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JASA

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The Journal of the American Society of Acupuncturists

INSIDE

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JASA
The Journal of the American Society of Acupuncturists

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

Dear JASA readers,

This year marks the beginning of a new decade and beginning of a new cycle in Chinese astrology, the year of the Metal Rat. Rat is the first of the zodiac animals signaling wealth, surplus and fertility. Properties of metal are strength and stability.

But how is stability and fortune found in a time of chaos and uncertainty during this unprecedented global pandemic? There are silver linings everywhere if you know where to look.

Medicare: This year changed everything for the American acupuncture profession when the CMS announced Medicare will cover acupuncture for chronic low back pain. This instantly makes us part of western mainstream evidence-based medicine. Though not all acupuncturists will choose to work in a mainstream medical setting, it's nevertheless a long-awaited endorsement for our medicine.

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.

Philanthropic funding: This year I designed a very "metal" project for the ASA and the acupuncture profession and was awarded a $121,000 grant by The David and Lura Lovell Foundation for the U.S. Acupuncture Profession Planning Project. The David and Lura Lovell Foundation is well-known for funding Dr. Andrew Weil's University of Arizona Integrative Medicine Center and for The Bravewell Collaborative, which supports the advancement of integrative medicine in science and policy.

The purpose of the planning project is to collectively define ASA's vision, its mission and how we want to use our resources to materialize what we want for the future of ASA, JASA and the profession. The project involves qualitative and quantitative research, and the final product is a strategic plan that includes all the collected information, which can be used as a guideline for what we do and how we use our resources in the future. This first year is meant to serve as a foundation so we can apply for funding for future initiatives from Lovell and other philanthropic foundations that fund integrative medicine initiatives.

High-Profile Partnerships: Our profession has a new partnering organization, The Academic Consortium for Integrative Medicine & Health (The Consortium). Their membership includes over 80 highly esteemed academic medical centers and health systems: Harvard, Yale, John's Hopkins Medical School, NYU, Mayo Clinic, to name a few. See their member listing here: https://imconsortium.org/members/member-listing/

The Consortium is supported by membership dues and grants from philanthropic partners including sustained support from the Bravewell Collaborative. The mission of the Consortium is to advance the principles and practices of integrative health care within academic institutions.

The Consortium provides its institutional membership with a community of support for its academic missions and a collective voice for influencing change. With Medicare now covering acupuncture for chronic low back pain, it's more important than ever to foster

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relationships with allied healthcare providers. We are grateful that The Consortium is serving as ASA's fiscal sponsor and will be managing the grant account with the funding from the Lovell Foundation.

Publishing: The planning project also provided funds to hire a professional editorial consultant who is preparing a proposal to send to several potential publishers and represent JASA in our search for a scientific publishing company. Our goal is to make JASA more easily available to the acupuncturists who it serves and expand into global databases such as PubMedCentral so our evidence can be more widely disseminated.

Along with this, we've made revisions to our website, articles and messaging. We've added some high profile internationally known research scientists to our editorial board to attract the attention of potential publishers and show how ready we are to advance to more widely used research databases.

We continually thank our readers, authors, reviewers and advertisers, for making the journal what it is and what it will be as a result of this new direction.

Respectfully,

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

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Effectiveness of Acupuncture for Induction of Labor: A Literature Review

By Adam Miramon, DACM, LAc, Dipl Ac (NCCAOM)

Adam Miramon, DACM, LAc, Dipl Ac (NCCAOM) earned their Doctor of Acupuncture and Chinese Medicine from the American College of Traditional Chinese Medicine at the California Institute of Integral Studies in May 2020. Dr. Miramon, identifying as gender nonconforming, specializes in reproductive health with a focus on fertility, pregnancy, obstetrics, and postpartum care. They own and operate Uptown Acupuncture LLC located in Washington, D.C. Email: adam@uptownacupuncturedc.com

Abstract

Objective: The objective of this literature review is an evaluation of the current scientific evidence for acupuncture as a treatment for labor induction or cervical ripening.

Design: Alt HealthWatch, CINAHL, and Medline with Full Text databases were searched to identify relevant studies between 1999 and 2020.

Inclusion Criteria: Any study or systematic review of acupuncture to induce labor in human, pregnant at-term individuals.

Exclusion Criteria: Animal studies, studies in languages other than English, studies of acupressure/acupuncture for pain with labor.

Results: Five relevant studies met the inclusion criteria. Two of these studies were randomized controlled studies and two were systematic literature reviews. The fifth study was a theoretical article to inform physicians. The results of the randomized controlled studies and the systematic reviews are inconclusive as two had favorable outcomes and two had unfavorable outcomes. The sample sizes of all randomized controlled studies including those evaluated in the systematic literature reviews were inadequate to provide definitive results.

Conclusion: There is a deficit of research into the field of acupuncture and obstetrics. There is a need for large scale, multi-center, well-designed, randomized controlled trials into acupuncture for induction of labor and cervical ripening. This review is limited by databases used and retrieval only of full text, which can result in excluding meta-analyses or other trials from the search.

Keywords: Acupuncture, obstetric labor, obstetric delivery, induced labor, cervical ripening, labor induction, cervical dilation, traditional Chinese medicine

Introduction

Labor induction is a process in which cervical ripening and uterine contractions are initiated prior to spontaneous labor. Labor induction is a common practice in obstetrics in the absence of spontaneous labor and when the cervix is not favorable or ripe, with an annual rate of labor induction ranging from 9.5% to 33.7%.[1]

The Bishop score is a standardized system developed in 1964 to assess the cervix during birth. This scoring system is used to determine which full-term candidates are most likely to proceed with a vaginal birth.

The Bishop score is calculated from a subjective perinatal vaginal exam (VE) by a qualified western medical professional. The qualities assessed in the VE are cervical dilation, cervical quality, cervical effacement, position of the cervix in the vagina, and head station of the fetus. Each of these qualities receives a subjective score from zero to three based upon their ranking as outlined in Table 1.

Table 1. Bishop Score from "Methods for Cervical Ripening and Induction of Labor" in *American Family Physician*[1]

Score	Dilation (cm)	Effacement (%)	Fetal Station	Consistency of Cervix	Position of Cervix
0	0	0 to 30	-3	Firm	Posterior
1	1 to 2	40 to 50	-2	Medium	Mild
2	3 to 4	60 to 70	-1, 0	Soft	Anterior
3	5 to 6	80	+1, +2	-	-

These scores are then totaled to produce the Bishop score. Total scores of six or less often require some form of cervical ripening, whereas scores of eight or more indicate the patient will probably proceed with a successful vaginal birth.[1,2]

Tenore outlines and briefly describes all forms of cervical ripening and includes information on the current research available. Non-medical interventions include herbal supplements, castor oil, hot baths, enemas, sexual intercourse, and nipple stimulation. Medical interventions include acupuncture with or without electrical stimulation, mechanical dilators, stripping of the membranes, amniotomy, and pharmacological cervical ripening or labor induction.[1]

Pharmacological cervical ripening agents include the prostaglandins Prepidil and Cervidil, and the misoprostol Cytotec. When the cervix is ripe, or favorable, the pharmacological agent most often used is oxytocin.[1] While western medical professionals prefer the mechanical, surgical, and pharmaceutical methods of labor induction, many patients want to avoid unnecessary pharmaceutical interventions during pregnancy and labor due to known side-effects.[3,4]

"Any study or systematic review of acupuncture to induce labor in human, pregnant at-term individuals was selected for inclusion. Exclusion criteria were animal studies, studies in languages other than English, and studies of acupressure/ acupuncture for pain with labor."

Acupuncture is one possible alternative to mechanical, surgical, and pharmaceutical methods of cervical ripening and labor induction. One survey of midwives published in 2000 noted that 20% had used acupuncture for labor induction or cervical ripening.[4] One systematic review discovered research from 1977 that described acupuncture "as an effective tool for cervical ripening or induction of labor."[5] There is limited scientific evidence to the effectiveness of acupuncture for conditions related to pregnancy, labor, and delivery; however, the use of acupuncture in pregnancy-related conditions is on the rise.[3]

Methods

Alt HealthWatch, CINAHL, and Medline databases were searched using EBSCOhost. The search terms were "acupuncture" AND "labor induction" OR "cervical ripening." The inclusion criteria were limited to full-text scholarly articles published between January 1, 1999 and January 31, 2020.

Any study or systematic review of acupuncture to induce labor in human, pregnant at-term individuals was selected for inclusion. Exclusion criteria were animal studies, studies in languages other than English, and studies of acupressure/ acupuncture for pain with labor.

The titles and abstracts were screened for relevance to the search terms and topic, then sorted by the type of study – randomized controlled trials, systematic literature review, and non-systematic, narrative review. Duplicate studies were eliminated, and literature reviews were evaluated for duplication of randomized controlled trials included in this review. Appropriate studies were then evaluated based on their methods, data, results, and overall quality of the study.

Results

A total of seven studies were retrieved; five met the inclusion criteria and two did not. Included studies are summarized in Table 2. Two of these are literature reviews, two are randomized controlled studies, and one is a non-systematic, narrative review that outlines all available methods of cervical ripening—both pharmacological and nonpharmacological.

Acupuncture is an effective treatment for many conditions related to pregnancy, with minimal incidences of side-effects. It can be utilized prior to pregnancy, throughout pregnancy, during labor and delivery, and postpartum.[4,6] Because the field of acupuncture for obstetrics is not in the clinical guidelines for western medical practitioners, acupuncture is not considered a primary therapy.

Table 2. Summary of Research Articles Identified

Author and Year	Research Design	Sample Size or Number of Relevant Studies	Control Group	Results and Conclusion
Ajori et al. 2013	Randomized Controlled Trial	105 recruited 75 completed the trial	• 37 randomized into sham acupuncture group	• Acupuncture not effective for induction of labor • Shorter time from trial enrollment to delivery for the acupuncture group though not statistically relevant
Alsharnoubi et al. 2015	Randomized Controlled Trial	120 recruited 60 completed the trial	• 30 randomized into sham laser acupuncture group	• Laser acupuncture effective for induction of labor • Statistically relevant difference between the control and acupuncture group • No known side effects associated with laser acupuncture • Evidence of clinical effectiveness of laser acupuncture is limited
Lim et al. 2009	Systematic Literature Review	10 of 10 studies relevant	• 5 of 10 studies utilized randomized control trial (RCT) design with control groups • 1 of 10 studies utilized nonrandomized control trial (NRCT) design with control group • 3 of 10 studies nonrandomized control trial (NRCT) design with no control group • 1 of 10 studies utilized a matched pair design (MPD) with a control group	• 3 RCTs and 3 NRCTs concluded no statistically relevant benefit of acupuncture • 2 RCTs, 1 NRCT, and 1 MPD concluded relevant benefit of acupuncture • Relatively no side effects associated with acupuncture • Recommendation for well-designed randomized control trials (RCT)
Chen et al. 2014	Systematic Literature Review	11 of 87 studies relevant	• 8 of 11 studies utilized randomized control trial (RCT) design with control groups; the remaining 3 studies utilized observational design • 5 of 8 studies utilized a blank control group • 3 of 8 studies utilized oxytocin treatment control group	• Acupuncture shortened labor duration • Acupuncture reduced the amount of oxytocin required • Unknown western medical mechanism of action • Relatively no side effects associated with acupuncture • Recommendation for well-designed randomized control trials (RCT)
Tenore, JL 2003	Theoretical Article	2 of 35 studies relevant	• Unknown as detailed information about studies was not provided	• Studies were poorly designed and lacked rigorous criteria for consideration • Recommendation for well-designed randomized control trials (RCT)

For comparison, Chen et al. noted that research into the effectiveness of acupuncture during labor and delivery "should focus on the scientific evaluation of its clinical, biochemical, and morphological effects with large scale randomized clinical trials." The authors also noted that research into acupuncture in obstetrics peaked in mainland China between 2006 and 2010.[6]

Randomized Controlled Trials

Western medical labor induction through pharmaceutical and non-pharmaceutical methods has known side effects and may be associated with complications, including fetal distress or death.[3,4,7] Two randomized controlled trials (RCT) sought to evaluate the effectiveness of acupuncture to induce labor.

Alsharnoubi et al. was conducted in Tehran, Iran, with an initial specified sample size of 120 with the final results based on 60 participants. The inclusion criteria were gestational age of 40-weeks, vertex presentation, singleton pregnancy, and normal fetal heart rate. Exclusion criteria were placental insufficiency, pelvic malformation, multiple pregnancy, abnormal fetal presentation, reduced fetal movement, oligohydramnios, or cesarean/uterine scar.[7]

This RCT utilized laser acupuncture for 60 seconds with 0.02 Joule per point. Participants received one treatment per day consecutively for three days. The acupuncture point prescription included LI-4 hegu, SP-6 sanyinjiao, BL-31 shangliao, and BL-32 ciliao. The primary outcome for this study was normal vaginal delivery (NVD) which was not specified further. In the acupuncture group, 66.7% of participants proceeded to natural vaginal delivery compared to 26.7% of participants in the control group.

The authors concluded that laser acupuncture was effective for the induction of labor, and they noted a statistical difference between the control and acupuncture groups. While not statistically significant, the authors also noted a higher 1-minute Apgar score for fetuses in the acupuncture group by a 2 to 1 margin with an Apgar score of 10.[7]

Ajouri et al. was conducted in Cairo, Egypt, with a sample size of 105 with final results based on 80 participants. The control group utilized sham acupuncture. The gestational age for this RCT was between 38- and 42-weeks. The inclusion criteria were intact membranes, less than 3 cm cervical dilation, cephalic presentation, and no signs of labor. The exclusion criteria were multiple pregnancy, pelvic malformation, cesarean/uterine scar, intrauterine growth restriction, skin infections, psychological disorders, anticoagulant usage, macrosomia, indication of emergency pregnancy termination, elective termination of pregnancy, or intolerance of acupuncture.[3]

This RCT utilized disposable acupuncture needles (0.25 x 25 mm) that were retained for 30 minutes. Acupuncture was conducted every three days until spontaneous onset of labor or until 42-weeks gestation at which point western medical methods of induction were utilized.[3]

The acupuncture point prescription for this RCT study included LI-4 hegu, SP-6 sanyinjiao, and BL-67 zhiyin. The primary outcome was the spontaneous onset of labor described as rupture of membranes, 4-5 cm cervical dialation, or three contractions within a 10-minute interval.[3]

The authors noted no difference in the onset of spontaneous labor between the control group and the acupuncture group. However, the authors did note the time from study enrollment to delivery was 1-2 days shorter for the acupuncture group even though this difference was not statistically significant. Ajori et al. concluded needle acupuncture was not an effective treatment for the induction of labor.[3]

Alsharnoubi et al. and Ajouri et al. are homogenous in certain aspects of their study design. While some of the inclusion/exclusion criteria differed, both studies included singleton pregnancy, cephalic presentation, no signs of labor, and no signs of fetal distress. The exclusion criteria for both studies were pelvis malformation, multiple pregnancy, placental insufficiency, intrauterine growth restriction, and/or previous cesarean delivery (CD). Both RCTs included LI-4 hegu and SP-6 sanyinjiao in the point prescription.[3,7]

Alsharnoubi et al. concluded that laser acupuncture is effective and statistically significant; whereas, Ajouri et al. concluded that needle acupuncture is an ineffective treatment for labor induction.[3,7] The methods with which lasers stimulate acupuncture points and their mechanisms of action remain unclear. Possibilities exist that laser acupuncture could be different from our current understanding of acupuncture theory, and that the positive results of laser therapy could be entirely independent.[8] This variation in therapy suggests that the results of these studies cannot be considered together. Therefore, these studies and their conclusions are heterogenous.

Literature Reviews

Two literature reviews were located in this search. The first one, Lim et al., sought all studies on the topic "acupuncture and labor induction from 1970 through 2008." The authors found ten clinical studies that focused on acupuncture for induction of labor. Five of the ten studies utilized LI-4 hegu and SP-6 sanyinjiao for the induction of labor with one of these studies including two additional acupuncture points. Three studies utilized either SP-6 sanyinjiao or LI-4 hegu, and one study did not specify the point prescription.

The mechanism of action for acupuncture was not specified. Lim et al. did speculate that "stimulation of the parasympathetic system excites the uterus, whereas sympathetic stimulation might be excitatory or inhibitory" for individuals who are close to term in pregnancy.

Lim et al. failed to conclude the effectiveness of acupuncture. However, the authors did conclude that acupuncture demonstrated relatively no side effects associated with labor and proposed acupuncture as an alternative treatment because of its safety and low risk. Lim et al. recommended the need for well-designed RCTs to evaluate the effectiveness of acupuncture for labor induction.[4]

The second one, Chen et al., sought all Chinese studies of the use of acupuncture in labor and delivery from 2002 through 2012. The authors found 87 clinical papers on topics of acupuncture as treatment for pain management during delivery; labor induction; postpartum disorders; abortion; and psychological factors. The point prescription for labor induction from the Chinese research studies was not explicitly stated. Chen et al. did not speculate or elaborate on the mechanisms of action for the studies they reviewed.[6]

The authors concluded acupuncture improved the quality of uterine contractions, shortened labor duration, reduced the amount of oxytocin required by study participants, and noted no adverse side-effects or events. Chen et al. recommended that further research should focus on the use of acupuncture during delivery "on the scientific evaluation of its clinical, biochemical, and morphological effects with large scale randomized clincal trials."[6]

Lim et al. and Chen et al. were heterogeneous in their literature review approach. Lim et al. limited their search to studies focused on acupuncture for labor induction/cervical ripening. Chen et al. sought studies of acupuncture for various conditions before, during, and after pregnancy. This difference in the search criteria affects the outcome, detail, and review of the results. For example, Chen et al. failed to specify point prescriptions utilized for labor induction or cervical ripening. This lack of detail reduces the quality of the literature review.

The conclusions of Lim et al. and Chen et al. also varied with positive results being split. The literature reviews are homogenous in two areas—the inability to determine a mechanism of action and the recommendation for well-designed RCTs. Neither Alsharnoubi et al. nor Ajori et al. was included in either of these systematic literature reviews.[3,7]

Non-Systematic, Narrative Review

The Tenore article, which appeared in May 2003 American Family Physician, was presented as a guide to pharmacological and nonpharmacological methods for labor induction and cervical ripening. Nonpharmacological methods included information on the research into herbal remedies, manual remedies, acupuncture, mechanical modalities, and surgical methods, whereas pharmacological methods included prostaglandins, misoprostol, mifepristone, relaxin, and oxytocin. Each subcategory outlined some research or evidence available and the results of said research. However, this article lacked the rigor of a full literature review by not providing the search engines, search terms, date limitations of research, inclusion or exclusion criteria, or any information about how the author located the research.[1]

Tenore explains the process of acupuncture with a rudimentary explanation of acupuncture theory. The author then presents one possible consideration about the mechanisms of action for acupuncture as understood through western medical theory: acupuncture stimulates the release of oxytocin and prostalandins.[1]

Tenore points out that many of the studies into acupuncture and labor induction were not well designed and lacked rigorous research criteria. Therefore, the author suggests well-designed RCTs are needed to evaluate the effectiveness of acupuncture for labor induction.[1]

While this article is over 10 years old, Tenore contains important information regarding western medical standard of care for induction of labor. The American College of Obstetricians and Gynecologists' (ACOG) current practice guidelines for induction of labor were published in 2009. The standards of care outlined in Tenore are in alignment with the most current recommendations of ACOG.[1,9] However, this article lacks other important and current information regarding acupuncture and labor induction as evidenced by the other studies included in this literature review as well as studies that may be available through other search engines.

Discussion

Labor induction is a medical procedure in which labor is started artificially to reduce the risk of neonatal morbidity. The procedure includes pharmaceutical and manual medical interventions to promote and encourage the onset of labor. Induction of labor is typically conducted on high-risk patients with a gestational age of 38-weeks or later.[10]

This medical definition of labor induction does not align with the modality of acupuncture. Leaders in the field of acupuncture for childbirth use terms like "promote the onset of labor" or "cervical ripening/dilation."[2,11] The use of these terms by experts in the field of acupuncture suggests acupuncture

"This medical definition of labor induction does not align with the modality of acupuncture. Leaders in the field of acupuncture for childbirth use terms like 'promote the onset of labor' or 'cervical ripening/dilation.' The use of these terms by experts in the field of acupuncture suggests acupuncture prepares the body for labor rather than acts as a form of labor induction."

prepares the body for labor rather than acts as a form of labor induction.

Two systematic reviews, Park et al. and Clarkson et al., concluded that adverse events of acupuncture during pregnancy were relatively minor. The most notable side effects outlined were discomfort, localized bleeding, drowsiness, fainting, and a drop in blood pressure.[12,13] These are all known common side effects of acupuncture treatment.

Several points of discussion regarding the evaluated articles include: (1) conflicting results; (2) problematic research design; and (3) deficit of research into this field. Five primary and secondary sources were included and both the results and conclusions of these sources vary. Two studies concluded acupuncture was effective for cervical ripening or induction of labor and two studies concluded acupuncture was ineffective. Each grouping of two studies contained one systematic review and one randomized controlled trial.

Tenore concluded that acupuncture was an ineffective treatment. However, this narrative review lacked the rigorous approach of a systematic review because the goal was to inform clinicians of the various treatments available for induction of labor and cervical ripening. In evaluating the remaining four available primary and secondary sources, the effectiveness of acupuncture is evenly divided.

The studies included in this review lack homogeneity in research design and methods. This creates a situation where studies cannot be compared effectively because of their differences. The RCTs were heterogenous in their participant inclusion and exclusion criteria, gestational age of the birthing parent, and method of acupuncture treatment. Another prominent issue is the difference in the studies' methodological approaches.

Leading obstetrical acupuncturists recommend the following for promoting spontaneous labor: LI-4 hegu, SP-6 sanyinjiao, and LR-3 taichong or BL-32 ciliao.[2,11] The point prescription for nine RCTs was comprised of LI-4 hegu and/or SP-6 sanyinjiao. Both points were utilized in Alsharnoubi et al. and Ajouri et al.[3,7]

The studies within Lim et al. that included LI-4 hegu and/or SP-6 sanyinjiao were Tsuei et al. (1974), Kubista et al., Tsuei et al. (1977), Rabl et al., Harper et al., Dunn et al., and Selmer-Olsen et al. Three RCTs from Lim et al. and all studies from Chen et al. either do not include the aforementioned points or do not specify a point prescription.[4,6]

Many of these studies utilized this point selection with the addition of other acupuncture points; some points were used as treatment for labor induction and other points were based on individual patient diagnosis. One of the studies included in this review evaluated the use of laser therapy as opposed to acupuncture with needles.

The evaluation of the literature reviews included randomized controlled trials, nonrandomized control trials, matched pair design, and observational design. While all of these study designs have value, RCTs are viewed as the gold standard among researchers.

The most problematic design component was the sample size of the studies. All of the studies with the exception of Chen et al. had sample sizes of less than 125 participants. The sample sizes referenced by Chen et al. were not published by the authors, thus making this literature review incomplete and reducing the quality of the research. Large sample sizes more accurately address the general human population, whereas, small sample sizes decrease inferential statistical power and fail to provide a clear view into the effectiveness of acupuncture.[6]

In the United States, few patients are allowed to exceed the gestational age of 41 weeks 0 days (41w0d) because of an increased risk of neonatal mortality. This fact is supported by a study conducted between 1999 and 2003 in California.[14] Ajouri et al. conducted acupuncture every three days or until spontaneous labor between 38- and 42-weeks gestation limiting its generalizability to the U.S. The gestational age of 42-weeks is outside the gestational limits accepted within the United States. Alsharnoubi et al. conducted laser acupuncture at 40-weeks gestation daily for three days. The variation in approach between these two RCTs sets different standards of care for the patients.

As research improves and informs healthcare decisions for both patients and medical practitioners, the most critical point in this discussion is the lack of research on acupuncture for induction of labor or cervical ripening. Many of the studies discussed here recommended the need for well-designed RCTs.

Inclusion criteria for these RCTs would be limited to patients whose obstetrician has recommended medical labor induction, singleton pregnancy, cephalic presentation, no signs of labor, and no signs of fetal distress. Participants would be randomly selected into two groups—an acupuncture group and a non-penetrating needle control group.

A double-blind design would be capable with this study. The point prescription would be limited to LI-4 hegu and SP-6 sanyinjiao. Treatments would begin at a gestational age of 38w0d and would continue every other day until 41w0d, spontaneous onset of labor, or scheduled medical induction. Study participants would be followed from the time of entering the study to completion of the fourth stage of labor. Details of their labor, including time intervals and medical interventions, would be tracked to determine correlations.

The literature search delivered seven results within the past twenty years, with only five of these results applicable to the topic. The paucity of RCTs on this topic limits the ability of healthcare practitioners to properly inform health care decisions. Therefore, acupuncture for labor induction or cervical ripening is an area that significantly lacks quality research both internationally and in the United States.

Limitations in this literature review include its design, the selection of studies, and the necessity of limiting them to English. Meta-analyses were excluded as the search criteria did not produce results for this type of study through EBSCOhost. Trials and meta-analyses available through other search engines such as PubMed were excluded due to lack of institutional access and/or full-text accessibility. Future reviews should include additional databases to prevent bias in study design and selection.

Conclusion

The results of this literature review are inconclusive regarding the effectiveness of acupuncture for labor induction or cervical ripening. Studies examined resulted in conflicting results, which impares the interpretation of the evidence base. The studies were also heterogenous in their research design, which further complicates the interpretation of these results. Finally, there is a paucity of studies on the topic.

"The literature search delivered seven results within the past twenty years, with only five of these results applicable to the topic. The paucity of RCTs on this topic limits the ability of healthcare practitioners to properly inform health care decisions."

Results of this literature review indicate the need for large scale, multi-center, well-designed, randomized controlled U.S. trials on this topic. They should be designed to consider the use of acupuncture for induction of labor and cervical ripening over a 1-3 year period, depending on the number of participants and active study sites.

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Case Report

Chronic Idiopathic Pruritus Using Traditional Chinese Dietary Considerations

By Jennifer L. Hartmann, DAOM, LAc, RH, Dipl OM (NCCAOM)

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Abstract

Chronic ideopathic pruritus is an itch originating from unknown sources that lasts greater than six weeks. A 30-year-old female reported a chief complaint of chronic idiopathic pruritus. From a traditional Chinese medicine perspective she displayed signs and symptoms consistent with Spleen *qi* deficiency with accumulation of Damp-Heat, Liver *qi* stagnation and Blood deficiency leading to deficient and stagnant Heat stirring Wind. She had been previously seen by an internist, four dermatologists, two neurologists, and an allergist at the Mayo Clinic, showing inconclusive results of all biomedical tests. While there were clear pathophysiological mechanisms within traditional Chinese medicine that affected this case, the patient was unusually slow to respond to treatment. Careful case management and the introduction of traditional Chinese dietary considerations ultimately proved to be an effective intervention for this patient. This case history shows the need for further research to determine efficacy and establish effective mechanisms of action for treatment of this condition.

Key words: Pruritus, Damp-Heat, traditional Chinese dietary considerations

Introduction

Biomedical Perspective

Pruritus or itch is a common complaint defined as any sensation that elicits the desire to scratch.[1,2] Scratching is an important acute adaptation in response to noxious stimuli; this action can include the removal of pathogens and parasites from the skin.[1,2] Chronically, when an itch has persisted for greater than six weeks, quality of life can be substantially disrupted on a level similar to cases of chronic pain.[1-6]

Damage to the surface of the skin from scratching may or may not serve as a portal of entry for secondary infection. Additionally, chronic pruritus may lead to depression and sleep dysregulation.[3]

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Chronic pruritus presents a challenge to clinicians due to the fact that its underlying biomechanisms are poorly understood and evidence for treatments is limited.[1,3,5-6] Chronic pruritus may result from an interplay of dermatological, systemic, neurological, immunological or psychiatric disease, and may coexist with other underlying conditions.[2-7] Due to difficulty differentiating patho-physiological mechanisms and specific treatments, many patients suffering chronic itch go for long periods without diagnosis or adequate treatment.[3]

The most common cause of chronic pruritus is xerosis or dryness of the skin. Emollients are generally recommended as a primary non-pharmaceutical intervention.[3] To initiate more specific therapies for xerosis, a thorough history and examination to differentiate between localized versus generalized pruritus, to identify lesions when present, and to screen for red flag symptoms must be done.[3]

Depending on the underlying mechanism or cause, other topical agents such as corticosteroids, systemic agents, and or anti-pruritics may be recommended to help patients who do not improve from nonpharmacological interventions.[4] In addition, it is important to treat any accompanying disorders coexisting or secondary to itch such as sleep dysregulation.

Acupuncture and East Asian Medical Perspective

For over 2000 years, traditional Chinese medicine (TCM) has been used in China to treat pruritus. A number of TCM therapies for this condition includes: acupuncture, herbology, and diet therapy, among others. The three main etiologies in TCM for pruritus are: 1) pathogenic Wind, Dampness and/or Heat obstructing free flow of *qi* in the cutaneous regions or in the channels, 2) the effect of depression, anxiety or anger disrupting the normal flow of *qi* and Blood, and/or 3) dietary irregularity plus deficient Blood and *yin*.[8] There is often excess Dampness, Heat, and/or Wind present in cases involving disorders of the skin.[9]

In 2015, Chi Yu et al. conducted a meta-analysis of three randomized controlled trials (RCT) to assess the effectiveness of acupuncture for pruritus. This meta-analysis "cautiously suggest(ed) that acupuncture therapy could improve the clinical efficacy of itch."[9] There was no discussion of pattern diagnosis, nor acupuncture protocols used in the RCTs selected by Chi Yu et al.

In 2016, Chan and Murrel et al. examined therapies to treat pruritus, including acupuncture. They found that acupuncture may be effective to treat the condition and that acupuncture had been shown to reduce allergen-related itch. However, the study concluded that these findings were limited due to small number of studies and sample sizes.[10]

In 2018, Aval and Ravanshad et al. conducted a systematic review and meta-analysis of acupuncture and acupressure used to treat uremic pruritus. They utilized five articles, including six trials, in their systematic review. The combined results "showed that acupuncture or acupressure was effective in treatment of uremic pruritus" with a 95% confidence interval.[11]

They concluded that more well-designed studies were needed to provide sufficient evidence to consider acupuncture for treatment of pruritus. None of these listed considerations for pattern diagnosis nor for acupuncture point prescription or rationale.

Mazda et al.[12] studied acupuncture points Hegu (LI-4), Neiguan (PC-6), Quchi (LI-11), and Zhigou (SJ-6), needled bilaterally, in the prevention of pruritus following intrathecal morphine administration. Discussion of rationale was not included. Certified acupuncturists were utilized in administration of the acupuncture therapy.

This group randomly divided thirty patients between an acupuncture group and a control group. The control group received press needles or sham needles at the same acupuncture points as the acupuncture group. Neither press needles nor sham needles (which often administer acupressure) are considered inert by certified acupuncturists.

Takayama et al. compared the effect of analgesic effect of skin-touch placebo needle, no-touch placebo needle, and no-treatment control. This study found that there was no significant difference between the interventions.[13]

Appropriate placebo/sham acupuncture interventions are still being investigated. In the study by Mazda et al., the acupuncture and control group received therapy the night before surgery, and needles/control interventions were removed 48 hours postoperatively. However, they found no significant difference between the acupuncture group and the control group regarding occurrence of pruritus.[12]

In 2018, Manway et al. conducted a pilot study on the efficacy of acupuncture in treatment of pruritus.[14] Because pathways for pain, inflammation, and itch overlap, they measured erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) before and after acupuncture treatments. Levels of inflammation, as measured with ESR and CRP, were then compared to perceived sense of itch. Only one of ten patients evaluated had elevated ESR prior to treatment. "This patient's ESR value returned to normal range after treatment and this participant reported subjective relief of her pruritus."[14] These authors also suggested that future studies might focus on patients with elevated levels of inflammation to assess efficacy of acupuncture to treat pruritus.

Traditional Chinese diet therapy has been long considered an important branch of the medicine. The WHO has recommended inclusion and integration of Chinese diet therapy with western medicine. A number of researchers have called for greater standardization of food composition within Chinese diet therapy as well as identification of biochemical, nutritional, and physiological properties to better enable dietary studies.

Some researchers have taken up this task but more work is required. Chu et al.[15] notes several studies regarding food or diet therapy: For example, Ni et al.[16] attempted to design a mathematical model to classify the composition of various foods as *yin* or *yang* based on their ratio of copper, iron, and magnesium content. Huang et al.[17] observed that food classified at warm or hot in nature had the ability to increase prostaglandin E2, a mediator involved in proinflammatory pathways.

Other researchers cited in the Chu et al. piece such as Feng et al.[18] have sought to understand Chinese diet therapy via interactions between gut microbiota. This study concluded that while associative relationships have been established, future studies should seek to establish causal relationships linking Chinese diet therapy with gut microbiota, metabolites and therapeutic effects.

TCM includes a number of therapies in addition to acupuncture, such as use of Chinese herbs and dietary therapy. Especially in cases where there may be factors interfering or reducing the effects of acupuncture, it can be useful to include alternate therapies such as herbs and/or dietary therapy. Some factors which may interfere or reduce the effects of acupuncture include caffeine, steroids and severe *qi* deficiency.

TCM dietary therapy can be used to manipulate the structure and content of the diet to help correct pathological imbalances based on an individual's constitution and pattern diagnosis. For example, if a patient is diagnosed with excess Dampness, that patient may be asked to restrict or avoid foods classified as Damp-engendering for a period of time.

Dairy is the classic example of a food category considered Damp and or Damp-engendering in Chinese diet therapy. Many of the functional foods used in Chinese diet therapy have proved effective in improving physiological functions or reducing illness in humans; however, further research is needed to identify mechanisms and active compounds.[10]

Case History

A 30-year-old female presented with intense, inexplicable all over body itching, or pruritus. She had previously been seen for this condition at the Mayo Clinic by an internist, four dermatologists, two neurologists, and an allergist prior to consulting an acupuncturist.

Onset of pruritus began when she was 24-years-old. Blood work, a skin prick test as well as a patch testing to screen for allergies, a 24-hour urine test, and a sweat test each did not reveal any abnormal findings. Prescription topical steroid creams, doxepin, gabapentin, dextromethorphan and quinidine, loratadine, fexofenadine, cetirizine and over-the-counter topical applications of Gold Bond, Cerave Itch Relief, and cocoa butter had not alleviated or affected the pruritus to any noticeable degree.

Per the advice of other practitioners, the patient had also tried waxing, laser hair removal, Nair, and tweezing her leg hair. None of these interventions improved the pruritus. The patient had no biomedical diagnosis, thus her condition was labeled chronic idiopathic pruritus.

The patient had given birth to her first and only child one month prior to the time an acupuncturist was consulted. Her chief complaint predated her pregnancy. Nonetheless, in addressing her chief complaint, her physical state postpartum could not be neglected. Due to her episiotomy and postpartum hemorrhage she had lost a copious amount of blood.

At time of her initial visit, the patient presented with chief complaints of chronic idiopathic pruritus, insufficient lactation, and chronic headaches. She could not identify the initial onset of headache; the location of her pain was frontal, temporal and at the vertex. Her headaches were dull, potentially better with pressure, and lasted two to three hours.

Pregnancy alleviated her headaches completely, but they returned as soon as she gave birth. Stress, fatigue and dehydration all aggravated her headaches but sleep, relaxation and, food and water did alleviate them. Her pruritus primarily

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affected her lower body from the waist down but at times her pruritus could affect her whole body.

The patient was pale and had dark circles under her eyes. She displayed a linea nigra, tiny spider veins on the lateral and medial, upper and lower aspect of both her legs, and a lacey pattern on her forearms resembling a mild form of livedo reticularis. Other than these observable findings, the skin did not appear to be dry nor were there any visible lesions present.

The patient had a body mass index (BMI) of 25.4. Factors which aggravated her pruritus included driving her car (passively sitting), sitting in general, weekends (versus weekdays when she was more active), sleep (nighttime), boredom, showering, heat, humidity, bare skin exposed to air, pregnancy, wearing socks, and temperature changes. Factors which alleviated her pruritus included walking, various distractions, and cool autumn weather.

The patient did not report any difficulty falling or staying asleep as long as her newborn did the same. She tossed and turned in her sleep at times and occasionally awoke with slight nausea and a headache.

If her newborn awakened her during the night, this could aggravate her pruritus. She said she always felt cold, even during her pregnancy. Although she preferred to be in a warm environment, heat aggravated her pruritus. She experienced night sweats, especially postpartum. Her diet was mostly vegetarian; she abstained from eating meat while pregnant and she described herself as a picky eater. She liked carbohydrates and sugar.

When she finally agreed to consult Maclean and Lyttleton's *Clinic Handbook of Internal Medicine*'s[19] list of foods to restrict or avoid in treating Dampness and Phlegm, she said that everything on the restrict or avoid list were things she ate exclusively. This list was composed in part of wheat, ice cream and dairy products, sugar, eggs, butter, chocolate, nuts and seeds (especially peanuts), avocado, and raw/dried fruit (especially bananas). She did not drink alcohol or coffee. The patient did not report any digestive abnormalities but tended towards loose and sticky stools.

When she first started the acupuncture treatments, her pulses were overall thin, slippery and weak. Her tongue tended to be pale and slightly dusky, puffy with slight tooth marks, slightly wet with a very thin white coating; her tongue quivered and her sublingual veins were distended.

Diagnostic Assessment

This patient was diagnosed with Spleen *qi* deficiency leading to Damp-Heat accumulation, Liver *qi* stagnation and Blood deficiency with deficiency and stagnant Heat stirring Wind.

Treatment

TCM acupuncture strategies focused on tonifying Spleen *qi*, resolving Damp-Heat, regulating Liver *qi*, tonifying Blood, and alleviating itching. The patient was slow to respond to treatment and did not experience *de qi* sensation. Each week, the prescription was slightly altered in an attempt to elicit a response that might prove effective as well as address any acute complaints.

This busy new mother and self-described picky eater had been consuming only carbs, dairy and sugar. Early attempts to talk about diet were rebuffed by the patient; it was only when she was urged to review the *Clinic Handbook of Internal Medicine*'s[15] list of foods to restrict or avoid in treating Dampness and Phlegm that, as noted above, she understood that she was only eating restricted or foods to avoid and that she needed to alter her diet.

This prescription was very challenging for the patient; she didn't like to cook and when dining out, her only preference was a Cold, Spleen-taxing salad. However, after limiting and abstaining for a week from Damp aggravating foods, primarily dairy, her symptoms were completely resolved.

The patient could not tolerate the taste of granule herbs so she was switched to capsules, which restricted the extent to which modifications were possible. At her 5th treatment, she was prescribed a low dose, 6 g/day, of KPC's *Dang Gui Yin Zi* (*Dang Gui, Sheng Di Huang, Bai Shao, Chuan Xiong, He Shou Wu, Jing Jie, Fang Feng, Bai Ji Li, Huang Qi* and *Gan Cao*). Though it did not address the Dampness, the patient's headaches were alleviated with use of this formula.

After *Dang Gui Yin Zi*, at her 7th treatment, she was prescribed a low dose, of 6 g/day, of KPC's *Xiao Feng San* (*Jing Jie, Fang Feng, Dang Gui, Sheng Di Huang, Ku Shen, Cang Zhu, Chan Tui, Hu Ma Ren, Niu Bang Zi, Zhi Mu, Shi Gao, Gan Cao,* and *Mu Tong*) to replace *Dang Gui Yin Zi* to alleviate itch, while still employing blood tonification strategies. The patient came down with a cold shortly after she began each of these formulas, neither of which had a significant effect on her pruritus.

Table 1. Herbal Formulas and Dietary Therapy

Treatment Week	Needle Depth	Retention Time	Acupuncture Points	Herbal Formulas
1	Acupuncture points were needled to depth of *de qi*, as felt by practitioner.	Acupuncture needles were retained for 30 minutes at a time.	ST-36 zusanli [bi], SP-9 yinlingquan [bi], LI-11 quchi [bi], TE-5 waiguan [bi], GB-41 zulinqi [bi], GB-31 fengshi [bi]	Dietary recommendations in lieu of herbs: beets (1 cup, 2-3 times throughout the week) to support Blood
2			ST-36 zusanli [bi], SP-6 sanyinjiao [bi], LR-8 ququan [bi], CV-4 quanyuan, HT-7 shenmen [bi], LI-4 hegu [bi], GB-41 zulinqi [bi]	Tao of Tea's organic Hibiscus (*Mei Gui Qie*), herbal teabag applied topically to acute cold sores as needed
3			ST-36 zusanli [bi], LR-3 taichong [bi], LR-8 ququan [bi], GB-31 fengshi [bi], LI-11 quchi [bi], SP-9 yinlingquan [bi], GV-20 baihui	
4			ST-36 zusanli [bi], SP-6 sanyinjiao [bi], LI-11 quchi [bi], LR-8 ququan [bi], GB-41 zulinqi [bi], HT-7 shenmen [bi], PC-6 neiguan [bi]	
5			ST-36 zusanli [bi], SP-9 yinlingquan [bi], CV-9 shuifen, LI-11 quchi [bi], GB-31 fengshi [bi], HT-7 shenmen [bi], LR-3 taichong [bi]	KPC Herbs, *Dang Gui Yin Zi,* 4 (2g) capsules, 3x/day
6			LR-2 xingjian [bi], PC-6 neiguan [bi], HT-7 shenmen [bi], LI-11 quchi [bi], SP-10 xuehai [bi], ST-40 fenglong [bi]	KPC Herbs, *Dang Gui Yin Zi,* 4 (2g) capsules, 3x/day
7			LI-4 hegu [bi], TE-5 waiguan [bi], GB-41 zulinqi [bi], LU-7 lieque [bi], LR-8 ququan [bi], SP-9 yinlingquan [bi]	KPC Herbs, *Xiao Feng San,* 4 (2g) capsules, 3x/day
8			SP-9 yinlingquan [bi], LI-11 quchi [bi], HT-7 shenmen [bi], GB-34 yanglingquan [bi], LR-3 taichong [bi], KI-6 zhaohai [bi]	
9			LU-5 chize [bi], LI-20 yingxiang [bi], LI-11 quchi [bi], SP-10 xuehai [bi], ST-40 fenglong [bi]	
10			GB-34 yanglingquan [bi], LR-3 taichong [bi], LI-11 quchi [bi], UB-40 weizhong [bi]	
11			GB-34 yanglingquan [bi], LR-3 taichong [bi], LI-11 quchi [bi], UB-40 weizhong [bi]	Patient agreed to limit or abstain from Damp foods (primarily dairy) for one week.
12			GB-34 yanglingquan [bi], LR-3 taichong [bi], LI-11 quchi [bi], UB-40 weizhong [bi]	Patient reported that all her symptoms completely resolved when she abstained from Damp foods.

Needles used: 0.20/36 gauge x 30 mm stainless steel, spring type, DBC Brand, Korea

Discussion

After discussing diet issues with the patient during the 11th treatment, as noted, she agreed to limit or abstain from Damp (primarily dairy) foods for one week. During the 12th treatment, the patient reported that by abstaining from Damp foods, all symptoms were completely alleviated during that one week. Though the patient had difficulty continuing these dietary changes, an alleviating strategy was thus successfully identified, whereas previous standard of care for pruritus had proven unsuccessful.

It is noteworthy that a food allergy test performed by a nutritionist following acupuncture did not detect any intolerance for foods considered Damp in TCM, including dairy. There was not an aberrant immune response towards dairy. Conversely, within the TCM paradigm, her Damp constitution left her vulnerable to pathologies of excess Dampness. This exemplifies the challenges when communicating between different medical paradigms.

"This case illustrates that medical practitioners may benefit by taking the time to identify and teach patients the tools to enable them to play an active part in their health."

Six years before the patient's pruritus began, she had moved out of her parent's home to live on her own. When she lived with her parents, her mother had prepared Blood-building meat and vegetables which she ate. Because she needed to remove Damp-engendering foods, she was encouraged to learn from her mother how to prepare a more varied diet of recipes that she liked and also fit this approach.

This prescription was highly individualized and relied on careful case management as well as Chinese dietary therapy rather than acupuncture and herbal strategy. The patient had to limit Damp aggravating foods from her diet as well as learn how to incorporate more dietary variety to rebuild her Blood and her overall health.

Upon follow up, the patient reported she was working to adhere to this prescription. She found that she experienced complete resolution of her pruritus when she abstained from Damp aggravating foods but could only do this to the extent she was able to incorporate more dietary variety her mother had prepared for her.

Results

In this case, a 30-year-old female reported a chief complaint of chronic pruritus. Within a TCM context, she displayed signs and symptoms of Spleen *qi* Deficiency with Damp-Heat accumulation, Liver *qi* stagnation and Blood Deficiency leading to deficient and stagnant Heat stirring Wind.

The patient had no specific biomedical diagnosis, though she had been seen at the Mayo Clinic by a number of physicians. While there were clear pathophysiological mechanisms working within the TCM paradigm, the patient was very slow to show improvement. A traditional Chinese diet and other lifestyle changes were ultimately found to be the most effective path to alleviate this condition.

This case illustrates that medical practitioners may benefit by taking the time to identify and teach patients the tools to enable them to play an active part in their health. Especially in complicated cases, the practitioner needs to listen carefully to the patient's narrative and then to problem-solve and identify interventions specific to that patient's case. This is particularly true when those lifestyle and dietary changes have the long-term potential to foster health rather than simply mask a symptom.

Conclusion

Women with chronic idiopathic pruritus may benefit from TCM dietary intervention as described above. While it is not possible to make any definitive claims with this single case study, and no clinical significance can be attributed to these findings, further research is needed to determine efficacy and establish effective mechanisms of action for treatment of this condition.

Disclosure Statement

No competing financial interests exist.

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Case Report

Successful Treatment of Intractable Idiopathic Chest Wall and Rib Pain Using Acupuncture

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Abstract

This case reports successful treatment of intractable, idiopathic chest wall and rib pain of five years duration in a fifty-year-old female patient, using acupuncture and related modalities. Patient had suffered from idiopathic chest wall pain without significant improvement with conventional therapies. Her condition was resolved in five treatments, which included manual acupuncture, electroacupuncture, running cupping and press needles. It is noted that this was a sample size of n=1. Further studies with larger sample sizes should be conducted to see if acupuncture and related modalities can help patients experiencing this kind of severe, unremitting pain. A further limitation of this case is that it is not yet known whether or not her chest wall and rib pain will reoccur, but, if it does recur, this approach can offer a relatively low cost, effective and safe alternative to conventional biomedical treatments.

Key words: Chest wall pain, rib pain, acupuncture, cupping, electroacupuncture, press needles

Introduction

Relief of chest wall pain is a common reason for consulting a medical professional. Patients mostly complain of chest pain with difficulty in breathing. Chest wall pain (CWP) can be caused by problems affecting the muscles, ribs or chest wall nerves,[1] including thoracic and intercostal nerves. The major concern of the physician is to rule out cardiac and pulmonary related causes for chest pain; in most cases the underlying cause of chest wall pain is benign and usually self-limiting.

The condition is challenging for patients whose pain persists. This is particularly true for those with drug sensitivity as limited conventional treatments exist.[2,3]

Musculoskeletal chest wall pain can manifest in a variety of ways. It can be caused by medical conditions affecting any of the organs located in the chest or upper abdomen, including the heart, blood vessels, lungs, airways, muscles, bones, esophagus, or

stomach. Diagnosis may include blood work (primarily to check cardiac enzymes and evidence of inflammation or autoimmune conditions), electrocardiogram, and imaging.

Musculoskeletal chest wall pain generally resolves well over time, usually within a few weeks, with rest, thermal therapy, analgesics, muscle relaxers, or stretching.[4] However, if necessary, allopathic treatment options rely on pain medications such as acetaminophen, non-steroidal anti-inflammatory agents (NSAID), narcotics, topical analgesics or corticosteroids. If pain recurs or does not resolve, few standard options remain, which may include interventional intercostal nerve block, antidepressant drugs and cognitive behavioral therapy.[5]

Patient Information and History of Present Illness

A fifty-year-old Caucasian female presented with main complaint of lower right side chest wall pain, which began five years ago. She did not recall any specific trauma to her chest and described the pain as "constant, dull and sore." The pain was exacerbated by lying on her right side, turning in bed, or reaching out with her right arm. The pain was localized and did not radiate into her arms.

She denied having any tingling or numbness in her right hand. She took over the counter NSAIDs as needed for pain (ibuprofen 400 mg up to 3 times a day). She exercised regularly, never used tobacco products, ate a mostly plant-based diet, and her alcohol intake included no more than six standard drinks (3.6 oz) per week.

In late December 2018, she had presented to her primary care physician with a main complaint of abrupt, extreme chest pain with painful deep respiration. The onset had occurred upon waking one morning and she described the pain as having a "sharp, burning" quality. The pain was located mostly on the right anterior side of her chest wall but extended across her lower chest and ribs to her left side as well.

Patient denied any history of increased activity nor trauma. She denied any fevers, chills, sweats, significant cough nor abdominal pain. Her medical exam at that time did not reveal any swelling, rash or bruising at the site. The only symptoms were a significant stabbing, burning pain reproducible with palpation and chest movement, which included torso rotation and raising her arms as well with deep breathing. She also mentioned that her pain was reproducible by sneezing or coughing.

The patient had a previous reported history of costochondritis in 2016 and again in 2017, which had never completely resolved but remained tolerable. Review of systems (ROS) positives per history of present illness (HPI) and all other system reviews were within normal.

"Musculoskeletal chest wall pain generally resolves well over time, usually within a few weeks, with rest, thermal therapy, analgesics, muscle relaxers, or stretching."

She rated her pain as a constant and nagging pain, which got worse and more prominent with movement and reaching out with her arm. She rated her pain at a VAS baseline of 3-4/10 and could increase to 7 on a VAS scale of 1 to10, depending on her activity or deep breathing. She denied dizziness, sweating or nausea with the pain. Certain movements or pressure applied to the region elicited strong pain, but otherwise there were no other particular triggering factors.

She has not done any interventional therapies (intercostal nerve blocks) but used topicals, pain creams, and nonsteroidal anti-inflammatory drugs (NSAID) as needed. The patient also tried applying topical heat, rest, stretching, and avoiding any activities that increased the pain.

Medical History

This patient's medical history is significant for anxiety and asthma, mitral valve prolapse (MVP), exertional headache, endometriosis and seasonal allergies. She was taking a beta agonist (Albuterol) for her asthma as needed, multivitamins, and Diclofenac 1% transdermal gel for her chest wall pain as needed. She was also taking turmeric occasionally (patient was not clear about dose and frequency) and 300 mg of magnesium at night.

Clinical Exam Findings

One the day of her first visit for acupuncture, her vital signs were within normal ranges. Her BMI was 23.42, oxygen saturation was 99%, blood pressure was 108/71, with a pulse of 81 bpm, and respiratory rate of 16. Her lungs were clear in auscultation, heart was regular rhythm and rate, no murmur, abdomen soft and non-tender with palpation, no organomegaly. Chest wall was symmetric in observation, with normal inspiratory expansion.

Resisted inspiratory expansion of her chest wall recreated lower anterior right chest wall pain with pain described as "tender" and "achy" radiating to lower left anterior ribs. She experienced "sharp" pain (VAS scale 7/10) with deep breathing, which was very disturbing to her. Active range of movement (AROM) thoracic and lumbar spine were within normal limits; there was no spot tenderness in her spine.

Tests Carried Out

Her blood work (CBC, liver function tests, thyroid) was normal. Her original X-ray imaging (four images) report in 2017 was normal indicating no fracture or osseous lesions, no opacities or nodules on the lungs, and no pleural effusion nor pneumothorax. There was no adenopathy or cardio-mediastinal silhouette enlargement except for some indication of mild mid-thoracic spine vertebral degeneration appropriate for her age.

She had two more X-ray images done in 2018. The report ruled out fracture or displaced ribs, lungs were clear, heart size was normal, and there were no soft tissue abnormalities. Mild osteoarthritis of the thoracic spine was again indicated, consistent with her age.

Western Biomedical Diagnostic Assessment

She was diagnosed with idiopathic chest wall and rib pain by her primary care physician.

Western Biomedical Therapeutic Intervention

She was prescribed Diclofenac Potassium (one 50 mg tablet, with food, three times a day as needed for pain) with Oxycodone (one 5 mg tablet every six hours as needed for pain) by her primary care physician. As the pain did not resolve, and she did not like the prescribed medications' side effects of nausea and drowsiness, she was referred to an acupuncturist.

Acupuncture Treatment Timeline

The patient began acupuncture in March 2019 after a referral from her primary care physician. She received a total of five acupuncture treatments, with one session per week. The duration of each acupuncture treatment was approximately 30 minutes excluding cupping and manual therapies. The treatment took place at a conventional medical clinic (University of Washington Neighborhood Clinic) by a board certified medical acupuncturist.

TCM and Acupuncture Diagnosis

The patient's pulse was thin, slightly floating and deficient. Her tongue was midsize, slightly pale, with a thin white coat and sublingual veins around 60%. Based on the clinical presentation and pattern diagnosis, the diagnosis was: *qi* and blood stagnation in foot Shaoyang (Gallbladder) channel, and Liver *qi* stagnation.

Materials and Methods

The acupuncture style employed was modified traditional Chinese medicine (TCM). Neurological and fascial assessment was used in conjunction with acupuncture channel theory.

The treatment regimen was relatively similar for each of the five treatment sessions. See Table 1 for the number of stainless-steel disposable needles applied and the location of points.

Needles were stimulated both manually as well as electrically (see Table 1). Response sought for the electroacupuncture needle locations was muscle twitch. The electroacupuncture machine used was ITO model ES-130 at the L-2 setting (1.3 hz).

Needle retention time was between 20–30 minutes for each session. The needle types utilized included #5 gauge 30 mm stainless steel J-type Seirin needles for manual acupuncture and #5 gauge 40 mm stainless steel L-type Seirin needles for electroacupuncture.

For each session, the patient was lying on her left side for the majority of the treatment. An Ito electro acupuncture machine was applied with a red clip on right Huatojiaji (HHJJ) T-11 and a black clip was applied on a painful point (*ashi*) associated with the right front 11th intercostal space (midclavicular line 11th intercostal). A red clip was applied on right HHTJ T-7 and a black clip on a painful *ashi* point associated with the right anterior 7th intercostal space (midclavicular line 7th intercostal). Manual acupuncture was simultaneously applied to right UB-60 Kūn Lún, right Liv-3 Tài Chōng, right Gb-41 Zú Lin Qì, and right Si-3 Hòu Xī.

Each session was concluded with flash fire running cupping[6] applied with glass cups on the right mid thoracic posterior region running to the right anterio-lateral chest wall and back to the posterior chest wall as well as occasionally over to the central and lower left chest wall. Lhasa-OMS Biotone massage oil was applied on the region when the cups were moved.

For the last three acupuncture visits, Pyonex single press needles made by Seirin Co. Ltd, 0.3 mm in length, 0.2 mm in diameter were added to the treatment. These were applied to the most painful residual (*ashi*) spot on her right lateral torso, right posterior shoulder plus right auricular points (see Table 1) with instructions to peel off the press needles in five days (or sooner if any discomfort).

Timeline

First treatment session: March 11, 2019. She reported less chest wall pain with deep inspiration (a decrease of pain from VAS scale 7/10 to 5/10) immediately after this treatment.

Second treatment session: March 18, 2019. Before the start of this treatment, the patient reported that she had continued to feel relief since the first treatment and that the intensity of the baseline pain had subsided and movement was overall less

Table 1. Treatment Timeline and Methods

Treatment number and Date	Methods	Points needled	Electro acupuncture pts (patient lying on left side)	Flash fire movable dry cupping	Press Needles	Pain level before and after treatment
#1 3/11/19	manual acupuncture, electroacu-puncture, moving fire cupping	UB-60 Kūn Lún, Liv-3 Tài Chōng, Gb-41 Zú Lin Qì, Si-3 Hòu Xī	HHJJ T-7-11, to *ashi* R anteriolateral chest pt (red at front and black at back, Low intensity L-2 frequency 6, for 20 minutes)	R posterior/ lateral/ anterior mid-torso region		from 7/10, the pain with deep breathing reduced to 5/10
#2 3/18/19	manual acupuncture, electroacu-puncture, moving fire cupping	UB-60 Kūn Lún, Liv-3 Tài Chōng, Gb-41 Zú Lin Qì, Si-3 Hòu Xī	HHJJ T-7-11, to *ashi* R anteriolateral chest pt (red at front and black at back, Low intensity L-2 frequency 6, for 20 minutes)	R posterior/ lateral/ anterior mid-torso region		pain with deep breathing remained at 5/10
#3 3/25/19	manual acupuncture, electroacu-puncture, moving fire cupping, Pyonex singles press needles	UB-60 Kūn Lún, Liv-3 Tài Chōng, Gb-41 Zú Lin Qì, Si-3 Hòu Xī	HHJJ T-7-11, to *ashi* R anteriolateral chest pt (red at front and black at back, Low intensity L-2 frequency 6, for 20 minutes)	R posterior/ lateral/ anterior mid-torso region	press needles on *ashi* points on R chest wall, press needles on R auricle (*shenmen* and Liver)	from 5/10, the deep breathing pain reduced to 3/10
#4 4/1/19	manual acupuncture, electroacu-puncture, moving fire cupping, Pyonex singles press needles	UB-60 Kūn Lún, Liv-3 Tài Chōng, Gb-41 Zú Lin Qì, Si-3 Hòu Xī	HHJJ T-7-11, to *ashi* R anteriolateral chest pt (red at front and black at back, Low intensity L-2 frequency 6, for 20 minutes)	R posterior/ lateral/ anterior mid-torso region	press needles on *ashi* points on R chest wall plus R SI-11 and R SI-12, plus press needles on R auricle (*shenmen* and Liver)	from 3/10, the deep breathing pain reduced to 1/10
#5 4/8/19	manual acupuncture, electroacu-puncture, moving fire cupping, Pyonex singles press needles	UB-60 Kūn Lún, Liv-3 Tài Chōng, Gb-41 Zú Lin Qì, Si-3 Hòu Xī	HHJJ T-7-11, to *ashi* R anteriolateral chest pt (red at front and black at back, Low intensity L-2 frequency 6, for 20 minutes)	R posterior/ lateral/ anterior mid-torso region	press needles on *ashi* points on R chest wall plus R SI-11 and R SI-12, plus press needles on R auricle (*shenmen* and Liver) plus press needle on R HHJJ T-8	from 1/10, the deep breathing pain disappeared (0/10).

painful. After this second treatment she reported that the pain was still at VAS scale 5/10 with deep inspiration, but she felt "better overall."

Third treatment session: March 25, 2019. Patient reported that before the start of this treatment, the reduction in pain had largely maintained at 5/10 at the most. She reported that she had only experienced one or two brief episodes of "dull ache and soreness" on the right chest wall during the week, so her baseline pain was significantly improved although she still could elicit sharp pain with deep inspiration.

Treatment was repeated as previously. At the end of this third visit, 0.3 mm Seirin Pyonex singles "press needles" were applied on three separate *ashi* points on the right chest wall associated with the affected intercostal spaces. Two additional press needles were placed on the right ear (*shenmen* and Liver points), with instructions to peel all of the press needles off after five days (and sooner if any discomfort). The patient reported that the pain had reduced to VAS scale 3/10.

Fourth treatment session: April 1, 2019. The patient expressed great satisfaction with the acupuncture treatments, reporting pain at VAS scale of 3/10 overall, with only one flare-up of pain with movement and sharp pain. She was pleased there was a significant decrease in the severity and intensity of pain overall even with deep inspiration. She reported it was easier overall to raise her arm and move without pain.

The treatment was repeated exactly as the last treatment except for the addition of 0.3 mm Seirin Pyonex singles press needles to painful points found at right SI-11 tiānzōng and at SI-12 bing-fēng, with instructions to peel all of the press needles off after five days (and sooner if any discomfort). After this treatment, the patient reported painful breathing with deep inspiration had reduced to 1/10 on the VAS scale.

Fifth (last) treatment session: April 8, 2019. The patient was very satisfied with the progress and stated that the pain on all levels had maintained at VAS scale 1/10 during the week, along with increased mobility.

Treatment was the same as the fourth treatment with additional 0.3 mm Seirin Pyonex singles press needles added to Huato JaJi (HHJJ) at an *ashi* point next the eighth thoracic (T8) on the right side, with instructions to peel all of the press needles off after five days (and sooner if any discomfort). She was pleased to report she experienced no pain at all (0/10 on VAS scale) after this treatment, even with deep inspiration, and she reported that she was able to raise her arm fully without pain.

Discussion

In this case the chronic idiopathic chest wall pain reduced and subsided in a fifty-year-old female patient. Application of acupuncture/ electro acupuncture at HHJJ points and along the intercostal nerves was used in conjunction with cupping at the site and the use of press needles on *ashi* points between the treatments.

There are limited options available to offer to patients with idiopathic chest wall pain. It is rare to have chest wall pain persist for years as it often self-resolves. When pain persists, many patients seek to control their pain using opioid medication.

This patient wanted a non-pharmacological approach for her pain management, therefore she sought acupuncture therapy. This treatment was the first in the patient's history that an alternative medical approach had worked rapidly and successfully.

Acupuncture is thought to induce the deactivation of the limbic-paralimbic-neocortical network in the brain and most acupuncture studies focus on deep, stimulatory needling (*de qi*).[7] From a traditional Eastern Asian medical perspective, cupping is done to dispel stagnation, thereby improving *qi* flow. From a western perspective, myofascial cupping releases and mobilizes soft tissue restrictions, increases blood flow, and facilitates lymphatic movement.[8]

The majority of Eastern Asian medicine research articles discuss the efficacy of stimulatory (deep) manual acupuncture needling, electroacupuncture and cupping, but less research has been conducted to explore the efficacy of non-stimulatory needles such as .03 mm press needles. More studies are needed on this topic.[9]

Classical literature such as *Lingshu* chapter 1 describes "needles" that were clearly not meant for insertion or strong stimulation.[10] This patient experienced a significant improvement in her pain after the addition of the press needles.

Conclusion

There is a nationwide initiative and growing recommendation to increase use of non-pharmacological pain management techniques. This case outcome suggests that patients with chest wall pain (that is not cardiopulmonary related) be considered for acupuncture and related modalities as an effective and low cost method of treatment.

It is noted that this was a sample size of n=1. Further studies with larger sample sizes should be conducted to see if acupuncture and related modalities can help patients experiencing this kind of severe, unremitting pain. A further limitation of this case is that it is not known whether or not her chest wall and rib pain will reoccur in a year or two as it has in the past but, if it does recur, this approach can offer a relatively low cost and safe alternative treatment.

Disclosure Statement

The authors report no conflicts of interest.

Informed Consent

Written informed consent was received from the patient.

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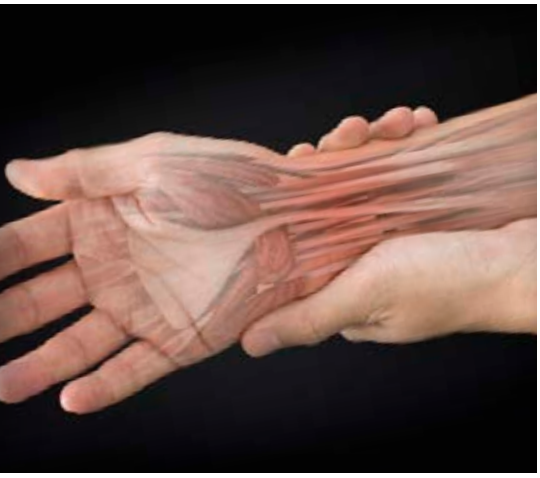

Case Report

Increase in Range of Motion and Reduction of Pain Using Acupuncture for Chronic Wrist Injury with Fracture

By Tyler N Andres, DAOM, LAc

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Abstract

Traumatic wrist injuries due to occult fractures and soft tissue injury can be difficult to manage. This case reports a positive outcome using acupuncture and moxibustion for a 36-year-old man who experienced debilitating wrist pain and limited mobility for over one year that resulted from a carpal bone fracture. After three treatments during a one-week time period, the patient demonstrated measurable improvements in range of motion and a dramatic decrease in pain through the wrist. Acupuncture is shown to be useful for chronic pain but acupuncture trials specifically for wrist pain do not exist beyond limited case reports. Better treatment options are needed for chronic wrist injuries and further investigations on using acupuncture for this condition are warranted.

Key words: Acupuncture, acupuncture therapy, moxibustion, chronic injury, chronic pain, wrist pain, carpal bone fracture

Introduction

Each year, work-related injuries comprise a significant portion of traumatic injuries in the United States. The Bureau of Labor Statistics estimates that injuries that involve the wrist and carpal bones form a small percentage of these injuries, with a median estimate of 5 per 10,000 full-time workers, whereas, in comparison, all bone fractures together make up a median estimate of 9 per 10,000 full-time workers.[1]

This same source notes that those who experience work-related wrist injuries are forced to miss a higher average number of days of work in comparison to other injuries. The median estimate is 14 days and as high as 27 days where bone fracture is involved.[1] Due to the greater length of time required for wrist injuries and bone fractures to heal, it is estimated that these specific type of injuries cost the U.S. economy hundreds of millions of dollars a year, both in medical costs as well as lost productivity.[2]

Standard biomedical care for wrist injuries that indicate possible bone fractures includes stabilization or casting the joint, pain medications, and possible surgical intervention.[3]

It is not uncommon for a patient with this type of injury to present with joint instability, ligament or soft tissue damage, and occult fractures.[4-6] These may result in chronic pain and the need for surgical procedures.[7-9]

Fractures that occur through the carpal bones, or avulsion fractures of the distal radius or ulna, are potentially more difficult to diagnose and effectively treat. Magnetic resonance imaging (MRI) and the use of radionuclide imaging are the most effective and reliable source of diagnostic imaging.[10-12] It is not uncommon for patients who experience bone fracture in the wrist to continue to experience symptoms of pain for a year or longer.[13]

Literature reviews demonstrate there is minimal evidence indicating that acupuncture has a beneficial effect on bone fracture recovery.[14] There is, however, sufficient evidence showing that acupuncture can reduce symptoms of chronic pain and, more specifically, may therefore reduce wrist pain.[15,16]

Chinese medicine views traumatic injury in the context of "*qi* stagnation and Blood stasis" at a particular part of the body. When injury occurs there is a temporary inhibition of the flow and circulation of *qi* and subsequently the circulation of Blood.[17] Traumatic injury can include elements of Dampness, Heat, or Cold according to TCM theory. Signs of Heat would include redness and pain, in addition to a constitutional picture such as a peeling, red tongue picture and an inflated quality in the pulse. Dampness is characterized by local swelling and edema, and possible correlating thick tongue coating and a slippery pulse picture.

Reductions in range of motion, pain, sensations of cold or a change in color, and a tight pulse could all indicate the presence of a Cold invasion at the site of injury. These are mentioned here although Maciocia, a noted author in the acupuncture field, suggests that these elements are not requirement in TCM diagnosis and pattern differentiation.[18]

An acute injury may demonstrate visible signs of Blood stasis, such as darkening of the skin, swelling or heat at the point of injury. Chronic, long-standing injury may be more occult in its presentation. Though there may be a lack of swelling or bruising in a case of chronic injury, ongoing pain is an indicator that there is continued inhibition of *qi* and blood circulation at a site of injury.[17,19]

Case History

A 36-year-old male patient presented with left wrist and forearm pain within the region between the distal end of the radius and ulna and the proximal carpal bones. Pain extended distally into the hand and proximally up the forearm to the cubital crease. The pain was primarily between the radius and ulna, extremely sharp with pressure and any use of the wrist. While at rest, the patient experienced a constant, dull pain.

Aggravating factors include flexion and extension of the left wrist and hand, supination and pronation of the left hand, and weight-bearing activities such as grasping or carrying objects. Severity of the worse pain was 9/10 on a VAS scale. The patient did not note significant exacerbation of pain with ulnar or radial deviation of the left hand.

High levels of pain were described specifically when pressure was placed on the distal aspect of the left forearm or with weight-bearing use of the hand and wrist. When the pain was not shooting in nature the patient reported a constant 5 out of 10 pain on a VAS scale and described it as dull and aching.

The original injury occurred when the patient was thrown from a motorcycle moving about ten miles per hour due to faulty brakes. After landing on his left hand and arm the patient was admitted to an urgent care center for evaluation. The results of an MRI were initially inconclusive, though subsequent imaging including X-rays and a second MRI which were completed 4 to 6 months following the injury demonstrated a carpal bone fracture of the triquetrum and an avulsion fracture at the distal end of the radius.

Over the past 13 months the patient had attempted to brace the joint and forearm. Medical records indicate that a cast was used twice over a total of 12 weeks to immobilize and stabilize the wrist joint to help it heal and to reduce pain. The patient reported that the pain was consistent and unaffected with the use of bracing and casting.

Temporary relief from pain did occur immediately after use of ice and cold packs on the forearm, which the patient continued to use infrequently a year after the injury occurred. Over the counter pain medications including Ibuprofen and acetaminophen offered temporary relief, but provided no enduring resolution.

Physical examination of the left wrist showed extension at 46 degrees with assistance. Extreme pain was felt at the end-range and the patient presented with visible facial grimacing and loss of breath. Flexion of the left wrist was measured at 64 degrees with unassisted movement. Dull pain was felt at the end-range of unassisted movement as the patient was unable to flex the wrist beyond 64 degrees without additional pressure facilitating range of motion. With light pressure facilitating movement in passive range of motion the patient reached 69 degrees of flexion and described experiencing severe pain.

Ulnar deviation of the left wrist provoked pain, though less severe compared to flexion and extension. There was audible crepitus emanating from the region near the styloid process of the ulna with ulnar deviation. Radial deviation resulted in pain without audible crepitus.

The left wrist and forearm presented with a visible swelling at the distal end of the radius and ulna along the dorsal aspect of the arm, as well as the dorsal aspect of the wrist. There was a possible ligament strain due to a measurable one-half inch elevation of the distal forearm in comparison to the region of the carpal bones.

No erythema was present but skin temperature was elevated at swollen regions of the dorsum of the forearm, particularly around TW-4 yangchi. Pulse diagnosis showed a tense or wiry quality in all positions, with a strong slippery quality present at the *guan* positions bilaterally.

Due to pain levels in the wrist additional testing of range of motion and function were limited, resulting in the omission of resisted movements of the wrist for diagnostic testing. Grade III tenderness, described as a positive "jump sign" or automatic withdrawal from pressure, was observed with light pressure at TW-4 yangchi and TW-5 waiguan. Grade II tenderness, described as obvious discomfort with pressure, was noted at TW-8 sanyangluo and LI-10 shousanli. With the patient engaged in active extension of the left wrist an increase in pain was described at both TW-8 sanyangluo and LI-10 shousanli.

Diagnostic Assessment

The acupuncture and traditional Chinese medicine diagnosis was Painful Obstruction Syndrome (*bi* syndrome) of the wrist joint with Heat, and *qi* stagnation and Blood stasis through all three *yang* tendino-muscular channels of the forearm.[18] There were signs of Heat and Damp accumulation, including swelling and erythema. The restrictions in movement reinforces the diagnosis of *bi* syndrome and Blood stagnation. Though most of the pain was located along the Triple Burner channel, pain radiation was noted laterally and medially through the Large Intestine and Small Intestine tendino-muscular channels.

The etiology and pathogenesis of this case is clearly linked to traumatic injury of the left wrist and hand. After a traumatic blow to the joint, bones and soft tissues, all were indicating *qi* stagnation and Blood stasis with the presence of Heat. As time progressed the pattern of *qi* stagnation and Blood stasis became chronic with the ongoing presence of Dampness and Heat. At the time of evaluation and treatment there were minimal signs of heat in the affected region, though it is likely that at the time of the accident there would have been redness, pain and tenderness. *Bi* syndrome can develop from both acute injury with pain as well as chronic conditions with Blood stasis.[17]

Methodology

The treatment principles used were to relieve *bi* syndrome affecting the left wrist, and move *qi* and Blood through the Triple Burner, Large Intestine, and Small Intestine tendino-muscle channels.

The patient gave written consent for treatment and received three treatments over of the course of one week. The patient received acupuncture and moxibustion at each treatment. Acupuncture was administered using .30 mm x 50 mm, spring handle, DBC Brand (Korea) needles.

The patient was positioned in a supine position and auricular points were used because he indicated nervousness and fear concerning the acupuncture procedure. The auricular points were: Kidney, Liver, Ear-*shenmen*, Sympathetic, Lung. This protocol, called 5-NP, has been studied and shown to be helpful for calming anxiety and stress.[20]

After the auricular needles were retained for three minutes and the patient reported feeling more relaxed, the points listed in Table 1 were treated on the left forearm, wrist and hand.

Table 1. Local Acupuncture Points

Local Acupuncture Point used on Left Side of the body	Treatment Principle and Rationale
TW-4 yangchi	Local point selected due to tenderness with palpation, used to reduce pain
TW-5 waiguan - *ashi* location	Local point selected due to tenderness with palpation, used to reduce pain
TW-8 sanyangluo	Local point selected due to tenderness with palpation, used to reduce pain
TW-1 guanchong - three edge needle, bleeding technique	Clear heat from the channel, eliminate pain
SI-5 yanggu	Local point selected due to tenderness with palpation, used to reduce pain
SI-3 houxi	Clears interior heat, resolves muscle spasms and pain along the channel
LI-10 shousanli	Local point selected due to tenderness with palpation, used to reduce pain
LI-11 quchi	Clear heat, benefits the sinews and tendons, eliminates dampness

Two additional needles were placed using *ashi* point location feeling for palpable knots and myofascial restrictions through the distal region of the radius and ulna. The direction was towards the origin of the Palmar ulnocarpal and dorsal radiocarpal ligaments in a proximal to distal direction angled at 75 degrees. The insertion of these *ashi* points were slightly distal to TW-5 waiguan, and TW-6 zhigou.

Points used for the wrist were selected via palpation at areas where tenderness and pain was present. These points were needled and then adjusted to the depth at which the patient reported sensations of tingling or pain. The needling depth was consistently between 1 and 2 cun.

Even needling technique was used by rotating the needle equally in clockwise and counter-clockwise directions. Shallow needling techniques were not utilized except for TW-1 guanchong in which there was no needle retention due to the nature of using a bleeding technique. This technique was used with only a few drops of blood being drawn from the body.

See Table 2 for additional acupuncture points used on other parts of the body.

Table 2. Distal Acupuncture Points

Distal Acupuncture Points used Bilaterally	Treatment Principle and Rationale
GV-20 baihui	Calm the *shen*-spirit
ST-36 zusanli	Regulate Nutritive and Defensive *qi*, tonify *qi*
SP-9 yinlingquan	Reduce swelling, regulate Nutritive and Defensive *qi*
LR-3 taichong	Move blood, reduce pain
GB-34 yanglingquan	Strengthen sinews and tendons, master point for tendons ligaments
GB-40 qiuxu	Mirror point selected on right side to reduce pain
SP-5 shangqiu	Mirror point selected on right side to reduce pain
5-NP: Auricular protocol	Calm the *shen*-spirit

Ju ci, in classical acupuncture theory, involves the treatment of the contralateral joint of the ankle for wrist pathology.[21] GB-40 qiuxu and SP-5 shangqiu were used at the right ankle and selected because they demonstrated tenderness with palpation. In TCM this is referred to as mirror needling or contralateral distal point acupuncture.[22]

The additional points used correlated with points that move blood, stop pain, reduce swelling, calm the *shen*, and support ligaments and soft tissues. More specifically, LR-3 taichong was selected to move *qi* and Blood, SP-9 yinlingquan and ST-36 zusanli were selected as they reduce swelling by regulating Nutritive and Defensive *qi*, GV-20 baihui and auricular points were used to calm the *shen*.[20]

Warm needle technique was used on the left forearm and wrist. Small 1/2" by 1/2" balls of Dongbang Gold Moxa were rolled by hand and pressed lightly around the handle end of the needles. These were lit and allowed to burn completely.

Four repetitions of this procedure were completed at TE-8 sanyangluo, LI-10 shousanli as well as the two *ashi* needles in the region of greatest pain at the distal ends of the radius and ulna. The moxa was lit starting at the most proximal point, then lit in succession moving distally. Total needle retention was around 30-35 minutes for all points.

After the needles were removed, *guasha* and soft-tissue massage were performed for the *yang* side of the left forearm. The *guasha* technique is a scraping therapy involving a smooth, hard tool that is quickly scraped across the skin creating friction and redness from increased blood circulation in an affected area. In this particular case *guasha* was focused along the length of the forearm between the radius and ulna and performed in a proximal to distal direction on the *yang* aspect of the left forearm.

Guasha, using a rounded 1/2" thick jade stone 4" long by 3" wide, was performed at each of the three visits. Due to the patient's availability, treatment frequency was one treatment every other day over the course of five days. It is possible that this narrow treatment timeframe was beneficial to the results.

Results

The patient reported a significant reduction in pain and increased range of motion by the end of the third treatment. Described changes after the first and second treatment noted in the reduction of pain. However, measurements and a more thorough reevaluation were completed at the third visit. Examination of the left wrist at the end of the third visit showed a reduction in swelling and a normalization of previous discrepancies in the height of the distal forearm compared to the region of the carpal bones. The forearm was flat without ridges through the distal ends of the radius and ulna.

Pressure continued to evoke pain, most notably at TE-5 waiguan, TE-8 sanyangluo, and LI-10 shousanli. However, the pain was rated 2/10 on a VAS scale. Without direct pressure, pain was rated 0/10. The range of motion measurements after the third treatment were extension at 69 degrees unassisted, 89 degrees assisted with soreness at the end-range, and flexion at 84 degrees unassisted.

Follow up with this patient occurred at one month and three months from the date of the initial acupuncture treatment. Improvement in range of motion was maintained. Pain, returning as a dull ache, rated between 1 and 3/10 on a VAS scale, was noted in the morning immediately arising from bed. During the two follow up visits the same procedure was followed and severe pain did not return in the wrist area.

The prognosis in this case is unknown. Based on the follow up that occurred one month and three months following the initial three treatments it is likely that the prognosis for long term recovery and ongoing pain reduction is good. However, based on the initial presentation of the injury, it is judicious to assume that there may be ongoing symptoms into the future.

This case may worsen over time, as mild exacerbation is sometimes seen with a return to activities or stress and strain on the joint from day-to-day activities and work. If circumstances had allowed, more frequent follow up would have been recommended every 2 to 4 weeks. This would serve as an ongoing maintenance plan to ensure the injury was completely resolved. However, this is unknown because, due to the patient's circumstances, only the five treatments were completed with no long-term follow up.

Discussion

This case discusses the use of acupuncture as a viable option in the treatment of functional wrist pain and mobility limitations after a traumatic injury. The patient received standard biomedical care for over 12 months with limited improvement. This highlights the difficulty that chronic wrist injuries can present especially when bone fractures are present.[9,10]

Following a relatively limited series of acupuncture treatments in combination with other modalities, the patient experienced improvement in range of motion and use of the wrist as well as a reduction in pain levels. Due to the original duration of symptoms and the changes noted with acupuncture, the improvement may be due to the intervention used.

This acupuncture intervention was not extremely complicated, yet it brought about measurable improvements in range of motion and reduced the wrist pain. The chronic nature of the injury suggested that moxibustion in addition to acupuncture was appropriate. Certainly more research is needed around the effects that result from using moxibustion on areas of chronic injury.

Research is also needed to fully understand the effect of moxibustion, both direct and indirect, on areas of active inflammation or conditions where there is a diagnosis of localized Heat. In this case it seemed that though there were signs of Heat, ultimately the moxa may have been beneficial to the outcome.

In this case the patient presented with a history of trauma with *qi* stagnation and Blood stasis. The treatment approach included both local points and distal points. The local points were used to open up the channels and move *qi* stagnation and Blood stasis. Blood movement was facilitated by the bleeding technique at TW-1 guanchong. It is used to remove obstructions along the channel pathway. The *jing-well* points, one of which is TW-1 guanchong, are also used to release the muscle-sinew pathways.[21,22]

The distal points were used in conjunction following the contralateral mirror approach which focused on selecting points based on sensitivity with palpation of the paired channels. The use of TE-5 waiguan was based solely on palpation. However, it is interesting to note that there is a close link between the TW and PC channels, and Maciocia states that "when the Pericardium channel ends and merges into the Triple Burner channel at the fingertips, the influence of the Pericardium Qi persists into the Triple Burner channel."[18]

One limitation of this case study is the difficulty teasing out whether local acupuncture, distal acupuncture, moxibustion, or *guasha* was the technique that had the most beneficial effect for this condition. What was demonstrated is that Chinese medicine has a number of its tools that can be used together to treat the condition at hand.

Conclusions

Wrist injuries have potential for chronicity and complexity in ongoing care. The Bureau of Labor Statistics notes that wrist injuries result in extended periods of work absence and research demonstrates that these injuries are difficult to clearly diagnosis and treat. Acupuncture has great potential to reduce pain in chronic conditions, though there is a lack of research regarding the efficacy of acupuncture for wrist injuries. This case report is not conclusive; therefore, further investigations are appropriate.

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The topic selected for this issue is:

What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Tracy Soltesz, DAc, LAc, Dipl Ac (NCCAOM)

Over eight months ago, the Center for Disease Control and Prevention (CDC) identified the first confirmed case in the United States of SARS-CoV-2 (COVID-19). At that time, this novel coronavirus was already responsible for the deaths of nearly 600 people in China and South Korea.

"The degree to which non-urgent care health facilities such as acupuncture clinics have experienced mandated closures has been equally varied throughout the country."

Days after this first confirmed case, China became the first of dozens of countries around the world to announce a "shelter-in-place" lockdown strategy as the first confirmed cases began arising in Europe. By late February, with a handful of recorded deaths attributed to COVID-19 in western U.S. states such as Washington and California, many European countries such as Italy, France, and Spain followed China's lead and announced countrywide coordinated lockdown strategies in an attempt to "flatten the curve" and slow the spread of the illness.

As cases and deaths began to rise in the Unites States, no such centrally coordinated strategy was pursued. Instead, individual states governments implemented varying strategies, beginning in early March.

Ohio was the first state to officially announce a state of emergency on March 6.[1] By March 10th, New York, Massachusetts, and Washington closed colleges and universities, moving classes to virtual online learning, and New York announced the establishment of the first "containment zone." Grade schools began to close throughout the country beginning March 14th, and by March 16th, Los Angeles became the first jurisdiction to order the closure of restaurants, bars, and other public spaces of large gatherings such as movie theaters.[2]

By the end of March, official state mandated stay-at-home orders varied considerably in regards to how stringent their restrictions were, with some states and counties essentially instructing people to remain in their homes at all times, even going so far as to close down popular outdoor activities and local parks. Other states never fully mandated closures, instead making non-legally binding recommendations to "social distance" when out and about.

The degree to which non-urgent care health facilities such as acupuncture clinics have experienced mandated closures has been equally varied throughout the country. While most state governments made recommendations that elective surgical procedures be cancelled or postponed, in many states this recommendation was a mandated executive order to fully close our clinic doors.

Many acupuncturists found themselves asking how these stay-at-home mandated closures applied to their own businesses. Questions arose as to whether or not acupuncturists were included in the definition of "essential workers" permitted to remain open. Officials in health departments clarified that acupuncturists are considered essential workers in states such as California and Maryland but are explicitly excluded from this definition in states such as New York and Massachusetts.

NCCAOM's Workforce Survey: How COVID19 Impacted the Acupuncture Profession showed that 61% of survey respondents stated their state or local government mandated or strongly suggested closing their clinics.[3] Even when legally permitted to remain open, 46% of acupuncturists surveyed stated that they made their own personal decision to close their doors for a time, taking a break to focus on family needs, or even moving their acupuncture practice to telemedicine coaching sessions.

States began to enter Phase One of the national reopening guidelines as early as mid-May, and according to the Workforce Survey, 60% of practitioners had reopened their clinics by July 1st.

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"Many acupuncturists found themselves asking how these stay-at-home mandated closures applied to their own businesses. Questions arose as to whether or not acupuncturists were included in the definition of 'essential workers' permitted to remain open."

When we asked acupuncturists what steps they were taking to assure their clinical practice continued to thrive in this post-COVID phase, tentatively re-opening, the responses we received were as uniquely varied as the individual state government responses to COVID19. Some practitioners focused solely on the steps they took to safely resume treatment for their patients, while others explained how they changed their delivery throughout the pandemic closures and planned to incorporate those changes moving forward.

As new cases of infection continue to surge in reopened states, speculation about a second wave is growing. Some states such as Florida that were the first to reopen have already rolled back these steps. Now more than ever it is important for acupuncturists to consider how they will deliver safe, effective care and continue to thrive in their clinics moving forward.

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What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Kristy McKendrick, MACM, DACM, LAc, Dipl OM (NCCAOM)

Kristy McKendrick, MACM, DACM, LAc, Dipl OM (NCCAOM) provides Functional and Asian medicine care in Austin, Texas, at Bliss Wellness Center. She specializes in treating digestive, hormone, autoimmune and thyroid conditions. Contact: klm34@msn.com, info@blisswellnesscenter.com

There's no doubt that COVID has changed the way I practice Functional Medicine and acupuncture in Austin, Texas. As community citizens we strive to keep the needs of all in mind when delivering safe and exceptional health care at Bliss Wellness Center. Our patients trust us to keep their safety at the forefront by providing them with a safe, stress-free experience.

We have implemented these changes:

- The use of hospital-grade sanitizing spray and wipes to clean all common touch areas in between patient appointments;
- The use of vinyl table covers to withstand table cleaning before each patient and the use of one-time, disposable paper/waterproof-backed table and pillow covers; and
- The use of UVC and true HEPA air filters, which are run constantly in treatment rooms to clean and purify the air.

The waiting room door is propped open to keep air circulating and prevent doors from being touched. All patients, staff and visitors are required to wear face coverings upon entering the clinic. Appointments are timed so patients do not pass by one another. We use contactless payments for patient fees.

At each treatment, the patient's temperature and pulse oxygen levels are checked. Screening questions are asked to ensure the patient is healthy enough to receive treatment in the clinic. Additionally, patients are asked to monitor their health and temperature in advance of their appointments and reschedule if they experience a fever or feel unwell.

What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Meaghan Massella, MAc, LAc, Dipl Ac (NCCAOM)

Meaghan Massella, MAc, LAc, Dipl Ac (NCCAOM) received her MAc from Tai Sophia Institute (now Maryland University of Integrated Health) in 2007. She owns and is sole practitioner at Edgewater Acupuncture with offices in Edgewater and Columbia, Maryland. Contact: mmassella@gmail.com

Edgewater Acupuncture, our community clinic, shut down in mid-March and re-opened mid-May. Given our business model, I didn't feel we could realistically offer virtual health to patients, so instead I focused on what I call "over-delivering connection" to patients by communicating with them frequently to let them know I was still there for them.

During shut-down, I offered free 10 minute phone consultations to anyone who needed to talk about anything. I made several videos about our patients' common health conditions and provided suggestions of things patients could do at home to support their health. Since my children were at home, they also helped out and were featured in many of my videos and social media postings.

Also, during shut-down, I knew my patients' chronic health conditions were not going to resolve, and would perhaps even worsen, without receiving acupuncture coupled with increased stress and anxiety. My outreach intentionally contained nothing specific to coronavirus or immune boosting because I wanted to keep the focus of my communications positive.

With the re-opening, the clinic is performing all of the mandated safety procedures, but my increased communication with patients is unique in its amount of support. Many of my patients are immune compromised and/or elderly so they are not comfortable in public yet. They're scared, yet they still need my help.

As an acupuncturist, I believe my job is to lead my patients towards better health and wellness. This means being continuously confident when communicating with them, over-delivering personal connection to and for them, and being present when they need me, now more than ever.





What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Kelly Hora, MS, MAc, Dipl Ac (NCCAOM)

Kelly Hora, MS, MAc, Dipl Ac (NCCAOM) graduated in 2004 from Tai Sophia Institute (now Maryland University of Integrative Health). She sees patients in her private clinic and a hospital-based practice in Madison, WI. She served two terms as president of the Wisconsin Society of Acupuncturists, co-chairs its Advocacy Committee and has volunteered on several ASA Committees. Kelly's public health outreach has included auricular acupuncture services for veterans and inter-national refugees. Formally a research botanist, she appreciates the opportunity to practice medi-cine in an ecological context. Contact: kelly@bluestemacupuncture.com

Like many practitioners, I have been using telehealth as a social distancing measure during this time. Since our medicine is rooted in a systems-approach, this allows use of a variety of tools for diagnosis and treatment. These tools enable us to listen to patients' statements, see the presenting patterns, and then use speech—especially metaphor—as a tool for healing.

In addition to acupressure, herbs, and dietary recommendations, offering a narrative based on Chinese medicine principles can empower patients to take healing into their own hands. In a virtual session with one patient, I realized that a barrier to healing was her resistance to taking an essential medication.

Rather than needling points, we talked about the dynamic that was playing out. We discussed that the resistance she felt was not separate from the insulin resistance happening at a cellular level in her body. I suggested that her inability to receive necessary nourishment may contribute to the pain in her muscles, the instability in her blood sugar levels, and her sense that the "insulin never helps anyway."

She told me that something inside of her is "broken." When I asked her what was broken she said that her body has forgotten how to communicate, so her organs cannot coordinate. Hearing this, I decided to go out on a limb and tell her a story—a metaphor for her situation (and my proposed solution).

Metaphor as Medicine

When my clinic initially closed, I began delivering weekly "meals on wheels" to people at home. One woman in an apartment complex was continuously hard to reach. I dialed her apt. number and waited to be buzzed in and leave a meal at the door. This never worked—I tried for six weeks in a row to no avail. Her phone indicated that her "voice mailbox has not been set up."

I explained to my patient that unless this person answers my call and opens her door she will not receive the food she needs. My reluctance to stop at this apartment complex is a logical response to a series of unsuccessful attempts. Without her prescribed dose of insulin my patient will not receive the nourishment she needs. Her resistance to the medication is the cell's resistance to the insulin.

The patient acknowledged the parallels between my story and her situation. Our session ended with her commitment to take her dose consistently, monitor her glucose, and schedule an endocrinology follow-up within 48 hours.

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What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Susan J. Grumbine, MAc, LAc, Dipl Ac (NCCAOM)

Susan J Grumbine, MAc, LAc, Dipl Ac (NCCAOM) graduated from Midwest College of Oriental Medicine, Chicago, in 2015. She treats under-served populations in the south suburbs of Chicago. Susan integrates her background in science education and counseling to provide the highest quality care for her patients. Contact: suzenacu@gmail.com

Although the multi-page Center for Disease Control and Prevention (CDC) guidelines for maintaining a safe environment, a list of my own sanitation procedures, and additional personal protective equipment (PPE) information are all available to my patients, no one has asked for them. Instead, what I find my patients are asking for is trust.

Trust is at the foundation of what we practitioners do by providing calm in the face of trauma and disruption. Patients need and want to trust that I am making decisions in their best interest to help them heal and enhance their quality of life. Therefore, I listen, validate, communicate, and treat.

I find that my patients basically crave a comforting, soothing environment, and they do want to heal. Patients want reassurance that if our office closes for a length of time, we are still here for them. Whether they have had exposure to trauma directly or indirectly in their daily life, patients need to know they are safe, they are welcome in this clinic, and that I am here to help.

I set aside more time for each returning patient so that they can debrief about their time away. The return on investment of this additional time spent listening and individualizing their care rather than a rush to return to a full patient load has begun to pay off financially.

It has not been necessary to show that I've created a literal "fortress" against the virus. Rather, it has been necessary to establish or reestablish trust with my patients. They want to know they are receiving quality care and that they have invested their trust wisely.

HORA CLINICAL PEARL CONTINUED FROM PAGE 34

I find that many patients are, consciously or unconsciously, looking for a partner to help them with something they already know. Integrative medicine seeks the most effective and least invasive solution rooted in respect and trust between provider and patient. We can support them to make choices to improve their health.

As the patient commits to self-care by taking her insulin and massaging the acupressure points, eventually the resistance will subside. As she feels nourished, she will become more hopeful and confident that her needs can be met. Her "broken communication" will become restored over time. We can tonify the Earth element by offering thoughtful solutions that help patients find steady ground even when the needle isn't available.

What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Arnaldo Oliveira, PhD, DAOM, LAc

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In early January 2020, when the World Health Organization (WHO) tweeted about a cluster of pneumonia cases in Wuhan, China, I did not think this would become a pandemic. However, I continued to follow the developments. A week later, it was determined this outbreak was caused by a novel coronavirus.

Though initially the WHO stated that there was no clear evidence of human-to-human transmission, the United States reported its first confirmed case of the novel coronavirus on January 21st, and on January 24th, France reported three cases of a novel coronavirus, all of whom had traveled from Wuhan. At the same time, *The Lancet* published the first peer-reviewed paper online describing the epidemiological, clinical, laboratory, radiological characteristics, treatment, and clinical outcomes of 41 patients in Wuhan, China.

Treating During the State of Emergency Shut Downs

In mid-March, with more than 100,000 confirmed cases globally, shelter-in-place orders were issued by the Mayor of Honolulu and the Governor of the State of Hawaii where I practice. Since all healthcare professionals were deemed essential, I decided to treat local patients.

Because it is difficult to know who is a carrier of Sars-Cov2, I instituted numerous additional safety measures and infection disease control protocols to protect my staff, patients, and myself. Due to the mandatory quarantine and travel risks, my mainland and outer-island patients were treated via telemedicine visits.

This choice to stay open was based on the fact that my practice is focused on chronic diseases and most of my patients need to be monitored regularly. I operate on the principle of treating the causes of disease by eliminating pathogens, restoring optimum health by supporting convalescence, and preventing illnesses through strengthening the immune system. This standard is also effective when treating patients who have contracted COVID-19.

Symptomatic Treatment of COVID-19 Positive Patients

In late March, two local patients who tested positive for COVID-19 (RT-PCR) contacted me. For safety reasons, we only communicated via telemedicine, phone calls, and texting.

In the first case, a 52-year-old female patient presented with a low-grade fever, dyspnea, malaise, anosmia, headache, and lack of appetite. She was diagnosed with Dampness constraining the Lung. She was given Hou Po Xia Ling Tang, 250 mcg daily

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What Steps Have You Taken to Make Your Clinic Thrive in a Post-COVID World?

By Carol DeMent, MAc, LAc, EAMP, Dipl Ac (NCCAOM)

Carol DeMent, MAc LAc, EAMP, Dipl Ac (NCCAOM) received her master's degree in 2000 from the NW Institute of Acupuncture and Oriental Medicine in Seattle, WA. She has maintained a general practice in Olympia, WA, for 20 years. Carol serves on the Editorial Board of JASA and has also written an award- winning historical novel about Cambodian refugees. Her second novel, due out in 2021, will feature a doctor of Chinese medicine.

Liver *qi* stasis has gripped our nation and the world. We feel stagnant, paralyzed, and held hostage by a virus that eludes our grasp, closing the doors to businesses and homes alike. Reacting to such constraints on its vitality, our country has responded with both heated outbursts and depressed energy on economic, personal and professional fronts.

Now we are asked, how will we prosper post coronavirus?

Let us remember that the Liver is the "general" and the planner of life events. Through the Hun, it is the dreamer and the wanderer. When stressed it becomes overheated, causing brittleness, breakage and stoppage. To prosper after COVID, we must nourish, cool and unblock, giving a vent to dreams and far-sighted planning.

We cannot just fix our practices "for now" by joining larger institutions; adding personal protective equipment (PPE), telemedicine, new services and scheduling changes; or working longer for less – less money, less satisfaction, less growth in our work – because these are just bandages. These are short-term fixes to a long-term challenge.

Once COVID is vanquished, there will be another virus, another plague, or another earthquake, wildfire, eruption or hurricane.

As practitioners of Asian medicine, we have a unique perspective with which to view and understand what is going on globally today. Our planet is in the throes of a complex disharmony wrought by pollution, climate change, overpopulation and warfare. Until we address that challenge, joining with others to demand humane and sustainable change to the way we work, play and share this planet with other sentient beings, there will be no sustainable prosperity post-corona virus. The changes we make will be just bandages.

Many may scoff at the seriousness of our planetary straits and continue on with business as usual, but ignoring this situation will not make it go away. Though we may be tempted to follow suit by living in the short-term, crossing our fingers and profiting while we still can, instead we should dig deeper into the wisdom of our medicine and apply it to the pain affecting the world today.

We can take our place among the doctors, teachers, scientists, activists, philanthropists and leaders who have a courageous view of a post coronavirus world. We have important insights and practical ideas to contribute to the discussion, and we can let our voices be heard.

The Tao of Querying Quackbusters

By Claudia Citkovitz, PhD, MS, LAc and Kate Levett, PhD, MPH, BEd (Hons I), App Sci (Acup)

The purpose of this piece is to illustrate some of the most important do's and don'ts of intellectual engagement with 'quackbusters' (or skeptics, as they sometimes call themselves[1]). This engagement may be in the clinic or online, socially or in peer reviewed journals. Below we identify some of the fundamental characteristics of a quackbuster or skeptic.

These characteristics are well illustrated by a recent Forbes Online article[2] by Steven Salzberg in which he suggests—literally, though not seriously, it appears—that the World Health Organization (WHO) caused the Covid-19 outbreak by including TCM in its ICD-11 guidelines.

We look at the Salzberg article in some detail here, providing a few critical questions to ask when encountering any article that may appear to be biased. This 'Tao' is also useful in querying articles we agree with, or even our own writing, speech, or Facebook posts. Even when we believe we are 100% in the right, our arguments are stronger and more persuasive when presented in an unbiased way.

Quackbuster or Skeptic?

The defining characteristic of a 'quackbuster' author is his[3] bias against the subject of the writing: this is plainly stated in the term itself. 'Quack' is a 17th-century term for a 'medical charlatan.'[4] The verb 'busting' is a colloquial synonym for 'breaking or disrupting.' It is thus important to note that the concept of quackbusting is inherently unscientific, as it denotes both a preexisting opinion about the subject matter and an intention to create a specific effect with one's writing or communication—typical characteristics of a social media post. In scientific writing and research,[5] there is only the framing of a hypothesis, collecting data, and interpreting the data to evaluate and/or refine the hypothesis.

The term 'skeptic' suggests a more scientific, evenhanded critical approach. However, as seen below, authors may consciously or unconsciously exclude their preferred theoretical frameworks and therapeutic methods from critical scrutiny.

The "**Tao of Quackbusters**" column, co-edited by Claudia Citkovitz, PhD, MS, LAc and Kate Levett, PhD, MPH, BEd (Hons I), App Sci (Acup), invites readers to submit any pseudo-science article you would like to be queried. Please send these articles to Claudia Citkovitz at: studyingpractice@gmail.com

What would a scientific, evenhanded critical approach look like?

Any journal article or online opinion piece can benefit from an appraisal of potential bias. This is particularly true of pieces we agree with or have written ourselves. For all science's talk of objectivity, humans are fundamentally and ineradicably subjective creatures.

The purpose of so-called 'scientific neutrality' is not to pretend that we don't have feelings or biases (everyone does). The purpose of writing scientific articles in neutral language is to create a space of *relative* neutrality, within which people with different ideas and theoretical orientations can at least intend to check their conscious and unconscious biases at the door. Once that happens, it's possible to discuss in a polite and respectful manner the relative strengths and weakness of each other's attempts to figure out how the world works and how better to take care of people's needs without offending each other.

Think of how it is when you're driving cross-country and lose your familiar radio stations. You scan through the offerings and can tell by the tone of voice what kind of radio station you're listening to—alternative music, country, evangelical. Each has its own sound. Scientific neutral writing should be similar to a National Public Radio station—a calm, neutral voice without too much accent or inflection that doesn't sound like it's trying to sell you anything.

On a basic level, the active ingredient of scientific neutrality is good faith that those taking part in the discussion are…

- Genuinely most interested in one of the legitimate aims of science, e.g., figuring out how the world works, figuring out how to take better care of it and the people in it, as opposed to enriching themselves
- Genuinely willing and able to factor in new information to their thinking, even if it means losing an argument, reinterpreting their research results, or reexamining their previous assumptions

Yes, it's a high bar to meet every single one of those criteria—especially the last two—though good scientists do clear the bar routinely, day in day out, as a matter of personal integrity and pride in their work.

This contrasts with some areas of contemporary culture, particularly online. An article went viral in July asking the question whether it is necessary, naïve, or even *possible*, given the nature of online interactions these days, to assume that someone else is communicating

in good faith.[6] This an important, intriguing question that won't get solved in this column but it does keep some of us up at night.

Here's what's important: the principles of scientifically neutral writing and a good-faith engagement with other writers can help us to identify and query faulty arguments, independent of personal feelings about the content. This independence is the firewall that partitions scientific and academic writing from, say, Facebook.

When we read and write with these principles in mind, it actually doesn't matter whether or not a given author is writing in good faith. A bad argument is equally bad whether made accidentally (they didn't realize the argument was faulty) or intentionally (they realized the argument was faulty but made it anyway, believing that it would not or could not be effectively countered).

For those new to scientific writing, it is not always easy to check one's feelings at the door. But once the habit of policing one's own bias and substantiating all claims is established, it becomes much easier to spot other writers' failures to differentiate thoughts and feelings.

Critical questions to ask

These three questions below are intended a as quick check-up for any piece of writing—our own or others'—as a way to query conscious or unconscious bias and assess whether the argument is sound without it.

1. Do you think they are writing in good faith?

Note that this is not an assessment of what they are actually, objectively doing. How would we know? This is what we think. Sometimes we feel it in our bones, immediately—just like when a patient is hot, red, robust and noisy, we immediately have an opinion about the state of their *yin* and *yang*. Other times it's not entirely apparent so we need to ask the other questions first and circle back to this one.

One good, early clue to good faith can be to look carefully at the title. In scientific writing, the title's accuracy and descriptiveness are extremely important. It is the equivalent of email subject line in a big, jumbled inbox that allows readers to scan effectively and not waste time on irrelevant emails.

In this age of 'clickbait,'[7] shock value may be valued over descriptiveness. For example, Salzberg's chosen title, "*Did the WHO's Endorsement of Traditional Chinese Medicine Cause the Covid-19 Pandemic?*" is an alarming suggestion likely to elicit clicks from TCM supporters and opponents alike. The article, however, does not actually probe the likelihood of a specific causal link between the Covid-19's emergence and the WHO's decision to include TCM disease categories in the ICD-11 guidelines. It makes a (debatable) argument that if the virus jumped from bats, then the reason a bat may have come in contact with humans is that TCM uses bats, and therefore the WHO should reconsider its decision. This is an extremely different argument, and it's fair to say that such a radical disjunction between title and content is can be regarded as a clear flag for writing in bad faith.

2. What kind of publication is this? How might the editorial policies and reimbursement structures affect content or presentation?

When you go to a movie, you know in advance what kind of experience expect. We call this 'genre.' If it's a big sci-fi action movie you will be disappointed if there aren't a lot of great space battles. But you don't expect much nuanced dialogue; big, expensive movies need to play well overseas to be profitable, and deep subtleties of the script are not of benefit to non-English speaking audiences.

Genre as a concept is extremely important for the interpretation of scientific or quasi-scientific writing,[8] and similarly related to funding structure. However, the underlying mechanisms and associated terminology are quite different.

Editorial policy describes the process (if any) by which the author's original writing is assessed or modified by the journal or site publishing it. The most important types of editorial policy to distinguish are:

- **Peer review.** This is the process that distinguishes scientific journals (like JASA) from other journals. In peer review, the journal's editors refrain from assessing the scientific merit of incoming articles themselves but send them out to two or more reviewers who have demonstrated expertise relevant to the article. These peer reviewers suggest whether or not to publish the article and also suggest revisions as needed. The editor does exert considerable discretion over the process, determining which reviewers to send which pieces, breaking ties, and setting policies as to what types of articles are even eligible for review. However, in well-respected journals, editors are expected to provide reasonable standardization and transparency on the making of these decisions.
- **In-house editorial and fact-checking.** This takes place in-house at established non-scientific publications such as the *New Yorker* and the *Washington Post*. Editors are broadly responsible for decisions about what to publish: for example, the editor of the *New York Times* came under fire for publishing an anonymous letter in 2018.[9] Fact-checkers are responsible for verifying individual details. For example, the *New Yorker* magazine is known for its scrupulous fact-checking department, and Ronan Farrow publicly credits them for helping his bombshell article on Harvey Weinstein to withstand extreme scrutiny.[10]
- **Op-ed sections, blogs, and online forums.** Today, much of our news comes from websites that do not take editorial responsibility for the content. These are effectively blogs but are not labeled as such. For example, *Forbes Magazine* has an

editorial policy and does fact checking for its print journal, but the Forbes Online forum (where Salzberg's post is hosted) specifically stipulates that it takes no responsibility for the content or any negative impacts thereof, even if advised of possible negative impacts and even in the case of negligence.[11] It is difficult to imagine a more comprehensive abdication of responsibility for a site one curates.

Reimbursement structure is also important to consider. The publishing industry in general is struggling these days as the amount of available information increases and the market for well-curated writing decreases.

The main structures to consider as a reader are:

- **Revenue-neutral (-ish).** This is the tradition for scientific journals. The time authors spend writing up their research results is budgeted into their research grant or employment structure. This is different of course from a magazine that likely needs to pay journalists to provide content. In the past era of hard copies only, subscription fees from universities and hospitals would cover the costs of peer review. But as times change, most journals now need to charge a nominal application fee and many charge a fee to make the article 'open access' (not behind a paywall). This fee, usually a few thousand dollars, is a small item in the 'dissemination' budget of a large study but may be prohibitive for smaller studies not funded by industry or government grants. This trend can be seen as antidemocratic, though without any indication of strategic intent.
- **The journal gets paid by the author.** Other than the fees described above, this funding structure is difficult to justify in the scientific context and is often described as predatory. Such journals may mimic the appearance of editorial oversight by recruiting an advisory board and in some cases even closely echo the names of established journals.
- **The author gets paid by the piece.** This is normal in mainstream journalism: reporting is a job with credentials and expectations. In general, junior journalists write their articles 'on spec' and are paid for the finished product, while more established journalists have a regular contract with a preferred journal or are paid in advance for their research and writing work.
- **The author gets paid by the click.** This novel arrangement is one of many ways in which intellectual discourse may be adversely affected by the online financial dynamics. 'Clickbait' is described by the online Cambridge Dictionary as "articles, photographs, etc. on the internet that are intended to attract attention and encourage people to click on links to particular websites."[12] 'Clickbait journalism' describes a style of writing where thoughtful, balanced content analysis may be subordinated to the eliciting of emotions such as fear and outrage, which have been identified as prime drivers of clicking and reposting.[13,14] The reimbursement policy of Forbes Online appears to be in the neighborhood of $10 per 1,000 'first' clicks, with additional reimbursement for readers who return to the author.[15]

3. What proportion of assertions are supported by references and do the references "check out"?

In peer reviewed journals and other scientific writing, the expectation is that every assertion made is supported by data, usually in the form of a reference to a previous publication.[16] For example, the previous sentence is referenced to an online college scientific writing guide, which is an adequate citation for that relatively uncontroversial statement. That level of referencing would be overkill in a magazine or online forum, but any statement with the potential to be controversial should absolutely be backed up with a citation. For example, if we had stated that "bleach injections are a safe and effective cure for COVID-19,"[17] readers would and should scroll immediately down to the endnotes and look up the original references.

There are multiple ways that citations can be problematic:

- **The source can say something slightly or grossly different from what the author claims.** For example, in his post Salzberg asserts that "a just-published scientific paper pins the blame squarely on TCM" and cites this paper by Wassenaar et al.[18] However, the paper itself clearly identifies any such link as a speculation, listing three possibilities for what could have happened and acknowledging that there is no direct epidemiological link from infected patients to the Wuhan animal market.
- **A source can be unreliable or unavailable.** For example, Wassenaar describes *ye ming sha*/bat guano along with another usage of bats that will be unfamiliar to TCM practitioners—"body parts are dried and added to wine or ground into a powder for oral intake as a means to 'detoxify' the body." 'Detoxify' is of course a term used in other disciplines such as naturopathy but not part of the TCM theoretical framework. These usages are referenced with a non-functional url with a store name that was not found on repeated searches: https://www.bestplant.shop/products/yeming-sha-bat-feces-bat-dung-bat-guano. The site bestplant.shop was not found to exist, while bestplant.com points to a factory design consultancy.

In fact, this speculation that TCM is involved in the migration of COVID-19 is not well supported. [Zoonotic origin is common and has long history in West—smallpox. West has not changed practices—e coli, etc.] No animal samples from the market were reported to be positive for COVID-19, and none of the early cases had visited the market, which (importantly) was a food and not a TCM market.[19]

Coming back to good faith

You can think of the author's good faith, the payment structure, and the citations of a publication as being like its *jing, qi,* and *shen*. *Shen* is just one characteristic, but it relies on the other two.

'Arguing in good faith' means that the writer genuinely believes his argument is correct, that he has arrived at it via unbiased scientific inquiry rather than financial interest, and that he would revise his opinion on the basis of compelling new evidence.

Authors may be mistaken on any of these counts: for example, those who write that acupuncture's effects on pain are attributable entirely to placebo may be genuinely unaware that a large meta-analyses shows pain relief with 'verum' acupuncture exceeding pain relief with sham acupuncture.[20] They may be unaware of these results because they don't consider it important to read studies on acupuncture, genuinely believing it to be quackery. This can be seen as an example of the Dunning-Kruger effect,[21] but it does not constitute arguing in bad faith until an argument is put forward that the author actually does not believe.

For example, it seems unlikely that Salzberg actually believes that the WHO's administrative actions in May caused the emergence of the virus in December. It is much more likely that he is using the question as a way to combine two otherwise unrelated points regarding the origin of Covid-19 and the structure of the ICD-11. This is like noticing that a patient's *shen* seems off somehow when they walk in the treatment room.

To really understand what pattern we are seeing, we need to learn more about the patient's *jing* (how they manage inherited knowledge from previous authors) and *qi* (how they conduct their material, post-heaven existence). This is the Tao of querying quackbusters—or anyone else who might be prone to bias, including ourselves.

Now you try it!

Kate and Claudia wrote a piece that presents an alternative hypothesis regarding causality of the U.S.'s particularly severe Covid-19 outbreak from both medical and institutional perspectives. Do you think we're writing in good faith? What kind of a publication is this? And do our references check out?

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Has Capitalism, Not TCM, Caused Covid-19 to Worsen?

By Kate Levett, PhD, MPH, BEd (Hons I), App Sci (Acup) and Claudia Citkovitz, PhD, MS, LAc

Most people accept that for the wellbeing of their population, medicine is life saving and an important investment for all countries. However, 80% of the world's population still utilize 'traditional' medicine when needed, whether it be through choice or the prohibitive cost of pharmaceutical and allopathic medicine.

When one sits in a privileged position of being white, male and relatively wealthy in America, the demonization of traditional medicines without any supporting evidence is easy enough to be 'mansplained' to the rest of us as we have recently seen from Steven Salzberg's opinion piece in *Forbes* (4th May 2020). We call this an 'opinion' piece, as there appears to be no supportive evidence or even critical thinking attributed to it. Instead, we see leaps of faith and accusations that somehow the WHO's endorsement of traditional Chinese medicine (TCM), and by extension TCM itself, is responsible for the COVID-19 pandemic. Salsberg might have called it the 'China virus.' Oh wait, that's already been used by the very same person who is de-funding the WHO in one of his latest tantrums.

Just to be clear, TCM does not use bat flesh in its medicinal or herbal products.[1] To imply that TCM is the source of the current Coronavirus COVID-19 does more than spread erroneous claims—it lays bare the arch conservative, pro-capitalist, xenophobic and racist attitudes exemplified by corporate America and increasingly corporate Australia. In fact, in Wuhan, China, no animal samples from the market were reported to be positive for COVID-19, and no early cases had visited the market.[2] And anyway, this was a food market, not a place to obtain traditional Chinese medicines.

Capitalism as a source of Covid-19

Pro-capitalist market-driven economies such as the U.S. that are forced to re-open in the midst of the Covid-19 pandemic or risk financial decimation are responsible for the hundreds of thousands of lives lost to Covid-19 infections because they cannot contain the pandemic and maintain the economy at the same time. Their preferences are clear—the whole set-up of capitalism precludes the choice of pausing the market while we contain the pandemic. If not, powerful people stand to lose a lot of money and those they employ will simply be cut loose. Where's the safety net?

Whose convenient truth is it anyway?

As Salzberg correctly noted, there are indeed claims of continued use of endangered species' animal parts in traditional and folk medicines such as tigers and bears, and that is deeply concerning. Salzberg's claim that these 'virility enhancers,' as part of TCM, is what rhino horn is used for is largely untrue. They are bought and sold in the black market, not through TCM channels at all.

It is also easy to counter with lab animals being used to test cosmetics and new pharmaceutical drugs before they are tested on humans. However, that ignores the fact that the number one cause of animal extinction remains habitat loss and prey depletion, which is largely driven by agriculture and human activity. And the country that uses the most arable land is the United States (10.5% of the whole world!), and that only about 27% of the land is used to grow food, with the rest being for animal feed and biofuel.[3] This loss of habitat also drives closer contact with wild animals as their natural environment shrinks to give way to agriculture and deforestation, but that's an inconvenient truth that doesn't serve Salzberg's commentary.

The philosophy of Medicine

In this postmodernist world, the idea that the ideology of science equalling the only valid truth and that male Judeo-Christian values are 'right' is deeply out of step with the values and needs of the majority of the world's population. We see in Salzberg's writing, the elements of the (frankly passé) Modernist framework that believes in the "intrinsic beneficence of science and technology,"[4] but this fails to recognise how the ideas of 'truth' are indeed social constructions. He positions language that conveys ideological dominance and privileges the vast field of Medicine as the only objective and superior truth.

The "**Tao of Quackbusters**" column, co-edited by Claudia Citkovitz, PhD, MS, LAc and Kate Levett, PhD, MPH, BEd (Hons I), App Sci (Acup), invites readers to submit any pseudo-science article you would like to be queried. Please send these articles to Claudia Citkovitz at: studyingpractice@gmail.com

This construct that Medicine exemplifies the natural order of the world smacks of deeply held racism and sexism. In Medicine and medical research, there is little tolerance for heterogeneity in individuals, including genetic and hormonal variance (read women as 'other' here), let alone cultural, organisational and societal variance. The idea that we can all be reduced to a single mean outcome value bedevils the very delivery of the medicine and devalues the individual receiving it.

The fact that medicine derives its roots from the philosophy of Descartes' dualism is notable.[5] There is no room in this philosophy for heterogeneity—the central idea that the mind and body have no bearing on each other is the origin of today's medical specialities! It is based on physiological norms and referent categories—and that the referent category was always healthy, white and male is apparently beside the point.

The rejection of Chinese Medicine's philosophical tenants that interaction of humans, animals and their environment co-create illness and can restore balance seems illogical when you consider western Medicine's privileging of certain individuals and groups at the expense of others.

To level criticism of insufficient evidence of effect for TCM ignores the fact that many of the research methods used to test hypotheses are geared towards testing univariate pharmaceutical outcomes and do not capture many of the other relevant outcomes,[6,7] including those seen in surgery or psychological interventions.[7,8] The mighty randomised controlled trial (RCT) will not answer questions of effectiveness for every outcome and deals only in means and standard deviations, not the individual in front of them. For example, will every cancer sufferer wish to increase length of life at the cost of quality? Life is not a series of univariate outcomes!

We also see in Medicine, as a by-product of Descartes' dualism, the inability to cope with phenomena that exist outside the reductionist framework that randomised controlled trials are designed to test. These phenomena are necessarily subjugated to the 'placebo effect.' It is fortunate for many men that the secondary effects of Viagra (which was originally being tested for heart disease) was not relegated to the 'placebo effect' or to be told it was all in their minds, as many women are told when hormonal issues are in question.

Racism veiled as critique

It is a version of DiAngelo's 'white fragility'[9] that serves to allow writers like Salzberg to throw a veil of criticism over TCM while really promoting anti-Chinese sentiment, with plausible deniability regarding the 'validity' of the medicine. This serves also to maintain white dominance as the holders of truth about medicine and medical theory, while subjugating traditional medicines as a 'set of beliefs' and substandard practices.

Salzberg demonstrates no comprehension of what traditional medicines mean in the context of the world's population, and he is tone deaf to the impact this has on racism and bias in his own country. The very idea of 'race' itself is born of religious, social and capitalist notions, which have infused every corner of our lives and become so imperceptible as to appear normal.[10] From that position it is easy to say that other epistemologies (or ways of understanding knowledge) are mere myths.

He conveniently locates sub-standard practices of medicine within non-white and non-western medical paradigms, allowing researchers and scholars to be blinded to their contribution. The idea that Medicine is the only truth and has the only 'valid' methods to derive valid conclusions is delusional. It is perfectly apparent that the practice and investigation of Medicine is heavily influenced by one's thoughts, social desires and political agendas.[11]

We can see this in the very way researchers ask questions, recruit subjects, collect data and report outcomes. There is no absolute truth, but there is certainly room to see Medicine's desire to maintain dominant power and perceived superiority over the 'other,' which in this case is Chinese Medicine.

TCM – a system of medicine

TCM is an intricate system of medicine and a philosophy that includes herbal medicine, acupuncture, cupping, *tui na, gua sha,* moxibustion, *qi gong, tai chi* and contemplative practices. These have been used for thousands of years and are largely aimed at promoting a healthy lifestyle—the restoring of balance in the body and maintaining health in the context of one's environment. Sounds dreadful doesn't it, when one could create a raft of health issues through lifestyle factors and pop a pill instead.

Speaking about the creation of pills, America has the number one highest spend per capita on health care in the world. Of the top 18 spending countries, the U.S. still has the lowest life expectancy.[12,13]

As China becomes more westernized in its diet and lifestyle, new chronic diseases are emerging as the main causes of mortality, including heart disease, which is America and Australia's number one killer. The main contributory factors for heart disease are unhealthy diet, lack of exercise, being overweight and smoking (according to the Mayo clinic in 2018[14]). Sound familiar?

But we digress. Chinese Medicine is a philosophy and a medicine. Just as western Medicine is born of philosophical roots, and what we're seeing is the subjugation of one medical paradigm for the benefit of the other, without consideration of what value the two systems bring.

The gentrification of traditional medicine

We see too the impact of capitalism, when a traditional medicine has sufficient evidence, using the western overlay of the 'correct' method for 'proving' this, it is then co-opted by the pharmaceutical industry, renamed and repackaged for mass production—this is the gentrification of traditional medicines. In this process, we can

witness the subjugation of Chinese and other traditional medicines—let's take for example, aspirin. Aspirin was originally sourced from willow bark and meadowsweet and later synthesised in the laboratory to create a patentable product, making very few people a great deal of money, long forgetting where it came from, or who used it before.

As Salzberg has rightly pointed out, medicinals are mainly sourced from natural products, but it is the idea that Medicine 'discovered' it that is at issue. In the process of discovering and patenting it, and in some cases supercharging it, aspirin is now a medication that is ubiquitous and has a long list of side-effects to its credit, largely due to its overuse. However, these very same original products, which have been used for thousands of years as effective treatments for inflammation, fevers and pain, is somehow vastly inferior and reeks of bogus claims when we refer to them by their Chinese names: Liu Shu Pi (Willow Bark), or Xiu Xian Ju (Meadowsweet).

Additionally, as these medicinal plants receive increased scientific and commercial focus, there is increasing pressure on the wild plant populations from which they are harvested. According to the National Cancer Institute, at least 70% of new drugs introduced in the United States since the '90s are derived from natural sources (Steenhuysen, 2007). Overharvesting has placed many medicinal species at risk of extinction, and commercial exploitation has implications for traditional medicines becoming unavailable to the indigenous peoples that have relied on them for centuries.

The pharmaceutical industry is also responsible for a vast amount of environmental damage, including the dubious award of being higher emitters of greenhouse gases than the automotive industry.[15]

TCM and COVID-19

But back to the issue at hand—the implication by Salzberg that TCM has caused the current coronavirus, COVID-19. Coronaviruses in general are large family of viruses that can affect many different species of animals, including camels, pigs, cattle, and bats. These coronaviruses are rarely also zoonotic, meaning they can pass between animals and humans. Zoonotic diseases are widespread both in the U.S. and worldwide. More than 60% of all human diseases are zoonotic in origin, and about 70% of zoonotic diseases originate from wildlife.

In western countries such as Australia and the U.S., we see numerous examples of zoonosis, such as Brucellosis from cattle, pigs, sheep and goats, Leptospirosis from domestic and wild animals, Lyme disease from ticks originating in Connecticut, cat scratch fever, campylobacter, and giardiasis—the commonest bacterial cause of gastroenteritis in America. However, the reason we have so much more contact with wild animals is habitat destruction, as previously mentioned, the principal cause of which is agriculture.

Not only is habitat destruction the number one cause of species extinction worldwide, it is responsible for a staggering 80% of deforestation. Agriculture in the U.S. is dominated by corn and soybean production, which will mostly be used as feed for the livestock industry.[3] Cattle, chickens and pigs are consuming 70% of the grain grown in the US, and ironically is where a lot of zoonoses originate. Not only do Americans, Australians and much of the Western world, eat beef, lamb, chicken, pork, etc. in vast quantities, but quite a few medicines contain or are derived from animal products. These include tablets, injections, capsules, creams, mixtures and vaccines.

Follow the money

But we really don't think that the animal population is the main problem. We can cite many examples of maltreatment of animals for cosmetics and pharmaceuticals with the same rapidity that Salzberg can point to the bears' gallbladders, and tigers' bones. But it would seem that the main source of complaint is that China wants a share of the global healthcare market—and this is not acceptable, not because the treatments are good, bad or otherwise and not because consumers want an alternative or complementary treatment. No, because Big Pharma knows what this market is worth, and the big boys don't want to share the sand-pit.

Salzberg points to the 'push' by the WHO's former director Margaret Chan and her work to have TCM endorsed. The criticism being that she worked closely with China, yet this would seem reasonable given what they were working on. The evidence base for Chinese medicine, including herbal remedies, acupuncture, cupping and *tui na*, is too innumerable to list here, but Salzberg would prefer readers to believe that bias and influence are at the heart of it.

So, let's talk about pharmaceuticals as that is apparently the only reasonable and evidence-based medicine according to Salzberg. The pharmaceutical industry accounts for $1.3 trillion in 2019, with U.S.-owned Pfizer ranking number one in the market, and the top 10 pharmaceutical companies accounting for about a third of all sales. Pfizer by no small coincidence is also the manufacturer of Viagra, which generated around $500 million in 2019—its own version of the purported rhino horn!

As has been reported extensively but notably by in the *Guardian* newspaper in Australia and by Jacky Law and others in the United States, big pharma is big business and has a lot to answer for in terms of shaping health policy and driving the high cost of pharmaceuticals in most 'western' countries.

Political donations and extensive lobbying shape what gets funded, what gets developed, and what it will cost consumers. This, by extension, shapes the research landscape too, as funding bodies are largely responsive to the political demands. Not only does funding shape the political landscape, it also apparently shapes the outcomes of trials. A Cochrane Systematic review finds that pharmaceutical sponsored trials are 30% more likely to show a benefit in favour of the sponsor. This is easily done by the way in which the question is asked, the selective outcomes assessed and the selective reporting of results.[16,17]

Conversely, preventive medicine, and research into complementary therapies receives less than 0.2% of research funding in Australia[18] and is held to a higher standard of reporting. Can you imagine why the evidence is less extensive and robust than that of pharmaceutical trials? But to say there is no evidence is deeply false—well, you're just looking in the wrong places.

Lobbying

Health insurance companies, the drug manufacturing industry and medical industries constituted four of the top 10 lobbyists in the U.S. in 2018[19,20] and they have a hugely vested interest in keeping people taking medicines for things that may or may not be assisted by over-medicalisation. Sounds like some snake oil to me!

According to the National Institute on Drug Abuse, Americans consume 75% of the world's prescription drugs. Nearly three in five American adults take a prescription drug at any given time. Surely you're not that unhealthy? Perhaps some overprescribing is at play?

Despite the obvious benefits of modern medication, excessive prescribing and over-medicalisation is putting people at increased risk, not actually promoting health. The U.S. spends more than any other country per capita on healthcare, largely funded by individual private health insurance plans; however, it has a lowest average life expectancy (78.8 years) compared to other high-income countries (80.7-83.9).[21] This research also identified that the main drivers of healthcare costs in America are the costs of pharmaceuticals and administration.[21]

There seems to be a growing unease regarding the vast profits of Big Pharma, and their control of the research agenda, like Big Tobacco and Big Sugar before them. Slick marketing campaigns, lobbyists and public relations, not the results of well-designed clinical trials, are driving the health policy agenda, and what's being proposed just might not be good for our health.

Or, as Barbara Mintzes expressed it, is it a pill for every ill, or an ill for every pill?

Can this agenda be the real reason behind Salsberg's baseless claims? Or is he so imbued with notion of western medical dominance he can't see the aspirin for the willow trees?

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It is Time to Retire 'Complementary' When Referring to Evidence-Based Therapies

By Arya Nielsen, PhD

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It is essential that clinicians and researchers engage science-based terminology that is utilized across medicine to best contextualize benefits, clinical applications and potential research for evidence-based nonpharmacologic care options like acupuncture therapy.

In 1998, the *Journal of American Medical Association (JAMA)* published an editorial that began: 'There is no alternative medicine. There is only scientifically proven, evidence-based medicine supported by solid data or unproven medicine, for which scientific evidence is lacking.'[1]

> 'Regardless of the origin or type of therapy, the theoretical underpinnings of its mechanism of action, or the practitioner who delivers it, the critical questions are the same. What is the therapy? What is the disease or condition for which it is being used? What is its purported benefit to the patient? What are the risks? How much does it cost? And, perhaps most important, does it work? For virtually all medical therapies and interventions, whether conventional or alternative, determination of effectiveness and recommendations for clinical application should be based on the strength of the scientific evidence…'[1]

Likewise, there is no 'complementary' medicine. 'There is only evidence-based medicine supported by solid data or unproven medicine, for which scientific evidence is lacking.'[1] Recommendations for clinical application should be based on the strength of the scientific evidence.

Research shows that acupuncture therapy is effective for many conditions: acute pain,[2] cancer pain[2,3] and chronic pain,[4-6] including chronic low back pain (cLBP),[7-10] neck pain,[10-12] shoulder pain and knee pain from osteoarthritis.[13-19] A large individual patient data meta-analysis (39 trials) of 20,827 patients with chronic pain demonstrated acupuncture to be significantly better than sham (placebo) treatment or usual care, with only a 15% loss in treatment effect after one year.[13,20] Patients with more severe pain at baseline improved more from acupuncture treatment than those with lower levels of pain, compared to sham or non-acupuncture controls.[21]

It begs the question: what medication can make this claim? And why not recommend acupuncture therapy as a standard of care as part of rehabilitation medicine? Why marginalize this effective option as 'complementary'?

In fact, acupuncture therapy is supported or recommended as part of comprehensive pain care by the U.S. Agency for Healthcare Research and Quality (AHRQ),[22] the U.S Food and Drug Administration (FDA)[23] and the Joint Commission (TJC).[24,25] The National Institutes for Health (NIH) recommends acupuncture for cLBP and knee OA pain.[26] The

"Opioids, commonly prescribed for pain, can actually increase pain (hyperalgesia) along with their liability for addiction, diversion, and death. Over half of chronic opioid use is initiated in the inpatient setting in the treatment of acute pain."

American Academy of Family Physicians (AAFP) endorsed the American College of Physicians (ACP) Guidelines recommending acupuncture as a first option for acute, subacute and cLBP.[27] The Centers for Medicaid and Medicare (CMS) will now reimburse for acupuncture for cLBP in Medicare patients (65 and older).[28]

A retrospective claims-based study found initial visits to chiropractors, physical therapists or acupuncturists for new onset LBP substantially decreased early and long-term use of opioids.[29] Active military service members who accessed acupuncture for chronic pain had reduced risk of long-term adverse outcomes.[30] And acupuncture has a very low adverse effect profile.

Safety of acupuncture compared to NSAIDs and opioids

Unlike common pain medications like non-steroidal anti-inflammatory drugs (NSAIDs) that increase risk of heart attack, stroke, acute and chronic GI bleeding, renal failure as well as delayed healing and risk of discontinuation syndromes, acupuncture has a low risk of adverse events.[2] Opioids, commonly prescribed for pain, can actually increase pain (hyperalgesia) along with their liability for addiction, diversion, and death.[2] Over half of chronic opioid use is initiated in the inpatient setting in the treatment of acute pain.[31]

Just five days of opioids can increase the risk of chronic opioid use.[32] Here again, acupuncture therapy has been shown to be an effective treatment or adjunct for acute pain with opioid sparing, that is, the ability to reduce the amount of opioids needed, if at all, to manage acute post-surgical and acute urgent care pain.[33-39] A single acupuncture treatment can also reduce anxiety, depression, nausea and vomiting as well as opioid side effects like dizziness, itching, urinary retention and constipation.[2] There is not a single medication that can make this claim.

Such a substantial evidence-base for acupuncture therapy as well as other effective nonpharmacologic modalities[2] begs the question: why continue to marginalize them as 'complementary' care.

NIH, NCCAM, NCCIH

The National Institutes for Health (NIH) retired 'alternative medicine' from its agency, the National Center for Complementary and Alternative Medicine (NCCAM), in December 2014 when it became the National Center for Complementary and Integrative Health (NCCIH). It is time to retire 'complementary' when referring to evidence-based therapies like acupuncture therapy for the following reasons:

1. 'Complementary' is not a term that is science-based.
2. 'Complementary' implies 'free,' unstudied, inessential, 'soft'.
3. 'Complementary' delegitimizes therapies proven effective, marginalizing them and their evidence-base.
4. Complementarity fails a primary responsibility to disseminate research and the evidence for therapies.
5. There is no such thing as a 'complementary provider'; there is no training, regulation, or licensure. It is professionally inappropriate to refer to a licensed professional, like a licensed acupuncturist, as a 'complementary provider'.
6. Referring to any evidence-based therapy as 'complementary' for pain undermines its appeal and viability as a pain care option and thwarts research interest in applications for other medical conditions.

State regulation

Most states in the U.S. regulate acupuncture, licensing professionals who meet a standard of education and practice.[40] These professionals work within their state regulated scope of practice. Many are in private practice, but a growing number of licensed acupuncturists are working within health systems in both inpatient and outpatient settings. This is due to the interest in safe evidence-based nonpharmacologic options for comprehensive pain care and proper dissemination of the evidence for the therapeutic benefit of acupuncture therapy.

Over the course of directing my eight year acupuncture fellowship program for inpatient care (at Beth Israel Medicine Center, then Mount Sinai Beth Israel), physicians and staff never referred to acupuncture as 'complementary medicine'; they were interested in two things: the research/evidence-base relevant to their patients and how to refer their patients.

Ask a physician or hospital administrator if they would like to incorporate evidence-based pain care options for their patients, or if they would like to incorporate 'complementary' therapies. Be assured the latter does not hold interest precisely because if a therapy has research supporting its clinical application, it would never be pitched as 'complementary'.

There are other appropriate terms with medical utility that are used in medicine: if acupuncture were to be referred in an area of pain care for which it has not been studied, medicine terms this as 'adjuvant analgesic' care[41] not 'complementary' care. If acupuncture is referred to encourage a patient to engage in their own health along with, say, yoga or exercise, this is termed 'self-efficacy' not 'complementary' care.

It's time to retire the term 'complementary medicine.' It's time to join the 21st century and engage science-based terminology that is utilized across medicine to best contextualize benefits, clinical applications as well as potential and future research directions for evidence-based nonpharmacologic care options.

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Liv – 1 大敦
Da Dun, Great Bulge

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.

Explanation of the Picture:

Liv 1. 大敦 Da Dun is the Wood and *jing-well* point on the Liver channel. Both qualities are shown as a tree and a wooden well.

The lady in green dress symbolizes the energy of the Liver – *Yin* of Wood. The Liver is to do with the ability to plan and bring the plan into action, this shows in her reading a chart.

The red robe represents the relation of this point to Blood.

Characters of the Name:

大 – Da – great

This is a pictogram showing a grown man with a knot in his hair.

敦 – Dun

In ancient times Dun was a bulging, paunchy grain container.

Meaning of the Name:

The name "Great Bulging" refers to the location of the point on the lateral corner of the big toe's nail. In the ancient Chinese doctor's imagination this area of the body resembles the shape of ancient container for the grains.

Main Actions and Indications:

1. Liv 1 is a *jing-well* point and the first point of the channel

1.1 As a *jing-well* point it has an effect of reviving consciousness and influences the other end of the channel.

Jing-well points as a group are very dynamic in nature. Liv-1 is a Wood point on the Liver channel, which is part of the Wood Phase. This double Wood quality results in a strong ability to bring movement and move strongly *qi* in the channel. Because the deeper Liver channel ends on the highest point of the body, Du-20, this area is related to *Hun* and *Shen*.

1.2. TMM channel of the Liver starts at Liv 1

The Liver Sinew Channel starts at Liv-1. It ascends through the medial aspect of the leg, knee and thigh to the genitals. Liv-1 as a starting point of this channel is indicated for the treatment of a variety of erectile dysfunctions, painful retraction of genitals caused by Cold or persistent erection caused by Heat.

2. Liv 1 is a Wood point

Wood Phase relates to the Spring—strong movement, assertiveness, on one hand and flexibility of young sprouts on the other. Liv-1 is very dynamic point breaking *qi* and Blood stagnations, tonifying self-esteem and ability to make and execute plans, as well as providing hope and direction.

The Liver channels run through the genital area. Liv-1, as the Wood point, connected with *ChongMai* strongly influences genitals providing proper flow of Blood to that area both in man and woman.

On the psycho-emotional level, Liv 1, as a Wood point, is effective in giving the joyful spark of initiative enabling planning and starting of new projects. It provides right direction for people who feel disorientated in life, who lost their direction and feel aimless, disconnected from the bigger life plan.

When this aspect is lacking, often there is a feeling of frustration and self-blame, which results in feeling of hopelessness and depression. Liv-1 gives new life to Wood Phase by bringing assertiveness, hope, and the ability to make and execute plans.

3. Root of *JueYin*

JueYin division incorporates the Pericardium and the Liver channels both related to the proper regeneration and distribution of Blood in the body. Liv-1 is the root of *JueYin* connecting it with the *ChongMai*. This explains why this point has so many indications which relates with the Heart, such as sudden heart pain with sweating and anger with palpitations.

4. Root of *ChongMai*

Liv-1 is one of the three points on the foot where *ChongMai* connects with the ground: Liv-1, Sp-1, Kid-1. All of them strongly influence the Blood. This relation explains the clinical effectiveness of Liv-1 in treating uterine bleeding and other bleeding especially when resulting from the Heat in the Blood. As a *ChongMai* point, Liv-1 also strongly moves Blood stagnations.

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of vitamin D3 taken with fat-containing meals, 60 mg daily of Zinc Picolinate, 450 mg daily of EGCG, and 500 mg daily of Quercetin. Her illness lasted three weeks, and the patient had two RT-PCR negative results.

The second local case, a 65-year-old female, felt sick after an early March trip to California, with a persistent cough, little phlegm, dyspnea, sweating, neck and shoulder stiffness, and chest discomfort. She was diagnosed with Wind-Cold invading the exterior. She was given Gui Zhi Jia Ge Ge Tang, 15 mL as needed of Drosera homeopathic cough syrup, 125 mcg daily of vitamin D3 taken with fat-containing meals, 60 mg daily of Zinc Picolinate, 450 mg daily of EGCG, and 500 mg daily of Quercetin. Her illness lasted four weeks, and the patient had two RT-PCR negative results.

Three more patients with COVID-19 contacted me from Europe and South America, all males in their mid-fifties. I couldn't send them Chinese herbal formulas nor could they find the formulas locally.

The patient in Europe ordered nutraceuticals online. The patients in South America ordered the supplements from compounding pharmacies. All were prescribed 250 mcg daily of vitamin D3 taken with fat-containing meals, 60 mg daily of Zinc Picolinate, 450 mg daily of EGCG, and 500 mg daily of Quercetin.

Because they all lived in countries with government-sponsored health care, it was easy for me to access their laboratory testing and thus monitor them. All three had elevated D-Dimer, so 3000 mg daily of N-acetyl-cysteine and 4000 mg daily of omega-3 were added. The average duration of the disease was two weeks, and all patients had two RT-PCR negative results.

Looking Towards the Future

My clinic's focus has always been on strengthening the immune system, building *qi* and Blood, and preventing disease. These days, this is more emphatically embraced by very motivated patients. Many challenges will result as mitigation measures are relaxed, and we may experience a second wave of case surges. Nonetheless, practitioners of traditional medicine are uniquely poised to make a positive impact on their communities by healing the sick and protecting the frail.

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