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Cover: *Angelica growing wild along hillside in Japan. © PaylessImages*

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The Journal of the American Society of Acupuncturists

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

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

For more than 30 years I have seen much change in my chosen field—acupuncture and Chinese medicine. At one time in the U.S., Chinese medicine was viewed as voodoo and now it's an important part of mainstream evidence-based medicine. Acupuncture is recommended in multiple practice guidelines and covered by many insurance carriers including the VA and some Medicare advantage plans. Looking back, I realize that so many of these changes have been orchestrated by our own federal government and The National Institutes of Health.

Recognition of our medicine began at the NIH under the auspices of the poorly funded Office of Unconventional Therapies (OUT). This agency then morphed into the Office of Alternative Medicine (OAM), then the National Center for Complementary and Alternative Medicine (NCCAM) and now the National Center for Integrative Health (NCCIH) with an annual budget of $142 million.

In the mid-'90s, NCCAM funded 15 medical schools so they could bring complementary and alternative medicine into their med school curriculum. A decade later NCCAM funded six CAM schools to increase research literacy in their curriculum. Among these was the Oregon College of Oriental Medicine, which continues to have a strong research program.

I saw early (unfunded) research in the Department of Defense in the '90s that examined acupuncture treatment for the symptoms associated with radiation therapy at the Navy Medical Center in San Diego. Today their Joint Incentive Fund uses its $5.4 million to support the Acupuncture Training across Clinical Settings program that deploys Battlefield Acupuncture to train Department of Defense and the Department of Veterans Affairs Medical Programs across the U.S.

Today, the NIH is reviewing applications and working with teams of researchers who are competing for an historic NIH funded research study: *Pragmatic Randomized Controlled Trial of Acupuncture for Management of Chronic Low Back Pain in Older Adults*. The request for applications was issued by the NCCIH and the National Institute of Aging (NIA). The federal government believes that acupuncture might benefit the Medicare population by reducing pain and narcotic prescriptions, so they're conducting this research to provide evidence to support acupuncture coverage under Medicare for chronic low back pain. The winning teams will get $1.25 million to conduct the study.

In February of this year, the NIH held a free conference on acupuncture research. Its theme was "Translating Fundamental Science of Acupuncture into Clinical Practice for Cancer

PLEASE NOTE: *Meridians: The Journal of Acupuncture and Oriental Medicine* is now called *The Journal of the American Society of Acupuncturists.* Read more about this name change on p 36.

Symptom Management, Pain and Substance Abuse." It was an incredible event attended by MDs, PhDs, and LAcs, and policymakers. Please check out the report on this on page 32 for more details and look at the high priority areas of interest for NCCIH funding for future acupuncture research.

Although it is very important to join and become an active member in the American Society of Acupuncturists and maintain your licensing through NCCAOM, it's this kind of research and dissemination of results that puts our medicine into the limelight and instills respect in the general public—our potential patients. All practitioners owe it to themselves and their patients to be up to date by reading about conditions and treatments based on scientific research. As this happens, the greater the momentum will be that confirms universal support for this medicine for all who need it, want it, and ask for it.

Respectfully,
Jennifer A. M. Stone, MSOM, LAc
Editor in Chief, JASA

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Combining Acupuncture with Aromatherapy to Enhance the Treatment of Stress

By East Haradin-Phillips, DAOM, LAc

East Haradin-Phillips has been a licensed acupuncturist since 1999. Along with practicing, writing, lecturing and coaching, she has been a professor of Chinese Medicine at the Pacific College of Oriental Medicine since 2004.
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Abstract

OBJECTIVES: There is a gap in the scientific literature regarding the effects of the concomitant use of acupuncture and aromatherapy in the treatment of stress. Extensive literature searches have revealed no studies comparing the effects of these therapies independently versus together. This study compared the effectiveness of treating stress by using acupuncture alone versus combining aromatherapy with acupuncture. Specifically, the study examined the hypothesis that aromatherapy combined with acupuncture would reduce perceived stress and increase perceived quality of life more than acupuncture alone.

DESIGN: This was a randomized, double-blind, placebo-controlled exploratory study.

SETTING/LOCATION: Participants were recruited from an in-house residential drug and alcohol rehabilitation center for women. The study was conducted in the center's clinic.

SUBJECTS/INTERVENTIONS: Participants (n=30) were randomly assigned to one of two groups. Both groups received six consecutive weekly acupuncture treatments designed to reduce the symptoms and perception of stress. The "Aromatherapy" group received relaxant aromatherapy simultaneous with acupuncture, while the "Placebo" group received a placebo of spring water simultaneous with acupuncture.

OUTCOME MEASURES: The Perceived Stress Scale (PSS) and SF12v2 Health Survey were used to assess stress level and perceived quality of life, respectively, and were administered prior to receiving the first treatment and after receiving the final treatment six weeks later.

RESULTS: The "Aromatherapy" group experienced a significant improvement in quality of life as measured by the SF12v2 Health Survey. Although stress levels, per the Perceived Stress Scale (PSS), were significantly reduced in both groups independently, a between groups analysis showed no significant difference.

CONCLUSIONS: This exploratory research demonstrated that aromatherapy and acupuncture combined improve stress levels and perceived quality of life. There is a need for further research to examine the potential efficacy of combining aromatherapy and acupuncture to impact perceived stress and quality of life.

Key Words: acupuncture, aromatherapy, stress, essential oils, patient satisfaction, treatment outcomes, patient experience

Introduction

Perceived stress is regarded as an ongoing problem in the United States.[1] It is a causative factor in 75% to 90% of all doctor visits.[2,3] This condition has been named by the Occupational Safety and Health Administration (OSHA) as a workplace hazard, costing American industry more than $300 billion annually. It produces absenteeism, turnover, diminished productivity, and medical, legal and insurance costs.[4] Chronic stress has been shown to be associated with severe conditions including: anxiety, depression, insomnia, hypertension, stroke, myocardial infarction, auto-immune disorders, hypertension, and even some cancers.[5,6,7,8]

Despite the fact that perceived stress is an ongoing problem, the American Psychological Association (APA) reported in 2013 that 53% of Americans surveyed said they received little to no stress management support from their healthcare providers.[9] Most commonly, stress-related conditions are treated with prescription medications.

Among primary care physicians, psychotropic drugs such as benzodiazepines and/or antidepressants are most prevalent.[10] These pharmaceuticals are known to be habit-forming as well as associated with several negative side effects.[11,12] These include dementia and impairments in cognition, memory, coordination, and balance for benzodiazepines,[13] and nausea, headaches, flu-like symptoms, sexual dysfunction, blurred vision, anxiety/tension, and sweating for antidepressants such as Prozac and Zoloft.[14]

Patient and insurance company costs associated with the prescription of these drugs are in the billions of dollars. In 2010 Americans spent $27 billion on antidepressants and antipsychotics, combined.[15]

Given the high cost and potential negative side effects of these and other drugs, options such as acupuncture and aromatherapy may be two of the safest and most affordable approaches for treatment.[16,17,18] Researchers have examined and proven the ability of acupuncture[20, 21] and of aromatherapy[19, 22, 23] to reduce perceived stress individually. When searching the major databases such as PubMed, CINAHL etc., no research was found that used a combination of the two approaches.

This study examined the hypothesis that aromatherapy combined with acupuncture can reduce stress and increase perceived quality of life more than use of acupuncture alone.

Materials and Methods

This randomized, double-blind, placebo-controlled exploratory study about whether or not acupuncture combined with aromatherapy reduced perceived stress and increased perceived quality of life more than acupuncture alone was approved and granted by the Institutional Research Board (IRB) at the Pacific College of Oriental Medicine.

Participants were women recruited from a residential drug and alcohol rehabilitation center, an inherently high-stress population,[24] and randomized into two groups: Aromatherapy Group and Placebo Group. During the study, the groups were marked "A" and "B" to ensure masking of study participants, practitioners, and assistants. For the purposes of this paper, the groups are referred to as Aromatherapy Group or Placebo Group.

Study treatments were conducted in the clinic of the rehabilitation center from which participants were recruited. Clinic treatment rooms were private, enclosed rooms with doors.

An initial inclusion/exclusion criteria checklist consisting of six questions was completed for all prospective participants. Examples of the questions were: "Are you currently pregnant or have you delivered a child in the past six weeks?"; "Can you lie down on your back for thirty minutes?"; "To your knowledge do you have allergies or adverse reactions to essential oils or aromatherapy?"; and "Can you read English?"

From a group of 34 potential participants, 30 participants passed the inclusion/exclusion criteria checklist. Four participants were excluded due to pregnancy (n=2) and could not lie down for thirty minutes (n=2).

The 30 resulting participants signed consent forms and received instructions on how the treatments would be administered every week with a cotton ball placed near their nose. They were told what to expect from the sessions. The treatments were given free of charge and the participants did not receive any compensation other than the value of the treatments.

All participants received 30-minute acupuncture treatments weekly for six consecutive weeks. The Aromatherapy Group received aromatherapy consisting of a relaxant blend of essential oils (formula provided below) simultaneous with acupuncture, while the Placebo Group received a placebo of spring water.

The Perceived Stress Scale (PSS) and the SF12v2 Health Survey, assessment tools that measure stress level and perceived quality of life, respectively, were the chosen instruments for this study. They are the most widely used, recognized and accepted tools for measuring non-specific perceived stress and quality of life.[25, 26] These instruments were administered prior to participants' receiving the first treatment and following the final treatment.

The PSS is a 10-question survey that measured the perception of stress. Upon completion of the survey, all items were summed resulting in an overall PSS score. Note that for this instrument, a decrease in scores was desirable.

The SF12v2 Health Survey used 12 questions to measure functional health and wellbeing over 8 domains organized into two main categories: Physical Health and Mental Health. Note that for this instrument, an increase in scores was desirable.

All participants received the same weekly acupuncture treatment from the Primary Investigator (PI), a licensed acupuncturist who had been practicing traditional Chinese medicine (TCM), including acupuncture, for over 13 years. This practitioner is the author of this research.

Seirin brand, single use, 34 gauge, 1.5 inch needles were inserted at each of the specific acupuncture points to a depth of approximately ¼ to ½ inch and turned slightly clockwise once. No needling response was required. Needles were retained for 30 minutes.

The acupuncture point protocol was designed to address the negative effects of stress based on a traditional Chinese medicine point of view. According to Maciocia[27] and Deadman, Al-Khafaji and Baker,[28] these negative effects are associated with the following patterns: (1) Liver *qi* stagnation; (2) *Qi* and/or Blood deficiency; and/or (3) Restless Spirit. Therefore, the acupuncture point protocol employed points that course Liver *Qi*, tonify *qi* and Blood and calm the spirit. The seven acupuncture points used in the study were: Liver 3 *Tai Chong* (bilateral), Large Intestine 4 *He Gu* (bilateral), Stomach 36 *Zu San Li* (bilateral) and *Yin Tang M-HN-3*.

The first four acupuncture points are collectively referred to as "The Four Gates" and consist of bilateral needle insertion of Liver 3 *Tai Chong* and Large Intestine 4 *He Gu*. The Four Gates are commonly used to treat stress resulting from *qi* and emotions being stuck in the body.[29]

Stomach 36 *Zu San Li*, a common TCM acupuncture point, has been used to treat stress in a variety of health conditions.[30] According to one of the classic texts of TCM, Stomach 36 *Zu San Li* will produce the following actions when stimulated: Tonify *qi,* nourish blood and calm the spirit.[31] Deadman, Al-Khafaji and Baker[32] claim it is the single most important point in generating *qi* and Blood.

Furthermore, experiments performed on participants during acute stress showed that stimulation of Stomach 36 *Zu San Li* blocked chronic stimulation of the hypothalamic-pituitary-adrenal axis, thereby reducing the negative physiological effects of acute stress.[33] Finally, the last of the acupuncture points selected for this study, *Yin Tang M-HN-3*, calms the spirit and is a powerful and effective point in the treatment of insomnia, anxiety and agitation.[34]

After the acupuncture needles were in place, the PI vacated the room so as to remain masked regarding the use of aromatherapy. A treatment assistant, also a licensed acupuncturist, masked to the contents of the treatment, delivered either aromatherapy or placebo by placing three sprays from a pre-mixed bottle onto a cotton ball, which was then placed on the participant's chest, within twelve inches of the participant's nose. The treatment assistant then left the room.

This method of placebo control group was elected due to its ease of administration and effective use in prior studies.[35] After 25 minutes, the treatment assistant returned, removed the cotton ball from the room and disposed of it in a separate area. At the 30-minute mark, the PI/acupuncturist returned to the room and removed the needles. The room was aired for fifteen minutes prior to treating the next participant.

The aromatherapy employed for this study was a blend of natural and organic essential oils. Natural and organic oils are considered superior to, and more effective than, synthetic oils.[36] A blend of oils was used, rather than a single essential oil, to avoid negative associations with a single essential oil, which might have altered the results of the study.[37] The essential oils used were specifically selected due to their widely purported relaxant odors, with stress relief repeatedly ascribed to them.[38,39]

The following essential oils were added to a 2-ounce glass spray bottle containing spring water to make up the aromatherapy: Ylang-ylang (2 drops), rose (2 drops), grapefruit (4 drops), and lavender (2 drops). For this investigation, Snow Lotus brand oils were used. Snow Lotus, Inc., Santa Rosa, CA, provides organic and natural essential oils.

An identical 2-ounce glass spray bottle containing only spring water was used for the placebo. Spray bottles were prepared by a second assistant, a recent graduate of a Master's of Science in Traditional Oriental Medicine program who was awaiting state licensure. The bottles were marked as "A" or "B" to accomplish blinding of contents for the treatment assistant.

Participants were surveyed prior to their first treatment and following the last treatment. The Perceived Stress Scale (PSS) and the SF12v2 Health Survey were used to assess stress level and perceived quality of life. The SF12v2 Health Survey may be used only with permission, which was granted. Permission included use of the statistical software that analyzes the results—the Quality Metric Health Outcomes™ Scoring Software, version 4.5.

A mixed 2X2 ANOVA test and power analysis was performed on data using a professional edition of SPSS, version 20. The data analysis was conducted upon completion of the study and the mixed 2x2 ANOVA tests and power analysis were performed by an independent statistician in order to eliminate bias on the part of the PI/acupuncturist.

Table 1. Participant Profiles Per Group

	Group A Aromatherapy	Group B Placebo
n	6	8
Median Age	34	33

Table 2. A Paired Student's t-Test

	Group A Aromatherapy (n = 6)			Group B Placebo (n = 8)		
	PreTest	PostTest	P-Value	PreTest	PostTest	P-Value
Test	Mean ± SD			Mean ± SD		
PSS	29.2 + 4.54	18.7 + 6.65	0.013	26 + 4.21	19.6 + 5.68	0.025
SF12v2	39.5 + 7.12	50.9 + 4.91	0.012	45.50 + 6.75	49.9 + 6.2	0.022

"Post-tests revealed that stress/quality of life indicators improved for both Placebo and Aromatherapy groups, with the Aromatherapy Group experiencing greater improvement."

Methodological Assumptions

For the purposes of this study, it was assumed that all participants had functioning olfactory systems. Additional assumptions were that both PI and treatment assistant remained masked as to whether the treatments contained aromatherapy or placebo and that all participants adhered to instructions to report either pregnancy or any adverse reactions, both of which conditions would result in their removal from the study.

Limitations

The final study group was small. Of the original 30 participants, only 14 were retained for the duration of the study. Attrition was due to pregnancy, quarantine due to illness, court appearances, and lack of child care.

Another limitation was the inherent difficulty of having a true control group or placebo when testing odor or in this case, aromatherapy. Spring water was used as the placebo for this study, as it was found to be an effective control method in prior research.[40,41]

Results

Table 1 presents the group differences accounting for age and number of participants. Participants were composed of women from diverse racial and ethnic backgrounds, each having delivered at least one child. Age was the only demographic data collected from study participants. Mean ages of both groups were similar, with a mean of 34 years for Aromatherapy Group (n=6) and 33 years for Placebo Group (n=8).

Post-tests revealed that stress/quality of life indicators, as measured by the PSS and the SF12v2 Health Survey, respectively, improved for both Placebo and Aromatherapy groups, with the Aromatherapy Group experiencing greater improvement than the Placebo Group. Between groups significance ($p<.05$) was found only for the SF12v2 Health Survey.

continued on page 10

SF12v2 Health Survey Scores

As can be seen in Graph 1, SF12v2 Health Survey scores increased for both groups after the 6-week intervention. Group A (Aromatherapy) experienced a greater increase compared to Group B (Placebo) with Group A increasing from mean scores of 39.5 to 50.9 (22% and 11.4 point increase) and Group B increasing from 45.5 to 49.9 (10% and 4.4 point increase).

Perceived Stress Scale Scores

Graph 2 illustrates the post-intervention reduction in stress levels for both groups. Group A (Aromatherapy) had a mean post-trial PSS score of 18.7 and Group B (Placebo) had a mean post-trial PSS score of 19.6.

Study findings further revealed that Group A (Aromatherapy) experienced a greater decrease in PSS scores compared to Group B (Placebo). Group A (Aromatherapy) went from a mean score of 29.2 to 18.7 (a 36% reduction or decrease of 10.5 points) versus Group B (Placebo), which went from a mean of 26 to 19.6 (a 25% reduction or decrease of 6.4 points).

Paired Student's t-Test

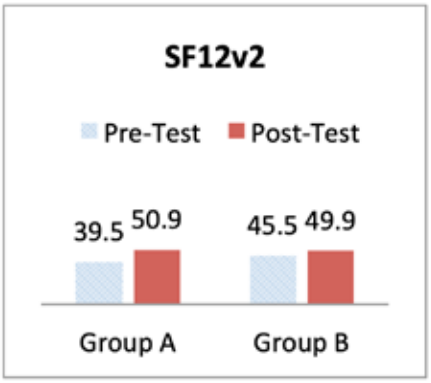
A Paired Student's t-Test (Table 2) was performed to determine if the intervention significantly reduced stress and/or increased quality of life ($p < .05$). P-values and standard deviations are presented. P-values for both groups (Group A: .013 and .012) and (Group B: .025, and .022) were below .05, indicating that both acupuncture with aromatherapy and acupuncture with placebo significantly affect these measures. While the Aromatherapy Group experienced a greater reduction in PSS scores and a larger increase in SF12v2 scores than the Placebo Group, between group significance was found only in the SF12v2 Health Survey, which measures quality of life ($p = .016$).

Discussion

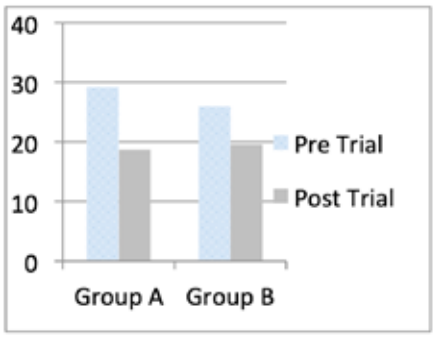
The hypothesis tested was that combining aromatherapy with acupuncture treatment can be more effective in reducing perceived stress and improving perceived quality of life than acupuncture treatment alone. Results suggest that aromatherapy combined with acupuncture is significantly more effective than acupuncture alone in improving perceived quality of life.

Limitations of this study include issues such as illness, lack of daycare and required court appearances that forced a number of participants to miss treatments and therefore be dropped from the study. Attrition rates for participants resulted in a drop from an original group of 30 individuals to a final group of 14, with only six receiving the intervention of aromatherapy and the other eight receiving acupuncture alone. Greater significance may have been demonstrated with a larger and more evenly distributed sample size.

Graph 1. SF12v2 Health Survey Scores



Graph 2. Post-Intervention Reduction



Strengths in the study lie within the acupuncture and aromatherapy protocols chosen as they both found to be effective in reducing stress individually as well as the placebo method and stress measuring tools employed.

Several of the studies examined in the pursuit of this project concluded that more research is needed in the areas that consider the treatments of acupuncture and/or aromatherapy.[42,43,44] At the same time, research on this topic revealed that while medical physicians want to offer their patients more options beyond prescribing pharmaceuticals when treating stress and stress-related diseases, they are reticent to do so without sufficient evidence.[45]

Conclusions

Further research regarding the efficacy of combining acupuncture with aromatherapy in the treatment of stress is warranted. As more research and clinical evidence demonstrate the efficacy of using an acupuncture combined with aromatherapy approach, three results are possible: (1) more people will consider aromatherapy and/or acupuncture for the treatment of stress; (2) more healthcare providers will suggest this combined approach when reviewing treatment options with their patients; and (3) more acupuncturists will combine aromatherapy with acupuncture and thereby increase the efficacy of their treatments.

"As more research and clinical evidence demonstrate the efficacy of using an acupuncture combined with aromatherapy approach, three results are possible: (1) more people will consider aromatherapy and/or acupuncture for the treatment of stress; (2) more healthcare providers will suggest this combined approach when reviewing treatment options with their patients; and (3) more acupuncturists will combine aromatherapy with acupuncture and thereby increase the efficacy of their treatments."

This study has positive implications for the fields of TCM, western medicine and aromatherapy. Acupuncturists may find that including aromatherapy with acupuncture increases the efficacy of their treatments. Further research on the efficacy of combining aromatherapy and acupuncture when treating other conditions may also provide other health practitioners with additional treatment strategies. For example, western medical practitioners may feel more confident suggesting acupuncture and/or aromatherapy as one of the viable options worth considering when treating perceived stress.

Summary

In this age of choice and increased self-involvement with healthcare decisions, patients are looking for more options to address their acute and chronic conditions. Providing patients with knowledge about the potential benefits of a combined approach utilizing acupuncture and aromatherapy may well be the non-invasive, cost-effective treatment option they are seeking in an ever-emerging complex of healthcare modalities.

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Author Disclosure Statement

The author affirms that no competing financial interests exist.

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The Current State of *Qi* Cultivation Education in American Colleges of Acupuncture and Oriental Medicine

By Forrest Cooper, DAOM, Dipl OM (NCCAOM), LAc

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Key Words: *Qi* Cultivation, *qi gong, tai chi, tai qi,* TCM, Chinese medicine curriculum

Background:

Since the sixth century BCE, breathing exercises combined with gymnastics were used to attain longevity and health by assuring the circulation and absorption of "fine influences."[1] In American colleges of acupuncture and Oriental medicine (AOM), *qi* cultivation is most often taught in the form of *tai qi* or *qi gong*. While there is no national mandate to include *qi* cultivation education as part of a master's or doctoral degree of acupuncture and Oriental medicine, the state of California does require some training in *tai qi*.[2] Further, there are programs devoted to medical *qi gong*, both within AOM colleges[3] as well as stand-alone programs.[4]

The health effects of *qi* cultivation in the form of *tai chi* and *qi gong* have been widely studied. A search of EbscoHost using the terms "*tai qi* or *tai ji*" and limited to full articles in academic journals found 2,242 results. A similar search using the terms *qi gong* or *qigong* found 1,184 results.[5] While older (2006) meta-analysis of studies on *tai qi* and its impact on health called for more longitudinal research,[6] more recent meta-analysis[7] demonstrates that it can benefit people suffering from diabetes, cancer, depression, fibromyalgia, cardiac and stroke rehabilitation, dementia, hypertension, osteoporosis, rheumatoid arthritis as well as other diseases. *Qi gong* has had many different meta analyses done and has been shown to be useful for quality of life, quality of sleep, grip strength, systolic and diastolic blood pressure, and resting heart rate,[8] type two diabetes,[9] and Parkinson's disease.[10]

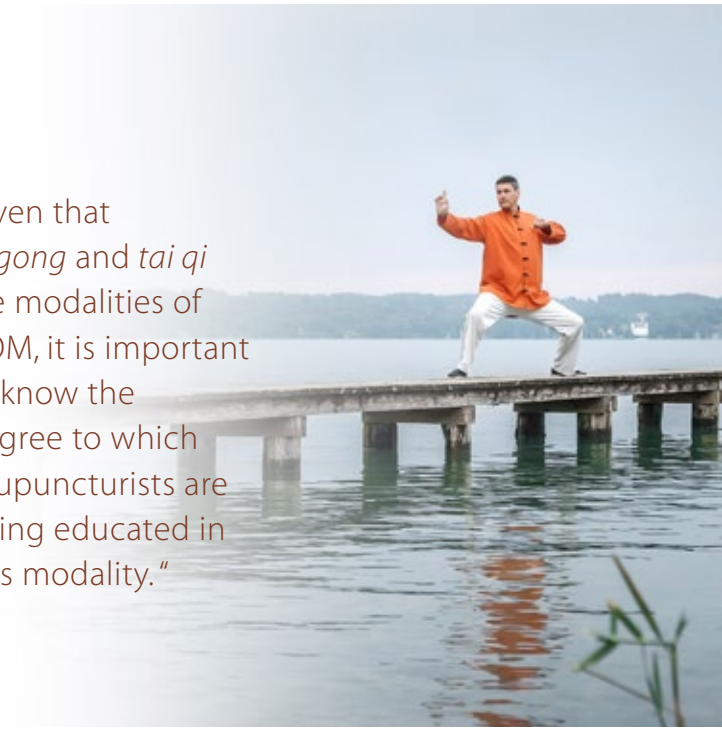
Given that *qi gong* and *tai qi* are modalities of AOM, it is important to know the degree to which acupuncturists are being educated in this modality.

Methods:

The website for the Accreditation Commission for Acupuncture and Oriental Medicine's (ACAOM)[11] was searched for a list of all accredited and pre-accredited acupuncture schools in the United States. The schools' websites were searched for copies of the school catalog, and data were extracted concerning the number of hours the program required for the

study of *tai qi* and *qi gong*, the number of hours offered as electives in each *tai qi* and *qi gong*, the total number of hours in the program, and the number of hours required for other types of self-cultivation classes that were offered. The data on hours were then assessed for mean, median, and mode as well as the number of hours and its relationship to the total number of hours required by the program.

Inclusion criteria were all accredited and pre-accredited acupuncture schools listed by the ACAOM website. Schools were excluded if they did not have an online catalogue that listed the number of hours required and offered in qi cultivation. Programs that were not part of a master's or doctoral of acupuncture or acupuncture and Oriental medicine degrees were also excluded. This included certification programs that were either stand-alone programs or that were offered as additions to the standard degree offerings.



"Given that *qi gong* and *tai qi* are modalities of AOM, it is important to know the degree to which acupuncturists are being educated in this modality."

Table 1. Total Hours Required

Required hours	Number of Schools
0	5
7	1
15	5
30	11
35	1
40	2
45	5
60	10
72	2
88	1
90	3
96	1
107	1
108	1
144	1
324	1
Total	51

Fifty-one schools met the inclusion criteria. Of these, five schools had no requirement for the number of hours of *qi gong* or *tai qi* that graduates were required to complete.

Table 2. Hours of Qi Gong Required

Number of Schools	Number of hours of Qi Gong Required
6	0
1	7
9	15
3	20
1	22.5
12	30
1	36
1	42.8
1	44
1	54
1	60
1	72
1	88
1	90
1	92
1	270

The mean number of hours required of *qi gong* was 34.1, the median was 30 and the range was 0-270.

Table 3. Hours of Tai Qi Required

Number of Schools	Hours of Tai Qi Required
12	0
1	7.5
11	15
1	18
2	20
10	30
1	36
2	54
1	63
1	90
1	60
1	72
1	88
1	90

The mean number of hours required of *tai qi* was 19.7, the median was 15 and the range was 0-90.

Table 4. Schools that Don't Differentiate

Number of Schools that Don't Differentiate between Qi Gong and Tai Qi	Number of hours required
1	15
3	30
3	45
2	72

Nine schools did not explicitly differentiate between hours of *tai qi* and *qi gong* required. Of these schools, the mean was 42.8, the median was 37.5, and the range was 15-72.

Table 5. Hours of Qi Gong Offered as Elective

Number of Schools	Hours of Qi Gong Offered as Elective
2	15
1	22.5
2	30
1	45
2	72
1	100
1	270

Ten schools offered additional hours of training in *qi gong*. Among those six, the mean hours offered was 67.2, the median was 37.5 and the range was 15-270. One of these schools listed their electives in *qi gong* as being 100+ hours, so they are listed as 100 hours. One school listed a requirement of 72 hours of either *qi gong* or *tai qi* but offered the other as elective and thus are listed here as well as in the elective hours of *tai qi* findings. One school offered 270 hours of *tai qi* and *qi gong* as elective but did not differentiate them as electives and hence are counted in both categories.

Table 6.
Hours of Tai Qi Offered as Elective

Number of Schools	Hours of Tai Qi Offered as Elective
3	30
1	66
1	72
1	100
1	270

Seven colleges offered additional elective coursework in tai qi. The average additional offering was 85.4, the mean was 66, and the range was 30-270.

Table 7.
Percentage of Curriculum Required to be Qi Cultivation

Number of Schools	Required Hours of Qi Cultivation as a Percentage of the Curriculum
6	0-0.4
3	0.5-0.9
9	1-1.4
6	1.5-1.9
4	2-2.4
9	2.5-2.9
4	3-3.9
8	4+

When analyzed to see what percentage of their curriculum consisted of *Qi* Cultivation, two of the fifty-one schools were eliminated because they did not list their total number of hours required for their degree. Of the remaining forty-eight, five required 0% of their hours to be in *Qi* Cultivation; four required between 0.5 and 0.9%; 10 required between 1-1.5%; six required between 1.6 and 2%; six required between 2.1 and 2.5%; six required between 2.6 and 3%; four required between 3-4%; and 8 required between 4.1-14.6%. The mean was 2.5%; the median was 2.0%, the range was 0-14.6%.

Results:

See the data discussions for Tables 1-7. We were unable to collect enough data regarding costs of attendance due to variations in the way schools may calculate their costs per class because of possible variations in methods for doing so.

Discussion:

There is a large divergence in both the number of hours required by schools for graduation as well as the number of hours offered as electives. This holds true whether considered as absolute hours or as a percentage of the curriculum. Further analysis of the hours of *Qi* Cultivation as percentage of the cost of attendance may shed light on why there is such a large divergence of *Qi* Cultivation offerings and requirements. There is also a lack of clarity in many schools' offerings and requirements.

However, because of the large body of research being done into the health effects of different types of *Qi* Cultivation, schools should consider a more cohesive approach to their offerings. The first is that since *Qi* Cultivation is historically a part of the medicine, AOM schools are the ones best situated to certify the abilities of the investigators performing this research. With a consistent accredited training regime for the people performing this type of research, the research would be more valuable to the medicine.

The second reason schools should consider having a more consistent requirement for *Qi* Cultivation is that the evidence so far is that it is effective for so many of the "lifestyle" conditions and conditions of aging that the U.S. population is facing. Having practitioners who are trained in low cost but high impact interventions for these types of conditions would position the field to treat many conditions that western medicine doesn't do as adequately.

Conclusions

The current state of education in *Qi* Cultivation at American AOM schools varies very widely. More research on this topic is recommended.

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Case Report

Treatment of Calcific Tendinitis of the Shoulder with Direct Moxibustion

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Abstract

Calcific tendinitis of the shoulder is an acute or chronic shoulder disorder that is caused by calcium deposits in the tendons of the rotator cuff. It affects people between the ages of 30 to 50 years. A 38-year-old Asian woman was diagnosed with calcific tendinitis of the shoulder, and she was suffering from excruciating pain and loss of shoulder function. The biomedical treatments did not alleviate her pain or recover her range of motion. After receiving five treatments utilizing direct moxibustion for eight days, she achieved pain relief and regained full range of motion at the shoulder. She has not experienced any recurrence. Direct moxibustion may be a useful intervention in the treatment of pain and mobility and warrants further study.

Key Words: moxibustion, calcific tendinitis, calcifying tendinitis, shoulder pain

Introduction

Biomedicine

Calcific tendinitis (CT) of the shoulder is an acute or chronic disorder that is caused by calcium deposits in the tendons of the rotator cuff.[1] Calcium deposits can be reabsorbed naturally in some patients.[1,2] CT may be asymptomatic for some patients, and it may cause unbearable and disabling pain for other patients, which may involve limitation of shoulder movement.[1,2,3] Pain occurs (1) when calcium irritates the tissue chemically; (2) when the tissue is pressed due to swelling; (3) when the calcium deposit causes bursal thickening and irritation; (4) when the glenohumeral joint becomes stiff due to the patient's voluntary restriction of movements.[1]

The pathogenesis is idiopathic. Causes of this condition include overuse and local ischemia followed by degeneration in the rotator cuff tendons, death of tendon cells due to apoptosis and progressive stages of precalcific, calcific and postcalcific, cell-mediated calcification, and genetic predisposition.[1,2]

Calcification occurs normally when bone and teeth are formed. Abnormal calcification occurs when there is lack of crystallization inhibitors and immune system disorder.[3] One study shows that patients with CT had lower urine concentration of phytate, when compared with healthy people.[3] Phytate and osteopontin may be associated with inhibiting crystallization.[3]

CT may be related to endocrine system disorders such as diabetes and thyroid disorders.[1,2,3] CT is more prevalent in women who are suffering from systemic diseases.[2] More women develop CT than men.[1,2,3,4] People tend to develop CT when they are between 30-50 years old.[1] One study done on 342 patients with CT showed 60% were female; their mean age was 49 years.[2] The radiographs indicated that the supraspinatus tendon was affected in 85% of 196 patients.[2] The dominant arm showed more CT than the non-dominant arm.[2]

Today, several diagnosis tools are used to diagnose this condition. X-ray can be used to assess the deposits and determine if CT is present.[1,3,4] Ultrasound is used for diagnosis and treatment.[1,3,4] It can produce information on the location, texture, and sizes of the deposits.[1,3,4] Magnetic resonance imaging (MRI) can be useful in differential diagnosis when CT is involved with other conditions.[1,3,4]

Allopathic treatments include non-steroidal anti-inflammatory drugs, ultrasound-guided needling, extracorporeal shock wave therapy, and surgery.[1,3,4] The 14-year follow up in one study shows that despite barbotage or other conservative treatments, many participants complained of persistent pain and severe decrease in shoulder function.[2]

Direct Moxibustion

Direct moxibustion is a traditional modality that has been practiced in southeastern Asia for many years.[5,6] This procedure involves burning moxa cones made of mugwort that are placed on the skin causing suppuration and then allowing the body to heal the wound itself.[5,6] In ancient times, moxibustion was believed to be ineffective without soreness, and suppuration was essential in inducing therapeutic effects.[5,6,7]

Direct moxibustion may have older history than acupuncture. The bamboo and silk texts unearthed in Mawangdui tombs in China include eleven meridians and moxibustion, but they do not mention acupuncture. The diseases indicated for moxibustion in the texts involve urology and pain.[9]

Moxibustion may have been used as a last resort in ancient times. It was thought that when acupuncture cannot treat the disease, moxibustion must be applied.[7] Moxibustion can be used for deficiency and excess conditions. Moxibustion helps benefit the original *yang* with its Fire in deficiency conditions. In excess conditions, moxibustion disperses the pathogen with the Fire so that it follows the Fire out of the body. Moxibution restores the warmth in cold conditions and disperses the congested heat out of the body in hot conditions.[7]

Direct moxibustion may be effective for treatment of various pain conditions.[9] In one systematic review about moxibustion for treatment of pain, they selected four randomized control trials that met their inclusion criteria. Two of these RCTs indicate that indirect moxibustion may be related to significant reduction of osteoarthritis pain when compared with drug therapy. The other two RCTs indicate that direct or indirect moxibustion may be effective in reducing pain in scleroma or herpes zoster when compared with drug therapy.[8]

The key words that were used in searching on AMED, Cochrane Library, EBSCO, MEDLINE and PUBMED were calcific tendinitis moxibustion, calcifying tendinitis moxibustion; calcifying tendinitis. A database search did not produce any results on calcific tendinitis using direct moxibustion treatment. In a related study, Lin et al. reported successfully treating calcifying tendonitis with acupuncture and small needle scalpel therapy in a case involving the right hip of a 68-year-old man.[10]

Case Description

Case History

A 38-year-old Asian woman patient presented with excruciating pain on the rotator cuff of her left shoulder. The patient reported that the pain had started a few days before and that she had not sustained any injuries.

She had seen two orthopedic doctors. After imaging tests, the first doctor diagnosed her with calcific tendonitis. The doctor prescribed medications, which failed to provide any pain relief. The pain became worse at night, which significantly disturbed her sleep. The pain was so excruciating that she frequently cried, especially at night. The patient described the pain as "much worse than the pain she experienced at childbirth." She reported that nothing had been able to improve this condition.

Before seeing the first doctor, the patient lost the mobility of her left shoulder which had zero range of motion. She did not go to the emergency room, deciding instead to wait and see a more qualified doctor the next morning. She was seen by another orthopedic doctor at a general hospital. After imaging tests, the doctor also diagnosed her with calcific tendinitis.

The doctor treated her with a therapy that involved hitting the painful area of the left shoulder with a hammer-shaped device along with use of laser beams for about eight minutes. The treatment was so painful that she screamed during the treatment. This first treatment did not break up the calcification nor did it reduce the pain.

The patient received a second treatment from the doctor, which also did not resolve the severe pain and calcification. The patient declined further biomedical treatment. Out of despair, she decided to seek direct moxibustion treatments.

Health History

Before this diagnosis of calcific tendinitis, the patient reported that she had been generally in good health with no past injuries or illnesses. She reported that her mother had had diabetes and high blood pressure.

Lifestyle

The patient hiked in the mountains once a week for about five or six hours. She ate organic food for the majority of her meals. She drank a moderate amount of alcohol, tea and coffee. She denied using cigarettes and recreational drugs.

Subjective and Objective Findings

The patient is 5'4" and weighs 160 pounds. She had an active and amiable personality. She had dark pigmentation below both the lateral canthi and stated that it was hereditary. Her tongue was pale red and scalloped, with a moist and thin yellowish coating. Her pulse was replete and wiry.

She reported that she experienced extreme fatigue. She said her fatigue was so severe that she fell asleep at the movies with her son. She stated that she tended to become angry and edgy easily, especially during menstruation. She experienced breast tenderness and lower abdominal cramps before menstruation, including clots. She had regular periods.

She denied having had chest tightness, palpitation, unusual sweating, headache, dizziness, urination and indigestion. She had dry eyes. She reported being slightly constipated, eliminating once every two or three days. She stated that her sleep deprivation had been severe due to the pain occurring at night.

The patient described the severity pain was 10 out of 10 on a numeric rating scale (NRS). She rejected palpation on the local area since the pain was so intense. The range of motion was almost zero on her left shoulder with abduction, adduction, flexion, and extension. The patient could not move her shoulder in any direction.

Diagnostic Assessment

The diagnosis was *qi* and Blood stagnation in the Large Intestine meridian. Because she tended to become angry and edgy easily along with her PMS symptoms, this indicated Liver *qi* stagnation underlying the chief complaint.

In terms of five-phase theory, it can be the case of wood insulting metal. In another theory, Liver and Large Intestine communicate with each other.[8] Liver disease is manifested in the Large Intestine meridian, so it needs to be opened for treatment. Large Intestine disease is manifested in the Liver meridian, and the Liver needs to be smoothed for treatment.[8]

Therapeutic Intervention and Results

Treatments with direct moxibustion were provided to help alleviate the pain and improve the range of motion. As well as a description of its benefits, the patient received verbal and demonstrative explanations from the practitioner about the nature of direct moxibustion and its possible scars on the skin. With the consent from the patient, five treatments were provided for eight days.

The procedure of the treatment is as follows:

- Palpating the painful area, marking the most painful point with a pen, putting moisture from a wet cotton ball on the point
- Placing the first moxa cone on the point, then lighting it with an incense stick
- Applying the next cones on the preceding cone before it has extinguished

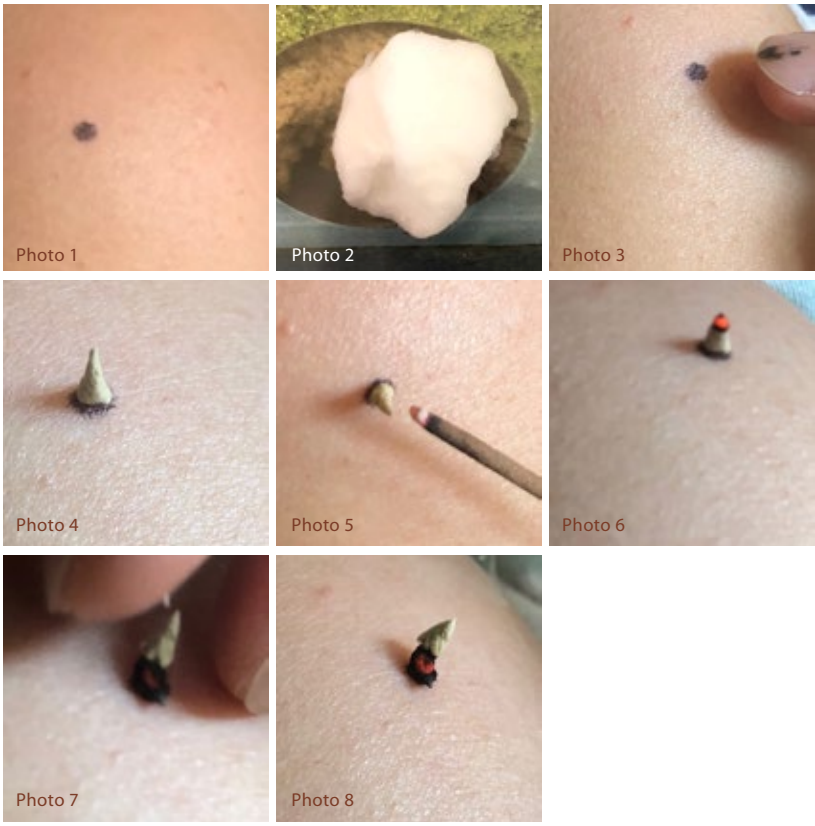

Photo 1: mark the most painful point after palpating the painful area. **Photo 2:** a wet cotton ball. **Photo 3:** put moisture from the cotton ball on the point. **Photo 4:** put a cone on the point. **Photo 5 & 6:** light it with an incense stick. **Photo 7 & 8:** apply the next cone on the preceding cone before it has extinguished.

The piling moxibustion method is most effective for acute conditions. Piling moxibustion involves piling up moxa cones on the preceding moxa cone before it has extinguished.

The next treatment is scheduled a week later if the patient still has the pain and it is performed the same way. This method increases the intensity of the heat and helps it penetrate more deeply. This heat helps reduce inflammation within the shoulder.

The basic principle of the piling moxibustion is as follows:[5,6]

- If the patient feels heat when the first cone is applied, moxa cones are applied until the patient does not feel any heat any longer.
- If the patient does not feel heat when the first cone is applied, moxa cones are applied until the patient starts feeling some heat.
- The size of the cones starts at half a grain of rice so that the patient acclimatizes to the heat, especially if the patient is sensitive. The size of the cones can be gradually increased to as big as a bean, or even bigger, depending on the conditions.

The moxibustion used was Yihwadang brand loose golden moxa from Korea. The incense stick was the smokeless Ilshimhyang brand from Korea. The sizes of the moxa cones used were between a grain of rice and a small bean. Loose moxa was compressed tightly before it was rolled into moxa cones so as to increase heat penetration.

The patient was made aware of slight suppuration or blisters after treatments. Regarding the moxibustion sores or blisters, the patient was instructed not to apply any ointments or put bandages on them. The patient was also advised to delay taking shower for a few hours after each treatment.

On the first treatment, two spots around LI-15 and SJ-14 on the left shoulder respectively were marked with a marking pen. The first moxa cone was applied on LI-15 and the second cone was applied on the first cone while it was still burning and before it was extinguished. The third cone was put on the second cone before it was extinguished.

This was continued until five cones had been applied, then the ash was removed. The procedure was repeated until it totaled 35 cones. Then, another 35 cones were applied on SJ-14 the same way the moxa cones were applied on LI-15.

The patient showed improvement in her range of motion immediately after the first treatment. The range of motion was obtained by about 30 degrees in terms of abduction, flexion and extension. The patient reported that the severity of the pain was reduced by 40%.

The second treatment was provided four days after the first treatment. The patient reported that she experienced good sleep after the first treatment, and that the pain had not bothered her much. She stated that the pain level was 4/10 on a NRS. The range of motion was 120 degrees for forward flexion, and 80 degrees for abduction. Instead of the piling moxibustion, five cones were applied on each point after each cone was extinguished.

> "Before treatments utilizing direct moxibustion, to avoid any misunderstanding, the practitioner must provide the patient with a personal demonstration of the technique and detailed explanation regarding direct moxibustion may produce moxa sores or blisters. If practitioners are properly trained in direct moxibustion techniques, they will be able to relieve patients of their various pain issues."

The day after the second treatment, the patient received another treatment each day for three days utilizing the same method as the second treatment. After the fifth treatment, she reported that she had significant pain relief and normal range of motion of her left shoulder. The patient was released after the fifth treatment.

The patient may need more sessions to treat the underlying issues at that time, considering that CT was only the manifestation. Approximately seven years after the last treatment, the patient was contacted for reevaluation. She reported that she had not experienced any recurrence of the calcific tendinitis.

Discussion

The patient was diagnosed with calcific tendinitis of the shoulder. The patient presented with excruciating pain on her left shoulder and restriction of shoulder movement. The treatments given by orthopedic doctors produced no pain reduction. After she received five treatments using direct moxibustion, the patient was free from pain and recovered full range of motion at her shoulder.

More practitioners in the United States are using direct moxibustion in the clinic setting. They tend to use ointments or cream as a barrier between the skin and moxibustion to help prevent scarring on the skin.

In the direct moxibustion applied in the case report, which is a more traditional method, water was put on the skin to stand the first moxa cone on the points, and loose moxa was tightly compressed before being rolled into moxa cones. This method generates longer burning time, more intense heat, deeper heat penetration but can also produce possible scarring.

Before treatments utilizing direct moxibustion, to avoid any misunderstanding, the practitioner must provide the patient with a personal demonstration of the technique and detailed explanation regarding direct moxibustion may produce moxa sores or blisters. If practitioners are properly trained in direct moxibustion techniques, they will be able to relieve patients of their various pain issues.

Conclusion

Calcific tendinitis of the shoulder is a disorder that is caused by calcium deposits in the tendons of the rotator cuff. Calcific tendinitis can be asymptomatic, but when it is symptomatic, it can cause severe pain and limitation of shoulder movement. When biomedical treatments do not provide any pain reduction, direct moxibustion can be a useful modality to address calcific tendinitis of the shoulder. This patient achieved pain relief and recovered full range of motion with treatments utilizing direct moxibustion.

A randomized control trial using direct moxibustion has some restrictions, such as difficulty blinding patients and assessors. However, further research is recommended to demonstrate its effectiveness such that treatment modality can gain more acceptance.

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

By Lonny S. Jarrett

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

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

Introduction

In the first two parts of this series, the basics were set in place for understanding Integral Theory as a foundation for the emergence of an integral medicine, a non-dual medicine that leaves no significant dimension of the self behind. In Part III, I present the lines of development and the nature of typing systems as the fourth and fifth fundamental aspects of Integral Theory (States, Stages, Quadrants, Lines, and Types). I also discuss the import of evolutionary and spiritual perspectives for the practice of integral medicine.

Lines of Development

Regarding "lines of development," we are referring to the multiplicity of capacities that are potentially available for human beings to manifest. This includes the physical, cognitive, psychological, ego, soul, spiritual, artistic, creative, philosophical, emotional, sexual, empathic, communicative, relational, and ethical lines of development. The 4Q map in Fig. 1 charts the course of the individual (UL), relational (LL), physical (UR), and societal (LR) lines of development.

Individuals evidence different degrees of development across a broad range of capacities. From this perspective, one is not an entity fixed in time and space but rather appears as a work in progress. We are constituted of different streams of development all contributing to the emergence of a compound self in a complex process of becoming.

The self, as a process, is not separate in any way from the process of Kosmic evolution.[1] This leads us to a foundational principle of integral medicine; through the transformation of the patient's self, we have access to the heart of the whole. The practitioner and patient are on a journey together, and meaningful development occurs in the self, culture, and consciousness as one.

Figure 1.

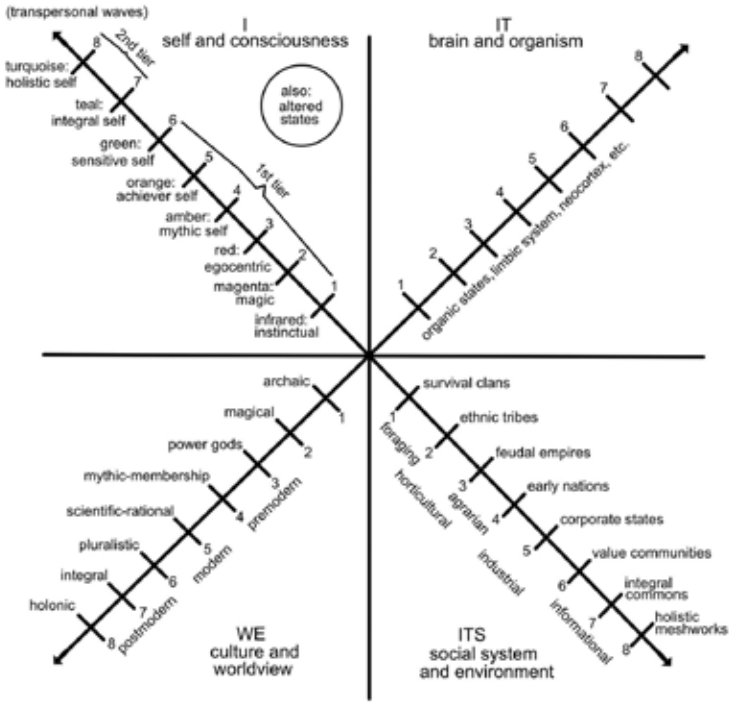

Figure 1: The quadrants define four perspectives that every sentient being looks *through*. Illustrated here are depicted stages in the evolution of the self (I), culture (We), the body (It), and society and ecosphere (Its). The trajectory of each line in each quadrant is toward increased complexity and integration.

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

We are never treating just the individual, but always culture, society, and Kosmos as well. Medicine is a potent vehicle for change.

Lines develop relatively independently of each other. Each of us has some lines which are more highly developed, some that are at a moderate stage of development, and others that are less so. We can all think of great artists and musicians whose artistic and creative lines of development were so elevated that they served as a channel for soul and spirit to enter into the world, moving and even transforming us in those subtle dimensions.

These very same individuals, however, can lack emotional and relational maturity, evidencing little capacity to lead a balanced, integrated, wholesome life. We've also had sufficient evidence in the last 100 years demonstrating that the elevation of an individual's spiritual line can far exceed their ethical, relational, and psychological line of development. Clearly, as a whole, humanity's technological prowess based on our cognitive capacity has far exceeded our soul, spiritual, and ethical lines of development.

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As practitioners who aspire toward an integral embrace of medicine, a significant dimension of diagnosis involves the assessment of the relative balance of a patient's different lines of development. We must note which lines are most developed and are therefore most relied on and which are weakest, having been neglected and therefore underdeveloped.

Over the course of treatment we expect the neglected lines to develop as we support the patient to direct attention to cultivating them (for example the nutritional, physical, cognitive, hygienic, and/or ethical lines). We also expect the highly developed lines to be less relied on as a dysfunctional way of avoiding neglected, repressed, and underdeveloped aspects of the self.

Types

"Types" is the fifth element of Integral Theory and are found in all quadrants. There are many typing systems with various degrees of nuance that are common in culture. In the UL, these include gender, enneagram, Myers-Briggs, and personality types. Typing such as the Aryuvedic doshas, the directions of the Native American medicine wheel, and astrological signs tend to implicate all four quadrants.[2]

Chinese medicine utilizes a variety of typing systems in diagnosis and treatment. The most well-known is that of Five-element constitution that I've covered extensively in my writing.[3] Eight principle syndrome patterns, exit/entry blocks, and the six-paired meridians can all be used as typing systems. Even herbal formulas can be used as a typing system, as we may denote a patient to be a *xiao yao wan* or a *gui pi tang* conformation or "type." Correlating various typing systems creates a synthesis of perspectives yielding a more nuanced view of the patient and clinical reality.[4]

A significant attribute of the Five-element constitutional typing systems is that each type is present in each state, stage, and quadrant, influencing all lines of development. For example, an infant who is a water constitution at Stage 1 will still be water through any and all subsequent stages (See Figure 2). Their water

constitutional type may be thought of as a lens that both admits, and denies, certain types of information and experience from entering consciousness. This filter is always in place throughout the entire spectrum of development, essentially skewing it in a particular elementally and constitutionally determined direction.

All lines of development are influenced by constitutional type. For the water type, their quality of ambition, will, degree of flow vs. contraction, and relationship to fear and resources—all attributes of the water element— will influence for better or worse the emergence and development of their individual capacities (UL), relationships (LL), phenotype (UR), functional fit in society (LR) and sensitivity to environmental conditions (LR). See Fig. 2 below.

Figure 2. Types, Lines, Stages

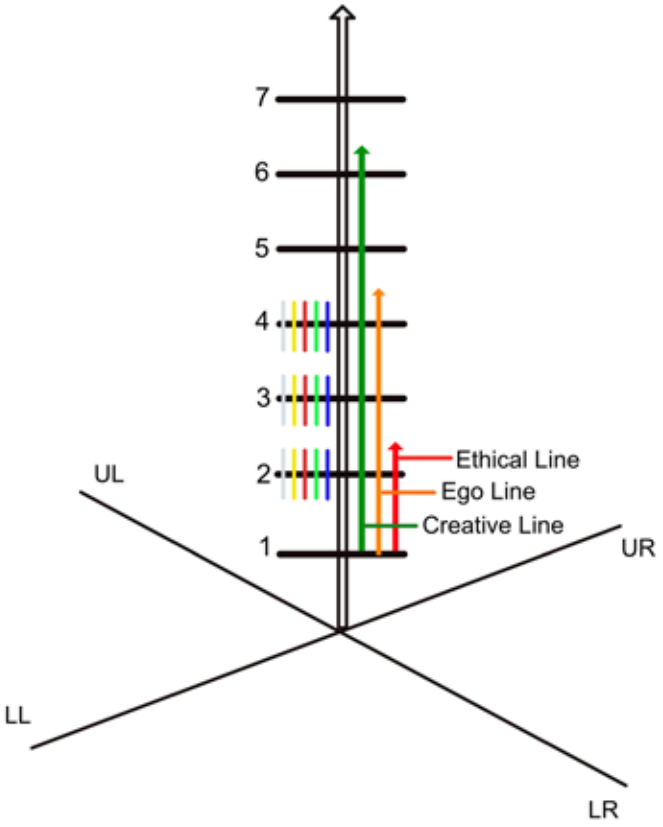


Figure 2: Here I've mapped lines, types, and stages of development, superimposing them over the four-quadrants. On the right, different capacities within the self (creativity, ego, ethics) are depicted at different stages of development. From right to left and shortest to highest these are magic/mythic (red meme), rational (orange meme), and pluralistic respectively (green meme).[i]

On the left, each stage is depicted as being translated by one of the five elemental constitutional types. Each of the five vertical lines at stages 2, 3, and 4 represent the constitutional filter of each element. These are color coded blue, green, red, yellow, and white respectively for their association with water, wood, fire, earth, and metal.[ii]

Constitution skews development in each stage toward a particular elemental expression, coloring the meaning attached to experience as well as its embodiment. In the course of development through the stages, the ethical line of development associated with each stage evolves toward an increased embrace of "other" as "self." As thought and feeling are revealed as objects in awareness in the transpersonal stages, identification shifts to soul and spirit, and the elemental virtues of wisdom, humility, benevolence, propriety, compassion, integrity, reciprocity, and righteousness manifest.[5]

Even an individual at the highest non-dual stage embodies innately determined constitutional tendencies. It appears to be a myth that at the highest stage, all lines converge as one becomes a living manifestation of the absolute. I doubt Jesus or Buddha played great jazz sax. Nonetheless, it is possible to experience the pull toward the confluence of all lines, Tielhard de Chardin's "Omega Point," in the heart.[6]

II. Evolution

The Chinese philosophical tradition placed great emphasis on transformation. The term for transformation, *hua* (化) refers merely to the change of one thing into another with no hierarchical distinction that might imply evolution.[7] A Chinese term for "evolution," *yanbian* (衍變) depicts water (氵) moving (*xing*: 行, the same character in *wuxing*, 五行, "Five-elements" or "Five-transformations). This is paired with the character *bian* (變) meaning "change." This couplet imparts a sense of both descent and return, of water flowing cyclically back to the sea.

Though consistent with Daoism's circular view of time, it is diametrically opposed to the sense of emergence and increased degree of complexity and integration implied by the English word "evolution." Evolutionary transformation implies vertical ascent from the lower to the higher; the emergence of new stages, not the return to former ones.

The theories of CM orient us primarily to cyclic transformation as embodied in the Five-element *sheng* cycle or the rotation of the 64 *Yijing* hexagrams. The integral AQAL map (Fig. 1) orients us toward evolution over the course of linear time. Taken together, the circle and the straight line yield the evolutionary spiral embodied in the double helix of DNA (hence the name "Spiral Dynamics" for the system that assess the evolution of values in culture).[8]

Much of what we've already covered in this series of articles is based on an evolutionary perspective. The great traditions postulated an endpoint to development expressed in the West

i. In the online version of the article these are colored to depict their memetic associations. I've discussed these in Jarrett (2004), pp. 745-766.

ii. These are depicted in color in the online version of the article.

as "heaven" and in the East as "enlightenment." Both denoted a mythic state of omniscience, omnipotence, and eternal light, bliss, and love. To make a caricature, in the West, you get to have ice cream for eternity with everyone you loved during life and in the East, you receive an eternal "get out of jail free" card, never having to return to incarnational suffering (from the perspective of Theravada).

For the sake of brevity, I will sum up the import of the deeper dimensions of evolution for our conversation thusly: implicit in our endeavor to develop an integral medicine that neglects no essential part of the self is the recognition of the imperative enabling the self to evolve in all its dimensions and capacities, while indulging no inherent sense of limitation or preconceived end point. Health and evolution are one and the same. When stagnation is released, *qi* flows, excesses are reduced and deficiencies are tonified, and *shen* interpenetrates with *jing*, evolution of the self is the result (See Figure 3).

III. Spirit, Medicine

Matter, body, mind, and soul are vehicles for the expression of spirit. The states, stages, quadrants, lines, and types forming the integral map, chart the hierarchical expression of spirit (consciousness) through self, culture, body, society, and Kosmos. In Figures 1, 2, and 3, spirit is the central axis arising out of the center of the circle as well as the field the entire map of creation arises from, and exists in. Spirit is the source, the path, and the goal of creation.

When expressed through the human vehicle, it has two directions, all the way up and all the way down. Ascension is the direction of spirit as the creative impulse, Eros, evolution, the authentic self, the life impulse, as it pushes to manifest that which has never been, endeavoring always beyond the bounds of the known. The descending direction of spirit manifests as an opening to source, Agape, involution, and Thanatos.[9]

In Daoism this opening is interpreted as a "return" to Laozi's "wilderness before the dawn." As spirit is liberated, we simultaneously recognize ourselves as the empty ground of all being, and the creative explosion surging forth from emptiness. We discover that there is nothing to overcome because nothing has ever happened, and we step into a place, beyond the known that is ever new, where spirit has never been before. These two directions of spirit manifest in health as spiritual self-confidence (trust in the positivity of the process) and soul depth (wisdom, knowledge of emptiness) respectively. The heart/kidney axis, held in place by will, is the physiological vessel for this simultaneous expansion into height and depth.

Figure 3.

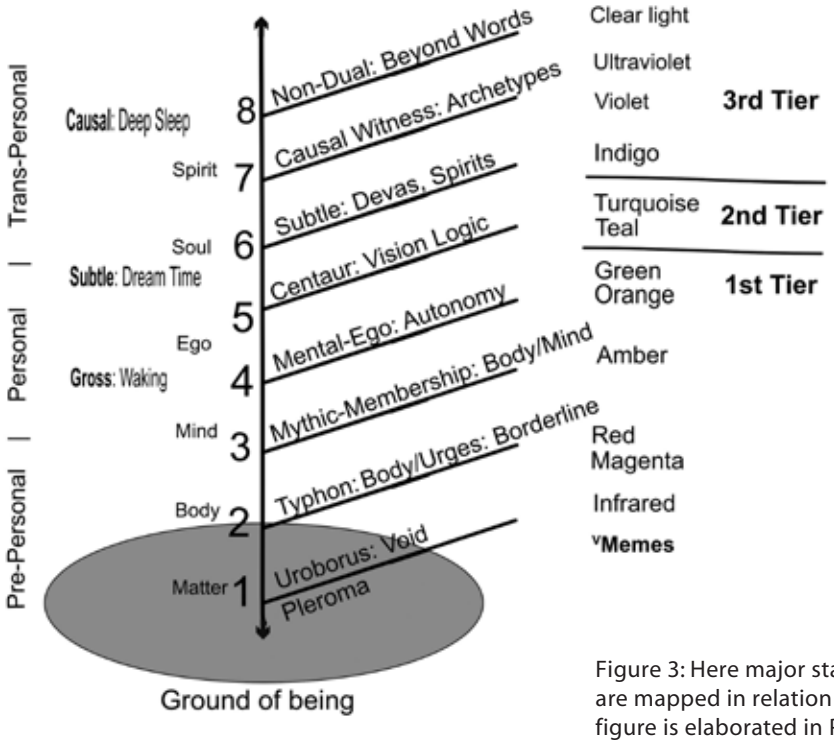


Figure 3: Here major states and stages are mapped in relation to each other. This figure is elaborated in Part II of this series.

Stagnation is illness; evolution is health. In CM we speak of working with "*qi*," but *qi* has no ethical imperative; it's a resource, like money, whose usefulness reflects the values of the person spending it. The heart of medicine is focused on the transmission of spirit as it catalyzes the emergence of virtue of a higher and more deeply integrated self. As stagnation is moved and upright influences are liberated, spirit opens to source catalyzing the evolution of a self that is capable of cognizing and responding in a more wholesome way to increased complexity. In CM we speak of this as the interpenetration of *shen* and *jing*.

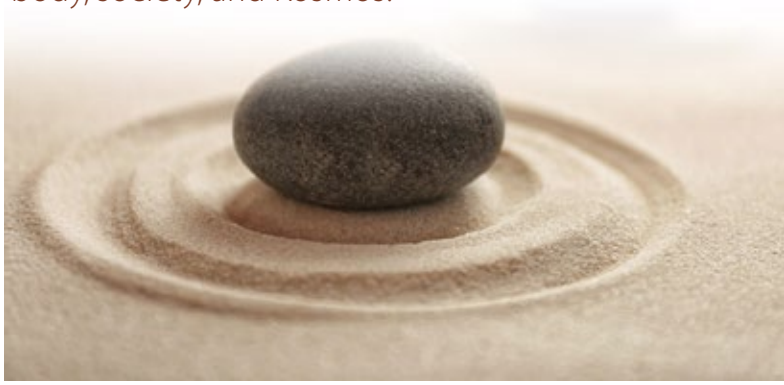
Realization of the source (0) discovery of that dimension of the self where nothing ever happened that isn't wounded, victimized, traumatized or cynical, and has nothing to overcome, manifests as ease of being in the face of stress. Awakening to the self as the Eros, the creative impulse (+1), we awaken to selfless passion, meeting each new challenge and every interaction as an opportunity to catalyze more wholesome emergence. From this perspective we have learned to live with a broken heart, holding all our suffering as having brought us to this point of authentically being able to serve others, spirit, and evolution itself. This attainment is a pillar of the physician's capacity to heal within the context of integral medicine.

We can talk about ways to facilitate, such healing with medicine, herbs, and/or needles, with all the techniques and knowledge at our disposal. In the end, the foundation of our efficacy in the practice of integral medicine arises from possessing an increasing measure of victory on the path of medicine ourselves.

Conclusion

In this series of articles I've provided a brief introduction to Integral Theory and its application to Chinese medicine. I've presented the integral, evolutionary, and spiritual perspectives as one unified view. The meridians, acupuncture points, herbs, and their actions can be elaborated across the continuum of body, mind, ego, soul, and spirit as regards introjected and repressed experience, projected shadow content, its stage specific location, and its implications for development according to the integral map. My new text, tentatively titled, *Deepening Perspectives on Chinese Medicine* will address these issues and more as a synthesis of my clinical experience and understanding.

"Matter, body, mind, and soul are vehicles for the expression of spirit. The states, stages, quadrants, lines, and types forming the integral map, chart the hierarchical expression of spirit (consciousness) through self, culture, body, society, and Kosmos."



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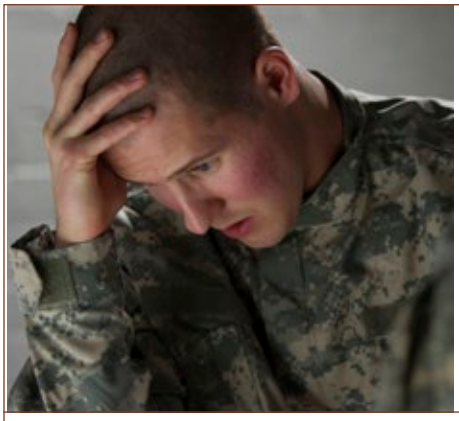
2. Personality Types see, Friedman, M.; Rosenman, R. (1959). For a discussion of the Doshas in the context of pulse diagnosis see Eckman, P: 2014.
3. Jarrett, LS (1999).
4. For a correlation of the Five-element system, Ayurvedic doshas, and the Korean constitutional approach see Eckman, P: 2014.
5. See Jarrett (1999) for a discussion of the five-elements and the transformation of dysfunctional relationship to thought and feeling into virtue.
6. Jesuit scholar Teilhard De Chardin coined the term "Omega Point" as a distant moment of divine unification where all matter becomes self-aware as god. This is alluded to in his statement, "The day will come when, after harnessing space, the winds, the tides, and gravitation, we shall harness for God the energies of love. And on that day, for the second time in the history of the world, we shall have discovered fire." Chardin, pp. 86-87.
7. CP: pp.746-748.
8. For a review of Spiral Dynamics in relation to the evolution of Chinese medicine see Jarrett, LS (2004), pp. 751-770. Also see Beck, D., and Cowan, C., (1995)
9. Eros is synonymous with the rising of *yang*, manifest as the life impulse. Thanatos, as the death impulse can be a destructive force counter to Eros. However it also can be understood as that force undermining the notions that embed us to cause stagnation, thus helping us "die to self" let go, and evolve. I will elaborate Eros and Thanatos in future writing relative to the *hun, po* and the *sheng* cycle.



The topic selected for this issue is:

How Do You Treat Post-Traumatic Stress in Your Clinic?

By Alaine D. Duncan, LAc

Alaine D. Duncan, LAc is the director of Integrative Healing, LLC. For 29 years, her clinical focus has been the impact of traumatic stress. She is current chair of the National Capital Area Chapter of Acupuncturists without Borders and teaches trauma-informed care as explored in her recent book, *The Tao Trauma: A Practitioner's Guide for Integrating Five Element Theory and Trauma Healing*. Alaine may be reached at alaine.duncan@integrative-healingworks.net

Acupuncture and Asian medicine (AAM) are powerful modalities for treating dysregulation caused by traumatic stress. AAM's foundational premise of opposing poles of energy that together support the easy rise and fall of activity and rest are mirrored in the autonomic nervous system's division into its sympathetic and parasympathetic branches. This theoretical foundation is a powerful one for restoring balance and regulation in survivors of traumatic stress.

Traumatic stress affects our mental, physical, emotional and spiritual health. It impacts educational success, criminal behavior, driving habits, work, family and community life as well as survivors' capacity for joy, pleasure and intimacy in relationships of all kinds. It's quite possible that the impact of traumatic stress is our most urgent public health issue.[1]

Traumatic stress does not arise from the story of the event per se but from the lived experience of that event, uniquely manifesting in an individual's energy body. The vibration of trauma's impact remains long after the analytical mind has considered and evaluated a narrative. AAM's focus on restoring system-wide coherence and fundamental balance and regulation of *qi*, rather than parsing out discrete symptoms, can unleash multi-system healing responses with the power to address underlying causes of the complex and multi-system impact of overwhelming life threat.

The tendency to look for formulaic or reductionist approaches to treating survivors can be alluring, especially when the number of people impacted is so great and the institutions responsible for the impact of war and abuse are so ponderous. However, the risk of missing trauma's unique expression in individual survivors is high.

Peter Levine, founder of the Somatic Experiencing® model of trauma resolution, has given acupuncturists an integrative lens for exploring traumatic stress. While studying animal predator-prey relationships, he noted that (1) two-legged and four-legged animals go through five phases of self-protection when responding to danger; (2) completing each of these five steps mitigates trauma's imprint; (3) symptoms arise when a step is thwarted or remains incomplete; and (4) the particular step that remains incomplete influences where and how trauma's imprint affects a survivor's tissues, psychological constructs, functional challenges and spiritual longings.

His observations paint a fascinating interface with the Five Element model. His steps of the self-protective response mirror the movement through the Five Elements:

- Water: "Signal Threat" - discern safety and threat, seek help;
- Wood: "Mobilize a Response" that is commensurate with the level of threat;
- Fire: "Create Coherence" - recognize that the threat is over in the regularity of the heartbeat;
- Earth: "Digest the Gristle" - break down these experiences into digestible bits and harvest their inherent lessons; and
- Metal: "Awaken Arousal" - recognize and respond to something new in our environment.

The impact of a lightning bolt hitting a tree does not exclusively impact that tree. Every insect in its bark, bird on its branches, bush crushed by its fall, and the soil disturbed by its uprooting are affected. Recovery of the forest will require quality minerals, water, new sprouts, warm sun and good soil.

Similarly, when we experience the lightning bolt of trauma, we are impacted in a comprehensive way. It cannot be exclusively pinned to a certain organ system or function nor can the transformation of its impact be reduced to universally applicable formulas or prescriptions. Each one of us, struck by the same "lightning bolt," will have different elemental needs for recovering the health and vitality of our individual tree and the relationships we have in our communal forest.

The Five Element model is helpful for exploring the diverse expressions of trauma's impact.[2] It supports providers to locate and work with the tissue, organ or function where a thwarted or incomplete step in the threat response has left its imprint in the energy body. Given that trauma is often "hidden away" under a variety of management strategies, having the correspondences of the Five Elements can help providers know where to support the completion of as yet incomplete measures for self-defense.

Traumatic stress gives rise to unpredictable and unusual physiology and clinical outcomes that are often not accounted for in acupuncture training programs, in spite of their common presence in our patient population.

I believe acupuncturists—and our patients—would benefit from including the neurobiology of traumatic stress, the approaches for recognizing dysregulation caused by trauma in our patients, and the nuanced methods for working with fragile nervous systems in our training programs. Our treatment rooms are full of people with "strange, rare and peculiar" symptoms that baffle western providers and are emblematic of the dysregulation in the autonomic nervous system caused by traumatic stress, whether known or unknown, spoken or unspoken.[3]

"The Five Element model is helpful for exploring the diverse expressions of trauma's impact.[2] It supports providers to locate and work with the tissue, organ or function where a thwarted or incomplete step in the threat response has left its imprint in the energy body."

Symptoms such as insomnia; chronic pain; metabolic and digestive disturbance; obesity; problems with memory, cognition, or mood; interpersonal challenges; autoimmune illness or endocrine disorders are often intertwined as "complex, multi-symptom illness" and are nearly impossible to tease apart as discrete phenomena.[4]

Research in the last 10-20 years in the neurobiology of trauma has revolutionized mental health treatment for trauma spectrum disorders. However trauma doesn't only impact mental health. Our patients will benefit when we integrate modern understandings of the human response to threat into how we offer our needles, manage clinical interactions, and interpret our clients' signs and symptoms.

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How Do You Treat Post-Traumatic Stress in Your Clinic?

By Miriam Pineles, DACM, LAc

Miriam Pineles, DACM, LAc is the founder and owner of Conscious Health and Wellness, Inc., in Midtown Manhattan. She specializes in women's health concerns and treats a variety of gynecological disorders. She also treats various pain syndromes in the body as well as allergies, migraines, insomnia, anxiety, and depression. Contact Miriam at www.ConsciousHealthandWellness.com

Post-traumatic stress disorder (PTSD) is a mental health condition that is triggered by witnessing or experiencing a terrifying event. Symptoms may include flashbacks, nightmares, severe anxiety and uncontrollable thoughts about the event. The emergence and types of symptoms will vary from person to person.

In our clinic, the most common symptoms of PTSD include anxiety, heart palpitations, insomnia, sweating and obsessive thoughts. There are a variety of tools available for determining the cause of symptoms. Addressing the root and branches of the disease is essential to effectively treat the condition. To diagnose accurately I use traditional Chinese medicine (TCM) diagnostic tools of asking, tongue diagnosis, skin color, temperature and what is known as the Medical Pulse Diagnosis (MPD), developed by Robert Doane, LAc. Treatment methods include Dr. Richard Tan's Balance Method of Acupuncture.

There are three common pulse presentations for anxiety and PTSD. One is called a "Block in the Left *Cun* and Left *Guan* position." This represents Blood stasis in the Heart and Liver. The second pulse is a "Weak Left *Cun* and Left *Guan*," indicating *qi* and Blood deficiency in the Heart and Liver. The third pulse is called a "Reverse Hook Pulse" which is a "Weak or Block in the Left *Cun*" and "High Pulses in the Left *guan* and Left *chi*." This pulse indicates *yin* deficiency in the Liver and Kidney and weakness or Blood stagnation in the Heart.

Herbal Prescription

Each pulse picture has a different herbal prescription to address the root of the symptoms. Prescriptions are unique to each patient. The following are standard prescription for the three pulse positions, which we almost always modify for the patient to address his or her unique presentation:

- Blocked Left cun and Left guan/Blood stagnation in the Heart and Liver: *Ge xia zhu yu tang, Xue fu zhu yu tang, Dan shen, He huan pi*;
- Weak Left *cun* and Left *guan*/Blood deficiency in the Heart and Liver: *Jia wei xiao yao san, Si wu tang, Gui pi tang;*
- Reverse Hook/*yin* deficiency in Liver and Kidney with Weak/Block Heart: *Tian wan bu xin dan, Zhi bai di huang wan, Sheng mai san.*

Herbs are given as granules and patients are instructed to mix with hot water and drink 3 g twice per day.

Acupuncture Points

Acupuncture points chosen are those that calm the *shen*, relax the mind and regulate *qi* in the chest to calm the heart. These can include Yin Tang to calm the spirit; Ear Shen Men to relieve stress, anxiety, and hypersensitivity; and An Mian to treat insomnia.

The following points image the chest in the Balance Method to treat all symptoms in the Heart, Lungs and chest: LI6, PC6, ST40, KD7.

In accordance with Dr. Tan's Balance Method, *yang* points are needled on opposing limbs to *yin* points to keep a balance of *qi* flowing through the entire body. They are retained for at least 30 minutes and given twice per week for at least four weeks.

Additionally, I often use essential oils when treating patients with anxiety and PTSD. I place a diffuser in the treatment room and use a combination of lavender, chamomile, and frankincense as these are known to be calming and pleasant for patients.

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How Do You Treat Post-Traumatic Stress in Your Clinic?

By Catherine Lumenello, LAc, PLLC

Catherine Lumenello is a classical Chinese medicine practitioner, a licensed acupuncturist, and *qigong* and *feng shui* master. She specializes in emotional stress, trauma, PTSD recovery, and LGBTQ+ concerns. Ms. Lumenello maintains a clinic in southern Vermont and is the author of *Gender and Sexuality in Chinese Medicine* (Singing Dragon, 2019), which includes her "Axial approach to Trauma." More information at: www.CatherineLumenello.com

Post-traumatic stress can stem from three different levels of exposure or endurance which are treated quite differently. Indirect trauma is caused by a witnessed or third-hand event (i. e.,not directly experienced) that affects the Heart's ability to function, even if temporarily. When the stirred emotions of unresolved indirect trauma are not properly settled, the Heart cannot build Blood properly and Heart Blood deficiency commonly results. Short-term herbs and emotional rest can usually resolve this condition. Acupuncture, diet, and *qigong* can help chronic cases progress faster.

Suggestions include:

- **Herbs:** Gui Pi Wan, Nu Ke Ba Zhen Wan, or Si Wu Wan;
- ***Qigong*:** Sheng Zhen Wuji Yuan Gong (SZWYG) – Heart Spirit as One;
- **Diet:** Blood-nourishing foods including meats, soups, grains, and dates; and Bitter foods such as dark greens, dark beer, dark chocolate;
- **Essential Oils:** Angelica, Chamomile, Lavender;
- **Gemstones:** Amethyst, Bloodstone, Garnet, Hematite

Complex trauma results from multiple exposures, where repeated triggering of extreme emotion creates a "churning" effect in the Heart. Heart Blood stasis is the most common pattern; less common is Phlegm in the Upper *Jiao* from depletion of fluids to "thin" the Blood. The acute phase may need only low to moderate cardiovascular activity, but chronic forms require herbs and other interventions to transform stubborn pathological fluids.

Suggestions include:

- **Herbs:** Tao Hong Si Wu Wan, Xue Fu Zhu Yu Wan, and Er Chen Wan or Liu Jun Zi Wan for Phlegm;
- ***Qigong*:** Golden Rooster Shakes his Feathers; Sheng Zhen Wuji Yuan Gong (SZWYG) – Pure Heart Descends (from Releasing the Heart);
- **Acupuncture:** HT 3, 5, 6; LV 3; LU 1, 2; PC 6; Ren 17; SP 6, 9, 10; UB 14, 15, 17, 43, 44;
- **Other:** Flash Cupping or vibrational *tuina*

Direct trauma originates in a personally experienced event, where damage targets the energetic poles of the body resulting in an "Axial Break" phenomenon that requires acupuncture and/or *qigong* for resolution. There are two major axes that differ greatly. The North-South Axis includes the Fire, Earth, and Water elements and is generally associated with early childhood onset, sexual trauma, and life-or-death situations. The East-West Axis includes Wood, Earth, and Metal elements and is generally associated with adult onset, cultural/social injustice or the death of a loved one.

Suggestions include:

North-South:

- **Acupuncture:** KI 6-16-26 combination; KI 1 or 3-Du 20 combination; LU 7-KI 6 (Ren); Ren 4, 12, 15, 17; SP 4-PC 6 (Chong); UB 14, 15, 20, 22, 23, 43, 44, 51, 52;
- **Herbs:** Tian Wang Bu Xin Wan or Gan Mai Dai Zao Wan

East West:

- **Acupuncture:** GB 21, 30, 34; LI 4, 10, 11, 16, 20; LV 3, 13, 14; LU 1, 2, 5; Ren 4, 6, 12; SP 6, 9, 15; ST 21, 25, 36, 40; UB 13, 17, 18, 19, 20, 21, 25, 47, 48;
- **Herbs:** Chai Hu Long Gu Mu Li Wan or Mu Xiang Shun Qi Wan

Both Axes:

- ***Qigong*:** Gathering the Rice; Qi Circulation or Daoist Napping; Pouring Qi;
- **Gemstones:** Carnelian, Lepidolite, Peridot, Sugilite, Tangerine Quartz;
- **Lifestyle:** talk therapy, friendship and community-building, and mental rest.

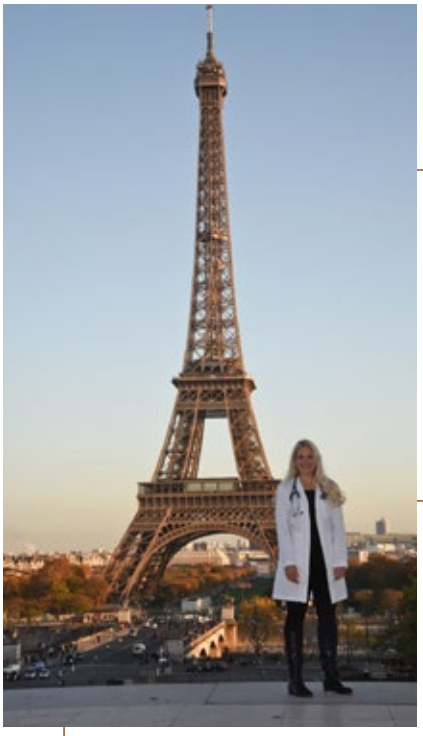

Photo courtesy Korina St. John

Report from the 2018 World Acupuncture Day and World Scientific and Cultural Dialogue on Acupuncture Conferences

By Korina St. John, DACM, DiplOM (NCCAOM), LAc

World Acupuncture Day (WAD) and World Scientific and Cultural Dialogue on Acupuncture (WSCDA) conferences were held on November 15-17, in Paris, France. More than 1,300 attendees from more than thirteen countries attended. David Miller, chair of the American Society of Acupuncturists (ASA), LiMing Tseng, Amy Mager, John Scott, Maggie Barile, Afua Bromley, and Korina St. John represented the United States.

World Acupuncture Day (WAD), held on November 15, was organized under the patronage of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization (WHO). Political world leaders, ambassadors from UNESCO, and representatives from the WHO, along with medical experts, academics, researchers, policy makers, and members of the public, converged at the UNESCO Headquarters on the Place de Fontenoy in Paris. It was the largest international event of its kind, commemorating the eighth anniversary of the inclusion of acupuncture and moxibustion to the UNESCO Representative List of Intangible Cultural Heritage of Humanity.

"The central topic focused on the rich history of acupuncture and traditional Chinese medicine in China and its transmission to the western world... Collective recognition was given for its deep impact on the field of healing and its influence on government, society, dietary cuisine, arts and spirituality over the 3500 years of its known existence."

Denis Colin, president of the World Acupuncture Day Organization, and Liu Bao-Yan, president of the World Federation of Acupuncture and Moxibustion Societies (WFAS) opened the ceremony. Speeches by Chinese, Greek and French ambassadors to UNESCO were presented. Acknowledgment was given to the thirty-seven WAD event sponsors and the WAD organization team.

The central topic focused on the rich history of acupuncture and traditional Chinese medicine in China and its transmission to the western world. Vice Minister of Health (PR of China), Professor Yu Wen-Ming and Liu Bao-Yan presented the history of acupuncture therapies and its cultural impact on China. Collective recognition was given for its deep impact on the field of healing and its influence on government, society, dietary cuisine, arts and spirituality over the 3500 years of its known existence.

Archbishop Francesco Follo, the permanent observer of the Holy See to UNESCO, discussed the role of the Jesuits in transmitting acupuncture to the West, referencing historical accounts of intercultural dialogue and the positive impact made by humanitarian efforts to preserve the practice of acupuncture therapies. Archbishop Follo reflected upon a holistic approach, "The integration of science is synonymous with medicine and the humanities. One must treat not only the human body, but the soul."

David Miller presenting
Photo courtesy Korina St. John

Medical physician and acupuncturist Konstantina Theodoratou of Greece reviewed the scientific progress of acupuncture over the past fifty years. She presented strong research evidence from basic and mechanistic studies that indicates acupuncture triggers physical and histological functions, releases endogenous opiate-like substances, affects CNS function and the HPA-axis, influences receptors and antagonists associated with brain network connectivity, and modulates brain activity. She also presented recent findings that demonstrate a causal relationship between acupuncture and epigenetic modifications.

Professional leaders representing France (Marc Martin), Europe (Gerd Ohmstede), Great Britain (Philip Rose Neil), Latin America (Francisco Lozano), Australia (John McDonald), and the United States presented the history of acupuncture in their respective countries, reporting on educational standards, the state of the profession, clinical highlights, and current research.

David W. Miller, MD, LAc reflected upon the most recent forty-five years of history of the acupuncture profession in the United States, stating, "The development of the Licensed Acupuncturist professional group is unprecedented. We have one of the strongest, most robustly developed training systems in the world."

Dr. Miller provided a brief history of the American acupuncture profession, formally established in 1982 through academic coordination (CCAOM), educational accreditation (ACAOM), professional certification (NCCAOM), and professional organization (AAOM). He discussed the ASA, a federation-style organization established in 2015 that benefits acupuncturists and advocates for the profession at the state, national and international levels. Dr. Miller further reported, "Since 1992, there has been a steady growth of educational institutions and number of graduates." Current distribution findings indicate there are nearly 38,000 trained American acupuncturists emerging from this system.[1]

In 2018, the U.S. Bureau of Labor Statistics formally recognized the profession, giving providers the title "Acupuncturist."[2] Dr. Miller explained, "This recognition creates a uniquely identified, taxable and measurable, professional group. It creates many opportunities and opens doors to the inclusion of acupuncturists in numerous federal programs, including educational loan repayment programs."

He also informed on the inclusion of acupuncture in the U.S. Department of Veterans affairs, the Department of Defense, and Public Aid programs." In his closing statement, Dr. Miller urged the importance of unification, communication, and continued collaboration amongst American acupuncturists

ASA members (L-R) Korina St. John, John Scott, Liming Tseng, David Miller, Afua Bromley, Iza Mietka, Amy Mager, and Maggie Barili with friends from Europe and China.
Photo courtesy Korina St. John

with all medical disciplines, while also encouraging the use and preservation of original medical source materials.

The WSCDA conference on November 16-17 was held at the largest science museum in Europe, the City of Science and Industry. Presentations and panel discussions from renowned speakers focused on acupuncture in relation to basic sciences, neurosciences, gynecology/obstetrics, chronobiology, oncology, endocrinology, pain/anesthesia, psychological and psychosocial suffering, humanitarian, addiction, and management of side effects of allopathic therapy.

Dr. Miller (ASA) presented key concepts in the integrative physiology of Chinese medicine from evolutionary biology viewpoint. Afua Bromley (NCCAOM) addressed acupuncture's role as a non-pharmacological method of lessoning the opioid crisis. A featured lecture presented by the WHO emphasized the role of acupuncture in primary health care. This subject was reiterated by several speakers who recommended the use of acupuncture as a first-line treatment performed by trained acupuncturists.

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Translating Fundamental Science of Acupuncture into Cinical Practice for Cancer Symptom Management, Pain, and Substance Abuse: At the NIH Campus, Bethesda, MD

The National Cancer Institute's Office of Cancer Complementary and Alternative Medicine and NCCIH cosponsored a workshop, "Translating Fundamental Science of Acupuncture into Clinical Practice for Cancer Symptom Management, Pain, and Substance Abuse" on February 11-12, 2019, on the NIH campus in Bethesda, MD.

The 2-day event included discussions on neural and extra-neural mechanisms as well as non-specific effects of acupuncture. There were also presentations on overcoming barriers to clinical research with acupuncture. Attendees included acupuncture researchers and NIH staff.

The event opened with a short introduction from Dr. Helene Langevin, MD, director of NIH's National Center for Complementary and Integrative Health (NCCIH). Dr. Langevin, who had previous appointments at both the University of Vermont and Harvard University, oversees the NCCIH's annual budget of $142 million, much of which funds acupuncture research. Her own well-known research includes studies on connective tissue in chronic musculo-skeletal pain and the mechanisms of acupuncture, manual and movement-based therapies.

The first session focused on **specific effects of the interventions, neural mechanisms and pathways.** Presenters

(L-R) Richard Niemtzow, Jennifer Stone, and Jun Mao
Photo courtesy Korina St. John

included Dr. Qiufu Ma, Dana Farber Cancer Institute, Harvard School of Medicine, who discussed his research on mapping sensory circuits and uncovering distinct sensory pathways that transmit and gate pain.

Dr. Jiang-Hong Ye, MD, New Jersey Medical School, presented research on the analgesic effects and mechanisms of electroacupuncture in treating hyperalgesia. Richard Harris, PhD, from the University of Michigan, presented his research on how different chronic pain patients have a different response to sham and verum acupuncture. Jun Mao, Memorial Sloan Kettering Cancer Center, presented on oncology acupuncture, and Dr. Weidong Lu from Dana Farber, Harvard, presented data on the impact of acupuncture on axon degeneration of distal nerve endings in chemotherapy neuropathy patients.

Following these was a session on **extra neural mechanisms of action**. First, Dr. Maiken Nedergaard, University of Rochester, who discovered the glymphatic system and its role in the clearance of fluids and solutes, presented a captivating video that shows the flow of brain interstitial fluid as it reaches homeostasis. Dr. Helene Langevin, NCCIH presented on the biophysical model and the involvement of connective tissue in pain.

Ru Rong Ji, Duke University, discussed the role of cytokine modulation as a mechanism for the analgesic effects of electroacupuncture in chemotherapy neuropathy patients. Dr. Suzanna Zick, University of Michigan, presented on the interrelationship between the inflammatory process and the common cancer symptom cluster; chronic fatigue, insomnia, mood disorders and pain. The session was concluded with Dr. Elsabet Stener-Victorin of the Karolinska Institute who presented on endocrine and metabolic regulation by acupuncture.

Session III focused on **non-specific effects of acupuncture,** kicked off by Dr. Ted Kaptchuk, Harvard University School of Medicine. He discussed placebo effects of acupuncture, from both clinical findings but also new information on the genomic findings in placebo research. Dr. Jian Kong from Harvard presented on using the power of the mind in acupuncture treatment. The session was concluded with Dr. Vitaly

The highly esteemed federally funded acupuncture researchers. Photo courtesy Korina St. John

Napadow from Harvard, who discussed how fMRI hyperscan supports the theory that the patient acupuncturist therapeutic alliance effects pain modulation.

Session IV was on **overcoming barriers for clinical research of acupuncture**. The session's first presenter was Dr. Hugh MacMherson, University of York, UK, who discussed the challenges in evaluating specific and non-specific effects of acupuncture in clinical trials for cancer pain. He was followed by Col. Richard Niemtzow, MD, founder of Battlefield Acupuncture. He discussed challenges he faced when creating the Acupuncture Training Across Clinical Settings (ATACS) program to deploy the Battlefield Acupuncture across the Department of Defense and the Department of Veterans Affairs.

Dr. Paul Crawford, Uniformed Service University, discussed the lack of coordination and connection between the research scientists in the lab and the clinicians treating patients. He offered solutions the NIH could use to assist in bringing successful treatments to public knowledge. Songping Han, Peking University, presented data on prolonged use of electroacupuncture causing tolerance to the treatment similar to prolonged use of morphine. This could explain why some people are non-responders to acupuncture.

Rosa Schnyer, University of Texas, discussed the barriers in translating clinical practice into fundamental science. Rosa says we must not only seek to translate fundamental science into clinical practice, but we must also seek to apply knowledge derived from clinical practice to inform clinical trial design.

(L-R) Liz Spetnagle , Korina St. John, Jason Bussel, Jennifer Stone, Lee Hullender Rubin, and Rosa Schnyer Photo courtesy Korina St. John

Dr. Gary Deng, Memorial Sloan Kettering Cancer Center, presented data his team collected on acupuncture as a non-narcotic pain management intervention in patients with multiple myeloma. Dr. Wenli Liu, MD Anderson Cancer Center, discussed gaps between acupuncture research and practice and overcoming methodological challenges. Dr. Jiang Ti Kong, Stanford University, discussed electroacupuncture treatment for chronic low back pain and the use of quantitative Sensory Testing as both a measure and a predictor of responders.

The conference was concluded with Marge Good from the National Cancer Institute and Linda Porter from the National Institutes of Health who each discussed the future of NIH resources in supporting clinical trials.

The NIH has funded acupuncture research for over 30 years and continues to support acupuncture research in the U.S. A recent search on acupuncture revealed 49 studies listed in the NIH's RePORTER database of current studies. https://projectreporter.nih.gov/reporter_searchresults.cfm

Years of acupuncture research have provided enough evidence for policymakers to realize that acupuncture works and acupuncture saves healthcare dollars. Acupuncture is now a recommended procedure for multiple diseases and syndromes in mainstream medicine and is a covered expense under many healthcare plans.

For more information on what the current research tells us, please visit:

https://nccih.nih.gov/grants/acupuncture/priorities

Helene Langevin and Jian Kong

Listed below are research topics that are considered by NCCIH as areas of low and high program priority for acupuncture research.

Areas of Low Programmatic Priority

NCCIH **strongly discourages** researchers from submitting research proposals in areas of low programmatic priority.

- Research comparing clinical outcomes of verum and sham acupuncture
- Research comparing individualized to standardized acupuncture treatment protocols
- Studies proposing use of moxibustion in the delivery of acupuncture interventions. Moxibustion may be difficult to deliver in most healthcare or integrative practice settings, given a variety of practical and occupational/environmental safety issues.

Areas of High Programmatic Priority

- Studies that address the pragmatic clinical and healthcare policy questions of whether acupuncture should be incorporated into clinical pain management strategies of patients with pain conditions where there is robust evidence of beneficial effects
- Large pragmatic studies for pain management addressing important clinical or policy questions, such as "Does a comprehensive pain management approach including availability of acupuncture improve pain management and reduce prescription opioid use in a clinical population?"
- Basic and clinical research to elucidate or quantify biological mechanisms of acupuncture analgesia in conditions in which beneficial effects are well-documented, and to clarify the degree to which effects are due to specific effects of needling or due to nonspecific effects related to the patient-provider interaction such as conditioning, patient expectations, self-empowerment effects, and placebo effects
- Studies to elucidate or quantify potential specific biological effects of electro-acupuncture for pain management using human experimental paradigms and quantitative sensory testing (QST) measures
- Development and testing of electro-acupuncture protocol(s) for safety and pain conditions
- Basic and clinical research on acupuncture as a model for understanding the role of nonspecific effects (e.g., expectancy, context, placebo) and whether they can be used to enhance effectiveness of pain treatment

NCCAOM and ASA Response to Centers for Medicare and Medicaid Services

February 13, 2019

David Dolan
Susan Miller, MD
U.S. Centers for Medicare & Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244

Dear Dr. Miller and Mr. Dolan:

On behalf of the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM)® and the American Society of Acupuncturists (ASA), we would like to thank you for the opportunity to provide comments on the Centers' National Coverage Analysis for acupuncture in the treatment of chronic low back pain (CAG-00452N). Together, our organizations represent more than 20,000 professional acupuncturists across the United States. As the largest payers in the American healthcare system, the Medicare and Medicaid programs are uniquely situated to have a significant impact on how Americans can access treatments for pain. Especially in light of the opioid crisis, we commend CMS for considering access to acupuncture as a non-pharmacologic treatment for pain, specifically chronic low back pain (CLBP). We offer this document as a summary of the status of the evidence on this topic, and hope to help contextualize that information. We believe acupuncture is a truly effective component in efforts to stem the tide of the pain management epidemic. As such, we have presented a summary of the evidence demonstrating that acupuncture coverage for CLBP is reasonable and necessary under the Medicare program.

Who We Are

The NCCAOM was established to assure the safety and well-being of the public and to advance the professional practice of acupuncture by establishing and promoting national, evidence-supported standards of competence and credentialing. Since our inception, the NCCAOM has issued more than 21,000 certificates in acupuncture, Oriental medicine, Chinese herbology, and Asian Bodywork Therapy. Currently, the NCCAOM certifies 1,200-1,500 acupuncturists per year and represents almost 18,000 nationally certified practitioners. In recent years, the NCCAOM has worked directly with federal agencies to establish recognition of our certification programs and our Diplomates in the federal arena. This has included the creation of a distinct classification code with the Bureau of Labor Statistics (BLS) for the profession "Acupuncturist," and the development of a qualification standard within the Veterans Health Administration (VHA) for acupuncture practitioners. We would offer the VHA qualification standard as a model for determining appropriate clinicians and training requirements in the provision of acupuncture through CMS.

The ASA represents the largest voluntary professional membership body of practitioners under the BLS professional designation "Acupuncturists." ASA's mission is to promote the highest standards of professional practice for acupuncture and East Asian medicine in the United States to benefit the public health. The ASA strives to strengthen the profession at the state level while promoting collaboration nationally and internationally, in addition to providing resources to its members, the public, and legislators. The ASA has 46 participating professional acupuncture state associations as part of its federation. **continued on page 37**

JASA

The Journal of the American Society of Acupuncturists

MJAOM has a new name and a new logo!

The Journal of the American Society of Acupuncturists (JASA) has the same professional standards and top-rated content since the journal's inception in fall 2014. This transition is more in line with how professional organizations present their scientific journals to the public. As always, it promotes the highest standards of professional practice for acupuncture and East Asian medicine in the U.S.

Our Author Guidelines are the same, our advertising rates have stayed the same, and complete online access to each issue is still free to all state association members!

The ASA represents a new stage of development in collaboration among groups working to promote the best of acupuncture and East Asian medicine in the United States. After years of preliminary, informal work together as the Council of State Associations, the ASA was born July 2015 as a 501(c)6 not-for-profit entity that allows our member organizations to achieve a new level of collective performance.

The ASA currently has 27 state member associations representing nearly 4000 individual acupuncturists around the country. Our structure seeks to be inclusive from the bottom upwards, so that the voices of the individual acupuncturist "on the ground" can be channeled towards collaborative effort. We share expertise, resources, experiences, and inspiration with one another.

–David W. Miller, MD, LAc, Chair, American Society of Acupuncturists

The Alaska Acupuncture Association

The California State Oriental Medical Association

The Acupuncture Association of Colorado

The Connecticut Society of Acupuncturists and Oriental Medicine

The Florida Acupuncture Association

The Florida State Oriental Medical Association

The Illinois Association of Acupuncture and Oriental Medicine

The Indiana Association of Acupuncture and Oriental Medicine

The Maine Association of Acupuncture and Oriental Medicine

The Maryland Acupuncture Society

The Acupuncture Society of Massachusetts

The Michigan Association of Acupuncture and Oriental Medicine

The Minnesota Acupuncture Association

The New Hampshire Acupuncture & Asian Medicine Association

The New Jersey Association of Acupuncture and Oriental Medicine

The New Mexico society for Acupuncture and Asian Medicine

The Acupuncture Society of New York

The North Carolina Society of Acupuncture and Asian Medicine

The Ohio Association of Acupuncture and Oriental Medicine

The Oregon Association of Acupuncture and Oriental Medicine

The Association for Professional Acupuncture

The Rhode Island Society of Acupuncture & Oriental Medicine

The Tennessee Acupuncture Council

The Vermont Acupuncture Association

The Acupuncture Society of Virginia

The Washington East Asian Medicine Association

The Wisconsin Society of Certified Acupuncturists

Introduction

Back pain is one of the most common reasons for Americans to visit their doctor. In a recent survey,[1] chronic neck and/or back pain was found to affect 54% of American adults in 2017. Another survey found that 32.5% of those 65 years and older suffer from back pain,[2] 29% of Americans believe their low back pain was due to stress, 26% believed it was due to being sedentary/weak muscles, and 26% blamed physical work.[2]

Acupuncture, along with other complementary and integrative treatments, is commonly used as a supplement or replacement for opioid prescriptions when treating a multitude of pain complaints, including chronic low back pain. Integrative pain management pilot programs have demonstrated impressive reductions in opioid use, emergency room visits, and annual costs of healthcare.[3] Providing American seniors with a safe, cost-effective approach to managing CLBP will reduce the burden on our healthcare system while supporting the triple aim of lower cost, better outcome, and improved patient satisfaction. Acupuncture has been practiced in the U.S. for more than a century and has been properly state licensed and certified since the early 1980s, with roughly 32 million acupuncture treatments provided each year according to the latest NCCIH survey.[4]

Acupuncture for Chronic Lower Back Pain

There is a significant body of evidence supporting the use of acupuncture for treating chronic lower back pain. We respectfully submit 17 studies of acupuncture for CLBP in Appendix A, and have summarized some of the key findings below.

- A systematic review of acupuncture for low back pain (Appendix B) demonstrated that in 11 trials comparing acupuncture to usual or conventional care, acupuncture outperformed usual care in all 11 reports.
- In 2017, Vickers et al., updated their 2012 meta-analysis of acupuncture research up through trials published in 2015. Data from 39 trials and 20,827 patients were analyzed. Acupuncture was shown to be superior to both sham and no acupuncture controls for each pain condition (all $P < .001$) with differences between groups close to 0.5 standard deviations compared with no acupuncture control, and close to 0.2 standard deviations compared with sham acupuncture. The meta-analysis also found clear evidence that the effects of acupuncture persist over time, with only a small decrease (approximately 15%) in treatment effect at 1 year.[5]
- In Germany, a large-scale observational study was set up by ten health insurance funds. The study examined 454,920 patients with one or more diagnoses of chronic pain, including low back pain (45% of patients), headache (36%), and osteoarthritis (12%), who were treated with acupuncture. Effectiveness of acupuncture was rated by physicians in 22% of the patients as marked, in 54% as moderate, in 16% as minimal, and in 4% as poor (unchanged). Results indicate that acupuncture provided by qualified therapists is safe, and patients benefited from the treatment.[6]
- Another German study involving 340 outpatient acupuncture practices and 1,162 patients with a mean of eight years of back pain, received ten treatments over a five-week period. The patients' back pain reduced for more than six months post treatment, and the acupuncture effectiveness was almost twice that of conventional therapy.[7]

Additional Benefits of Acupuncture

The evidence for acupuncture's role in treating pain, preventing the overuse and unnecessary use of opioids, and treating opioid addiction has been summarized in the white paper, "*Acupuncture's Role in Solving the Opioid Epidemic: Evidence, Cost-Effectiveness, and Care Availability for Acupuncture as a Primary, Non-Pharmacologic Method for Pain Relief and Management*" (Appendix C). Acupuncture has been cited as one of the strongly recommended treatments for back pain in guidelines published by the American College of Physicians[8] and a number of national and state agencies. In an article by Birch, et al. "a total of 1,311 publications were found that recommended using acupuncture published between 1991 and 2017. The number per year reached 50 in 2005 and 100 in 2009. In addition, 2,189 positive recommendations were found for the use of acupuncture. Of these, 1486 were related to 107 pain indications and 703 were related to 97 non-pain indications."[9]

Acupuncture has also been demonstrated to provide a wide range of benefits beyond the treatment of chronic pain. According to the 1998 NIH Acupuncture Consensus Statement,[10] acupuncture is effective at treating more than 40 health conditions, including colds and flu, hepatitis, asthma, colitis, diarrhea and constipation, stroke, stress including PTSD, anxiety and depression, insomnia and infertility. Additionally, acupuncture has been shown to be effective in reducing opioid prescription and utilization.[11,12]

In addition to the studies supporting acupuncture for CLBP, we have included seven studies on the cost- effectiveness of acupuncture, four of which specifically focus on CLBP (Appendix D). We believe that with support and appropriate reimbursement policies, acupuncture can provide significant cost savings to the Medicare program by reducing opioid prescriptions, and by reducing spending on opioid-related complications.

An excellent summary of the current evidence for acupuncture in general was recently published in "*The Acupuncture Evidence Project*." This is included in Appendix E, and the full results of the project in Appendix F.

Figure 1 (in the document *NCCAOM-ASA Figures*) presents a graphic depiction of acupuncture's evidence base from the Department of Veterans Affairs' Evidence Map of Acupuncture for Pain.

In one of the largest 2-year prospective surveys to date of 89,000 acupuncture patients, American Specialty Health Incorporated (ASH), in conjunction with the Agency for Healthcare Research and Quality (AHRQ), were looking to achieve the following objectives:

- Assess and track patient satisfaction based on the type of specialist seen
- Measure overall and specific areas of patient satisfaction with their practitioner
- Examine patient satisfaction with the access and availability of specialty care
- Measure patient satisfaction with their specialty benefits design
- Determine the effectiveness of treatment from the specialty practitioner

ASH contracts with approximately 6,000 licensed acupuncturists across the country, and, since 2012, the ASH acupuncturist network has cared for more than 157,000 patients. The 2014-2015 survey results showed 99% of their patients rating the quality of care as good to excellent, 90.5% of those surveyed were willing to recommend their health plan to others, and 93% of the respondents said their acupuncturist was successful in treating their primary condition. For further detail, please see Appendix G.

Safety

When performed by properly trained and certified providers, acupuncture is widely recognized to be an impressively safe, frequently effective, non-pharmacological option for the treatment of chronic and acute pain syndromes. A thorough systematic review by Chan, et al. published in 2017 concludes that while some adverse events are reported, "all the reviews have suggested that adverse events are rare and often minor."[13] These findings are consistent with prior studies.[14,15,16] Some severe adverse events such as brain stem piercing, spinal lesions, infectious disease transmission, organ puncture, needle breaking and migrating, and death have been documented in other countries, but may be associated with provider competence and training, and could be avoided with sufficient regulations determining appropriate clinicians. We have included nine studies addressing safety and adverse events with acupuncture treatment in Appendix H.

Study Design

It is critical when reviewing any of the literature surrounding acupuncture and pain management to understand the state of the science in acupuncture research. Because large-scale studies are expensive and difficult to fund, most of the acupuncture trials are performed on relatively smaller populations.

Further, various attempts to create an inert, "placebo" control with "sham acupuncture" are found throughout the literature base. What has been learned over the past two decades of research is that it is problematic to utilize sham acupuncture as a control. Sham acupuncture is not only biologically active; it activates all the non-specific mechanisms of acupuncture's effects. Many of these physiologic responses have been identified and include at least endorphin release in many subjects, as well as activation of innate and conditioned relaxation responses, modulation of limbic processing (mood improvement and stabilization), and the creation of a therapeutic experience.[17] These effects alone are sufficient to improve a subject's scale ratings of disability and pain perception. What is seen, however, is that as study size increases, the effects of true acupuncture begin to meaningfully exceed those of sham. It has been estimated that a study would require more than 4,000 subjects to begin to meaningfully distinguish between the short-term improvements in verum versus sham groups.[18]

What is also frequently lost in research analysis is the clarity that despite the difficulty distinguishing verum from sham groups, both *verum* and sham acupuncture significantly outperform conventional care or wait listing, indicating clear clinical benefit over usual care.[19]

Further, acupuncture theory firmly adheres to the assertion that care must be administered appropriately and in an individualized fashion to be optimally effective. The majority of prior study designs have attempted to create a uniform treatment protocol for acupuncture's application to the study group. Despite this fact, acupuncture still obtains results superior to conventional care while operating under suboptimal application conditions. We anticipate that acupuncture performed most correctly would yield even greater divergence between verum and sham groups, as well as over usual care. It should also be noted that when studying acupuncture's effectiveness for a condition such as "low back pain," there is an obvious problem with design in that "low back pain" is not truly a diagnosis, but rather a symptom description. There are many etiologies of both acute and chronic low back pain, and so studies must be designed to account for the differences in underlying pathology.

Critique of the acupuncture literature based on a lack of divergence between verum and sham groups displays an outdated view of research methods and an oversimplified understanding of the complexity of acupuncture and its numerous mechanisms of clinical effect. More attention should be focused on the divergence between any acupuncture and usual care (Appendix E). It is also critical to observe that proper training is likely to yield improved clinical outcomes and is more likely to optimize the use of healthcare funds. Future studies should provide more focus on meaningful outcome measures of an integrative care approach, such as overall perceived pain, reduced side effects of pharmacological interventions, and overall cost-effectiveness.

Appropriate Clinicians and Training Requirements

Licensed acupuncturists are currently the only health profession authorized to provide acupuncture with federally regulated and accredited independent oversight agencies. The Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM) is a specialized accreditation agency recognized by the U.S.

Department of Education that monitors academic curricula of professional non-degree and graduate degree programs (including doctoral programs) in acupuncture and Oriental medicine. A master's degree in acupuncture requires a minimum of three years and 1,905 hours of training, covering acupuncture theory, clinical practice, biomedicine, ethics, counseling, patient communication, and practice management. A minimum of a master's degree level program is required to become a licensed acupuncturist and be eligible to sit for the NCCAOM national board exams. In addition, all graduates must also document in-person training and passage of a Clean Needle Technique course.

The NCCAOM establishes and promotes national evidence-based standards of competence and credentialing. The four psychometrically-validated NCCAOM national board exams establish minimal competency for an entry level practitioner. NCCAOM's three certification programs are accredited by the National Commission for Certifying Agencies (NCCA). NCCAOM Diplomates (National Board-Certified Acupuncturists™) are required to be recertified every four years in order to maintain their knowledge and clinical performance at the highest levels of competency for acupuncture practice. The recertification process includes 60 hours of Professional Development Activity, which must also include at least 30 hours of re-training in acupuncture core competencies, at least 4 hours of safety and ethics training, including education on bloodborne pathogens, clean needle technique, and more, as well as a continually updated CPR certification. All NCCAOM nationally board-certified Diplomates must agree and adhere to the NCCAOM Code of Ethics. Violations of the Code of Ethics may include denial of certification, probation, or permanent revocation of certification.

While "Acupuncturists" are recognized by the Bureau of Labor Statistics as an independent profession and are occupationally titled in the Veterans Health Administration System, they are currently not included in the Medicare program as providers. Given their extensive training and assessment of competency, board-certified, licensed acupuncturists would be the most reliably identifiable group to provide acupuncture services.

The Veterans Health Administration, which has worked to expand access to acupuncture for all of its covered veterans, currently requires NCCAOM board certification for an acupuncturist to be appointed as a VHA practitioner. The VHA represents the largest health system in the United States with more than 1,200 locations. Eighty-eight percent of their facilities currently offer acupuncture services using NCCAOM Board- Certified Diplomates to fill their acupuncturist positions. There are also a large number of VHA general practitioners who are narrowly scoped to provide battlefield acupuncture and acupuncture detox protocols, but for general acupuncture services, NCCAOM certification is required. The VHA also requires an acupuncturist to be NCCAOM Board-Certified in order to serve in their extensive outpatient referral system. The agency requires maintenance of NCCAOM certification as well as engagement in continuing education as required by the NCCAOM. This classification allows the thousands of veterans who suffer from chronic and acute pain to be treated by the most reliably credentialed and qualified acupuncturists.

Workforce

There are approximately 38,000 trained acupuncturists in the U.S.[20] (Figure 2), and the growth of the profession has been impressive over the past approximately two decades (Figures 3 and 4). Figure 5 depicts the distribution of NCCAOM Diplomates across the U.S. There are an additional 7,000 students in this system of approximately 56 ACAOM-accredited institutions currently due to graduate in the next four years. There is more than enough capacity for acupuncturists to absorb additional patients that would likely seek out this service, should CMS begin to cover acupuncture for chronic low back pain with reasonable reimbursements.

Conclusion

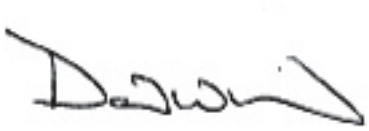
When delivered by qualified healthcare professionals, acupuncture is a safe, cost-effective, increasingly evidence-based treatment option for chronic low back pain, as well as numerous other conditions, including many that potentiate both pain and addiction. There is a well-developed system already in place to educate, train, certify, and regulate acupuncturists, and the educational system can accommodate the training of many more interested applicants than currently enter the system. The inclusion of acupuncture as a Medicare benefit for the treatment of CLBP is both a timely and rational consideration. We feel it should stand as a reasonable and necessary component of the Medicare program, and there is a growing, reliable workforce able to provide the service.

Acupuncture will prove to be a valuable addition to CMS' efforts to treat pain and help to minimize or even eliminate the use of opioids in many circumstances. It also offers promising secondary benefits that may further boost the health of seniors, as well as potentially increasing satisfaction with the Medicare program. Appropriate reimbursement by the federal government for these services to support qualified acupuncturists is critical to the success of any program expanding coverage of acupuncture.

Our organizations are grateful to the Centers for prioritizing this inquiry that could meaningfully alter the current medical management of chronic low back pain, and for examining integrative treatment options to address pain among program beneficiaries. We look forward to working with CMS to further the development of coverage policies that allow beneficiaries access to proven, non-pharmacological treatments for their pain. We stand ready to provide any additional information as requested and look forward to continuing to combat the opioid crisis through advocacy for safer and more effective treatments. If our organizations can offer any further information, please contact the NCCAOM Government Relations department by phone at 202-367-2494 or by email at advocacy@thenccaom.org, and the American Society of Acupuncturists by email at asapolicy@asacu.org.

Sincerely,

Afua Bromley, MSOM, Dipl Ac, (NCCAOM)®, LAc
Chair, NCCAOM Board of Commissioners



David W. Miller, MD, LAc
Chair, American Society of Acupuncturists

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LI – 1 商陽 *Shang Yang*, Expression of *Yang*

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

Please see bios at end of the article.

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

Shang Yang is a metal point and a *Jing-Well* point on Large Intestine channel. In the picture you can see the merchant siting on a well and the heap of coins and knife representing the Metal quality of the point.

Shang is a note related to Metal on the Chinese 5 tone music scale. *Shang* also means merchant, trader. Both translations are depicted in a form of a male (*Yang* channel) merchant playing *Guqin* – an ancient Chinese zither. It is worth mentioning that strings are pulled by his index finger – a hint for location of the point.

Large Intestine channel tells a story of rising suns and distribution of *Yang*. That is why there are some lanterns and a fire-bird on merchant's cart (the fire-bird is kept in a metal cage – Metal point can give borders to Fire).

You can watch a free special video about the point: *TCM Academy: https://www.tcm.ac/course/ht-9-unfolding-the-mystery-of-universe-and-man/*

Characters of the Name:

商 – *Shang*

This character means to express inner feelings, to deliberate.

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

陽 – *Yang* – the *Yang* principle

This character portrays rays of sunlight warming a hill.

Meaning of the Name:

Expression of *Yang*

LI-1 is a Metal point on the Large Intestine channel giving borders to the energy of Fire and Heat. LI-1, *Shang Yang* together with Lu-11, *Shao Shang*, enables proper expression and speech. It has a very strong and immediate effect in relieving acute throat pain and hoarseness.

Main Actions and Indications:

1. LI-1 is a *Jing-Well* point

1.1 Affects the other side of the channel – throat

Jing-Well points are dynamic in nature and their energy reaches the other side of the channel. LI-1 is the beginning of *YangMing* channel, the expression of a digestive tract. Therefore it strongly influences the throat. As a Metal point and a *Jing-Well* point it mainly releases the Heat/Fire pathologies, preventing and treating inflammatory processes in the throat, teeth, and sub-mandibular region.

Since *YangMing* channel is abounded with *Qi* and Blood it can both pacify and eliminate Heat.

1.2 Fullness in the chest

There is a branch connecting Lu-7 and LI-1. Therefore LI-1 is indicated in the case of fullness in the chest with cough and dyspnoea.

1.3 TMM TendoMuscular Meridian:

The Sinew channels begin at the *Jing-Well* points. The Large Intestine Sinew channel flows along the arm through following muscles: extensor digitorum, extensor carpi radialis longus, brachoradialis, biceps brachii, deltoid subscapularis. Then it enters the neck and head region going through: scalenes, trapezius, sternocleido-mastoid, platysma, risorius, masseter, nasalis and finaly temporalis muscle. Therefore LI-1 is an effective point in the treatment of pains, sprains or swellings of these muscles as well as the swelling of submandibular region, teeth pain, tonsillitis, or facial neuralgia.

2. LI-1 is a Metal point

Metal is the Phase related with Autumn and downward, inward movement of *Qi*. Its nature is communicating between Heaven and Earth, *Yang* and *Yin*. Therefore LI-1 is perfectly located as the first point on the Large Intestine channel, receiving the Heavenly energy from the previous, *Lung* channel.

This ability of leading the energy of Fire into the energy of Water, *Yang* into *Yin*, results in strong anti-inflammatory function of Metal Phase and all Metal points in the channel system. The same function is reflected in the *Ke cycle* of Five Phases, where the energy of Metal can draw down the energy of Fire/Heat. LI-1, being a Metal point on the *Yang* Metal channel is one of the strongest anti-inflammatory points in the body. It also generally harmonizes the Metal Phase.

The Metal Phase relates with the ability to give sounds. Lu-11 and LI-1, both being *Jing-Well* points on the Metal channels, are sharing the name *Shang* radical and facilitates speech and expression, treating hoarseness, pain and inflammation of the throat, the organ producing the Five Sounds.

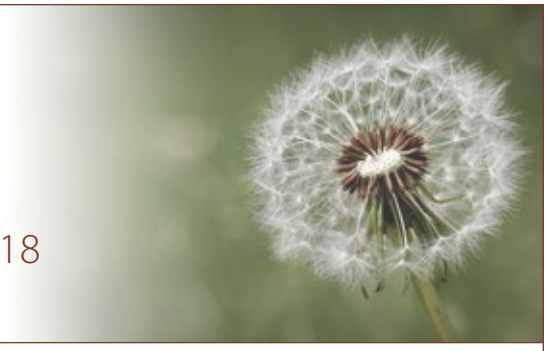
Inflammatory processes are related to the energy of Fire and Heat. In order to balance this strong *Yang* pathological process, the body reacts by releasing fluids at the affected area hence creating local swelling. LI-1 reduces inflammatory processes in the throat and reduces the swelling. Moreover, the Metal quality of the point results further help in reduction of oedema by its drying action.

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

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

The Giant Has Left Us: Giovanni Maciocia

February 28, 1945-March 9, 2018



Giovanni Maciocia has passed.

A scholar and clinician who opened the door for countless practitioners of Chinese medicine in North America, Europe, Central Asia, and Australia will no longer lecture, demonstrate diagnoses, author books, or be available for guidance. Every practitioner who reads English has gained insight, knowledge, and courage from Giovanni. It is impossible to imagine ourselves as individuals and members of our profession without feeling, thinking, and experiencing what Giovanni bequeathed us.

Thanks to him, practitioners of East Asian medicine in the West have for the most part moved away from the margins and become a vibrant component of modern health care. Giovanni afforded us a usable vocabulary where previously ones were inadequate. He taught us how to examine another civilization's medicine both theoretically and practically. We and our patients owe Giovanni a deep debt of gratitude.

Giovanni was born into a medical family in Naples, Italy. He was part of the '60s rebellions when he decided to train in Oriental medicine. His decision was a protest, an assertion of respect for another world. The few books on this topic that were available back then were neither serious nor understandable; there were no professional organizations, licenses, or career pathways to shape the path.

Giovanni graduated from the International College of Oriental Medicine in 1974 but he felt he still needed to learn more. He travelled many times to China to study at the Nanjing University of Traditional Chinese Medicine where he gained the respect of Chinese colleagues.

He poured over dictionaries and taught himself to be comfortable reading Chinese medical texts. He started to lecture around the globe. He started to write—first with pen and then with computer. He amazed us at his meticulous style, clarity, erudition, and rigor. We could see a method and elegance in East Asian medicine.

Giovanni had a vision that encompassed detail, nuance, and complexity. Many people have told me that they have had to rebind their Giovanni books multiple times because they read them so often. Throughout our studies, it was as if he held our hands. Afterwards in clinical practice, his books offered guidance, and comfort. Young up-and-coming students needed to memorize his writing for examinations; but he also provided the answers.

What dizzying productivity: *Foundations of Chinese Medicine, The Channels of Acupuncture, Practice of Chinese Medicine, Tongue Diagnosis in Chinese Medicine, Obstetrics and Gynecology in Chinese Medicine,* and *The Psyche in Chinese Medicine* as well as many journal articles. In 1996, he was appointed Visiting Professor at the Nanjing University of Traditional Chinese Medicine.

Giovanni's work has done much to enable this medicine to extend its reach far beyond Asia. East Asian medicine is now poised to become integral to cosmopolitan medicine. A perfect example is the World Health Organization's (WHO) forthcoming *International Classification of Disease, Eleventh Revision* (ICD-11), which will include a major new section on traditional medicine (China, Japan, Korea).

The section will have diagnostic codes for every pattern and disease in East Asian medicine. Descriptions of Liver Wind and Spleen Dampness will be on the desk of every biomedical clinician. Our codes will coexist alongside of biomedicine's nosological categories.

Younger practitioners and students now live in a different world. This trailblazer has given them a path. Giovanni's words remain. His ideas persist. His *hun* lingers and his *zhi* (wisdom) still provides.

Those of us who experienced his teaching will continue. Our students will carry on. I think Giovanni's name will be on our lips and in our mind for countless generations. His *hun* and *zhi* will continue to inspire everyone who joins the community of East Asian medicine.

May his memory be a continuous blessing.

–Ted Kaptchuk, Cambridge, MA

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