice using *shonishin* tools under the watchful eye of teachers. They also observe many treatments. As a result, they graduate with the skill and confidence necessary to treat children.

In late July, I gave a three-hour presentation on *shonishin* to 29 pediatric residents at the University of California at Davis, School of Medicine. They were fascinated, attentive, and interested. One can only hope that a new day, a day influenced by the gentleness of *shonishin*, is coming for this type of pediatric care in North America and Europe. Perhaps in 20 years all pediatric offices will employ a *shonishin* practitioner. One can only hope.

Please Note: The reviewer wrote a positive review of the first edition of Birch's *Shonishin* for *The Journal of Alternative and Complementary Medicine* in 2012 and also has a case report included in this second edition of *Shonishin*.

JAWAHIR CLINICAL PEARL CONTINUED FROM PAGE 45

topical use as it contains menthol, which has a natural antimicrobial[4] and anti-pruritic effect on the skin.

Battle Balm® contains all three of these herbs and is part of an herbal complex that adds many natural skin healing lipids and compounds to support and nourish skin while addressing the local trauma. Note that *hong hua*, *tian qi*, and *bo he* can also be found to varying degree in different external trauma formulas (such as *zheng gu shui*, 701 *Dieda Zhentong Gao*, and *yunnan bai yao*) that may be more familiar to TCM practitioners and are also valid options. I've used all of these formulas extensively and surmise that each one is useful in reducing/treating potential infection and facilitating the damaged skin's healing process.

Other treatments I use in conjunction with an external trauma balm would be acupuncture points for boosting immune system function: Yintang ST-36 bilaterally, and Four Gates (LV-3, LI-4). Retention time 20-30 minutes with needle stimulation (on all points except for *yin tang*) for *de qi* every 10 minutes.

If a skin infection does not look to be resolving at a normal rate, I recommend eliminating ingestion of sugar and alcohol and having the patient take an internal supplement of zinc and omega-3 fatty acid.

VOZAR CLINICAL PEARL CONTINUED FROM PAGE 47

It is worth noting that the effect of *pu huang* is not cumulative over time nor does its effect seem to be systemic when used externally. Wounds at other sites on the body or those which occur after the initially treated wound do not seem to be affected by treatment.

Those who can benefit particularly well from these methods are those who have difficulty making and transforming tissue, such as the immuno-suppressed, those with bleeding disorders that delay clotting, those with *yin* or *yang* vacuity, and those with dysregulation of skin production (such as keratosis or eczema).

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