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INSIDE

Electroacupuncture According to Voll: Historical Background and Literature Review

Successful Treatment of Whiplash Associated Disorder Using Traditional Chinese Medicine and Other Healing Modalities at an Integrative Medical Facility: A Case Report

2015 Conference Reports: First Congress of Evidence-Based Acupuncture and Chinese Medicine; 12th International Conference of the Society for Integrative Oncology; and SAR 2015 International Research Conference

Clinical Pearls: How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?

Teaching Research Literacy: Spotlight on PCOM NY

Book Review: *Acupuncture from Symbol to Clinical Practice*





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CONTENTS Volume 3, No. 1 · Winter 2016

ORIGINAL RESEARCH

- Electroacupuncture According to Voll: Historical Background and Literature Review
Arnaldo Oliveira, PhD, DAOM, LAc 5
- Evidence-Based Acupuncture: Report on the First Congress of Evidence-Based Acupuncture and Chinese Medicine
Executive Chairpersons Zhanxiang Wang, PhD, MD (China), LAc, Hui Wei, MD (China), Lic. AP, and Haihe Tian, OMD 17
- SIO 2015: Report on the 12th International Conference of the Society for Integrative Oncology
Carla Wilson, PhD, DAOM, LAc 21
- SAR 2015 International Research Conference: Reaching Across Disciplines to Broaden the Acupuncture Research Network
Greg Golden, DAOM, LAc, Dipl OM (NCCAOM) 26

CASE REPORT

- Successful Treatment of Whiplash Associated Disorder Using Traditional Chinese Medicine and Other Healing Modalities at an Integrative Medical Facility
Connie M. Presson, LAc, Dipl OM (NCCAOM) 11

PERSPECTIVES

- Teaching Research Literacy: Spotlight on PCOM NY
Meridians Editor in Chief interviews Principal Investigator Beau J. Anderson, MSAOM, PhD 38

CLINICAL PEARLS

- How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic? 30

BOOK REVIEW

- Acupuncture from Symbol to Clinical Practice* By Jean-Marc Kespi
Reviewed by Joseph Adams, LAc 36

- Letter from Editor in Chief 2
Meridians JAOM Editorial Board 3
MJAOM Advertising Index Inside back cover

Cover Image: Winter Forest. Photo by Viktor Khymych

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



Welcome to the 2016 winter issue of Meridians JAOM: Spotlight on AOM Conferences.

Scientific conferences provide the opportunity for researchers to share their data from completed research or collect input on protocol design and methodologies on studies in progress. It's a time when like-minded researchers get together, network and share, and learn. In the world of academia, fall is usually conference season, and this winter issue of MJAOM presents our readers with reports on three scientific conferences in the U.S. that focused on presenting data on AOM research. Each report is written by a member of our MJAOM Editorial Board—each is a

peer reviewer for our journal who regularly attends AOM conferences.

The Beijing University of Chinese Medicine American Alumni Association (BUCMAAA) and the Traditional Chinese Medicine American Alumni Association (TCMAAA) held a joint conference in Orlando, Florida, on October 3-4, 2015, "The First Congress of Evidence-Based Acupuncture and Chinese Medicine." MJAOM is honored to offer you this report prepared by Executive Chairpersons Zhanxiang Wang, PhD, MD (China), LAc, Hui Wei, MD (China), Lic. AP, and Haihe Tian, OMD.

This year the Society for Acupuncture Research (SAR) held their international conference November 12-14 at the Harvard Medical School in Boston. On the final day of this conference, SAR continued its recent theme of international and collaborative expansion by combining program content with both the Society for Integrative Oncology (SIO) and the Fascia Research Society (FRS). The SAR conference was attended by many MJAOM authors, editors, and contributors, myself included. The conference report is prepared by Greg Golden, DAOM, Dipl OM (NCCAOM).

Immediately following the SAR conference, the Society for Integrative Oncology (SIO), held their annual meeting in the same location. It was attended by over 353 participants from 19 countries. Researchers, clinicians, educators, advocates, and thought leaders in integrative oncology presented exciting research findings, shared rich clinical insights, and discussed novel programmatic developments. The SIO conference report is prepared by Carla Wilson, PhD, DAOM, LAc.

In this issue we are pleased to present original research by Arnaldo Oliveira, PhD, DAOM, LAc. Entitled "Electroacupuncture According to Voll: Historical Background and Literature Review," Oliviera expands on his Electroacupuncture According to Voll case report that was published in the fall issue of MJAOM.

Our case report, "Successful Treatment of Whiplash Associated Disorder Using Traditional Chinese Medicine and Other Healing Modalities at an Integrative Medical Facility: A Case Report," was prepared By Connie M. Presson, LAc. Presson discusses treatment for a patient with whiplash injury with complications of headache and radiculopathy.

One of our focuses of MJAOM is to offer helpful resources for AOM faculty and students. In this issue we present "Teaching Research Literacy: Spotlight on PCOM NY." For this piece we were very fortunate to be granted an interview with Dr. Belinda Anderson, recipient of an NIH Career

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welcomes letters to the
editor from our readership.
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Development Award and coordinator of the Interprofessional Student Education Exchange Program between Albert Einstein College of Medicine and Pacific College of Oriental Medicine, New York.

Our featured book for this issue is *Acupuncture from Symbol to Clinical Practice* by Jean-Marc Kespi, reviewed by Joseph Adams, LAc. In the book, distinguished French acupuncturist Dr. Jean-Marc Kespi draws upon over fifty years of study, practice, and fascination with both western and Oriental acupuncture methods of medicine.

Please also take note of our Clinical Pearls for this issue. The topic, "How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?" offers a range of treatments within AOM, depending on which type of this condition is predominant in the patient. We hope the Clinical Pearls we offer are valuable resources for your own practice regimen.

Our Clinical Pearls topic for this issue is "How Do You Treat Erectile Dysfunction in Your Clinic?" Send your 400–500 word submission, with a maximum of 5 references or notes in a Word file, to Clinical Pearls Editor Dylan Jawahir, LAc at djawahir@meridiansjaom.com. More information is on our website: www.meridiansjaom.com. Submission deadline is February 1.

As always, we continue to invite your questions, submissions, feedback, and letters to the editor. info@meridiansjaom.com. Thank you and we hope you enjoy reading our winter 2016 issue.

In Health,

Jennifer A. M. Stone, LAc Editor in Chief, MJAOM

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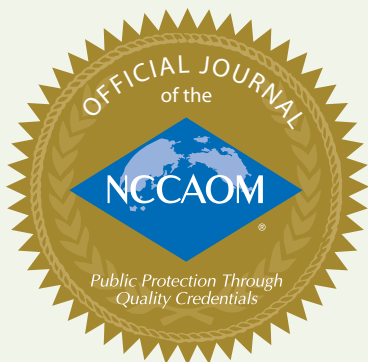
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We are very pleased to announce that the National Certification Commission for Acupuncture and Oriental Medicine has designated Meridians: JAOM as its official journal. Read more about this affiliation in our spring 2016 issue.

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Electroacupuncture According to Voll: Historical Background and Literature Review

By Arnaldo Oliveira, DAOM, LAc

Arnaldo Oliveira is a facial-trauma surgeon trained in Brazil at the Universidade Federal Fluminense. He holds a master's degree in organizational change and a PhD in organization and management. He received a master's degree in acupuncture and Oriental medicine from Institute of Clinical Acupuncture and Oriental Medicine, Honolulu, Hawaii, and received his DAOM from the Oregon College of Oriental Medicine in Portland, Oregon. Dr. Oliveira practices acupuncture and Oriental medicine in Honolulu, Hawaii, and specializes in electro-acupuncture according to Voll. Email: droliveira@ibemedicine.com

Above: Practitioner using the electroacupuncture technique on a patient.

Abstract

Electricity has been used to treat medical conditions for many years. Acupuncture points have distinct electrical properties when compared to surrounding tissue. The bioelectrical impedance of acupoints seems to vary between healthy and diseased states. Electroacupuncture according to Voll is a methodology that uses a calibrated ohmmeter to measure bioelectric impedance on certain acupuncture points located on the hands and feet in response to changes in the physiological functions of organs and structures of the body. This process also evaluates bioelectric impedance of acupuncture points when substances, such as medicines, herbs, supplements, and homeopathics are placed in the same electrical circuit with the patient.

Key Words: electroacupuncture according to Voll, EAV, medicine testing, impedance, resistance, bioelectric properties of acupoints

Historical Background

The use of electricity to treat medical conditions dates to antiquity. Archeological evidence indicates that circa 2750 BC, physicians in Egypt used electricity produced by *malapterurus electricus*, an electric fish, to treat pain. Circa 43 AD, Scribonius Largus, a court physician to Roman Emperor Claudius, employed the common torpedo, *Torpedo torpedo*, a Mediterranean electric ray, to treat headaches and gout, among other ailments.¹

During the 1740s, physicians in Europe, including Christian Gottlieb Krazenstein and Jean-Etienne Deshais, published a series of works on the use of electricity in medicine.^{2,3} During the 1750s, Benjamin Franklin treated many patients using an electrostatic generator and a Leyden jar.⁴ In 1775, Alesandro Volta invented what he called the "electrophorus," the precursor of capacitors.^{5,6} In the late 18th century, scientists such as Luigi Galvani and Charles Le Roy worked to delineate the fundamentals of modern electrophysiology.^{5,7} Volta built the first battery in 1794.²

The 19th century was also fertile ground for developing medical uses of electricity. In France, Duchenne de Boulogne pioneered the development of faradization,⁸ the therapeutic application of a faradic (induced) electrical current, based on the discoveries

of Michael Faraday (1791-1867).⁹ In the U.S., George Beard and A.D. Rockwell promoted the application of mild electric current to treat neurasthenia.⁵ In 1827, George Simon Ohm formulated a mathematical equation that described the relationship between voltage, current, and resistance, which became known as Ohm's Law.^{10,11} In the mid-1880s, Carl Ludwig and Augustus Waller discovered that the heart's electrical stimuli could be detected and monitored from the skin,¹² and in 1901, Willem Einthoven invented the EKG machine.^{1,6,12}

Today, the term "electroacupuncture" encompasses a number of procedures that employ traditional Chinese acupuncture and use of electronic devices.¹³ However, the combined use of electricity with acupuncture needles was most likely first implemented by Japanese physician Gennai Hiragain in the late 1700s. Hiragain utilized a static electricity generator, a device he called the "Erekiteru," connected to acupuncture needles.^{1,14} From Hiragain's first electrostatic generator ultimately to the advent of electroacupuncture utilized by Reinhold Voll, a number of physicians and scientists had researched and developed the process.

It was not until the beginning of the 20th century that, without the assistance of any electrical device, August Weihe was able

to make significant association between Chinese medicine and homeopathy.¹⁵ In 1903, Weihe published a list of points that he had discovered become painful following a toxic dosage of a remedy. He named the points after the specific homeopathic remedies that cured the pain in these points. The homeopathic remedies associated with these tender points were then prescribed to treat a broad array of disorders. Apparently, his knowledge of acupoints came from a relative in China.¹⁵ According to G.S.D. Marrant, a large number of the points that Weihe claimed to have found have the same locations as Chinese acupoints.¹⁶ In addition, according to A. Jayasuriya, the "coincidence of Weihe points and acupuncture points is probably because both homeopathy and acupuncture are based on similar concepts and approaches to healing."¹⁵

In 1932, Roger de la Fuye, a homeopath and acupuncturist, postulated the existence of physiological relationships between acupuncture points, homeopathic remedies, and diseases—a theory that became known as homeosiniatry.¹⁷ De la Fuye improved Weihe's method not only by highlighting the correlation between some of Weihe's points and traditional Chinese acupoints but also by impregnating acupuncture needles with homeopathic remedies prior to needling patients.¹⁷

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“In terms of electrical properties of the skin, the stratum corneum, functioning as a barrier, produces the greatest impedance (opposition to charge flow), expressed in resistance (both in alternating and direct currents) and in reactance (only in alternating current), when exposed to electrical stimuli.⁴⁹”

Additionally, De la Fuye promoted the use of electroacupuncture by using a device he called the “diathermopuncteur” to enhance the efficacy of his treatments.¹⁸ The contributions of both Weihe and De la Fuye were *sine qua non* for the discovery and development of Reinhold Voll’s method. In one of his books,¹⁸ Voll acknowledged the importance of De la Fuye: “The word ‘Electro-Acupuncture’ was first coined by the French acupuncturist Dr. Roger de la Fuye in Paris. He combined an electric device (Diathermopuncteur) with the inserted needle in order to apply on certain points of the skin—the so-called acupuncture points—as an additional therapeutic stimulus, a diathermia-current lasting 1/8 to 2 seconds via the inserted needle.”¹⁸

In 1953, Voll and Werner designed a needleless electroacupuncture instrument to locate acupoints, naming it an “electropuncteur.” However, after De la Fuye’s objection, Voll and Werner renamed the device the “K+F Diatherapuncteur.” (The manufacturer’s name is Kraiss & Friz company.)^{1,18,19} After studying the instrument for more than two years, Voll discovered additional acupoints and how they relate to different internal organs. He named this process “medicine testing.”^{18(p850),20,21,22,23}

What is an Acupuncture Point (Acupoint)?

There are a number of hypotheses concerning what constitutes an acupoint (AP) and several theories proposing possible mechanisms of how acupuncture works.²⁴ Although no specific anatomic correlates corresponding to the channels and acupoints have been yet found, acupoints seem to be closely connected with anatomical structures such as nerves, blood and lymph vessels, muscle gaps, and interstitial connective tissue.^{25,26,27,28,29} Despite inadequate definitions and descriptions of the APs found in several prior studies,³⁰ most researchers seem to agree that acupoints present distinct electrical properties when compared to surrounding tissue.^{25,30–41}

A number of research papers have examined whether APs present electrical properties and whether there are any electrical differences between APs and non-APs.⁴² Although the available reports in current literature vary in terms of research quality, a recent published systematic review established validity to the theory that acupuncture channels and points possess electrical characteristics distinguishable from surrounding tissue.³⁰

Additionally, a number of studies have indicated that there may be an association between APs and reduced electrical impedance and resistance.^{43,44,32,30} For instance, in a study published in 2010, Ahn et al. assessed electrical impedance of skin and subcutaneous connective tissue on the large intestine, liver, and urinary bladder meridians in 28 healthy subjects. They concluded that collagenous bands are significantly associated with lower electrical impedance.³² Although the size and shape of acupoints remain undefined,⁴⁵ the morphological structures of the skin are well known.

Human skin is divided into three major layers: the epidermis, the dermis, and the subcutaneous tissue (hypodermis).⁴⁶ The epidermis is the most superficial layer and is further divided into four distinct strata according to their structural location and the differentiation (keratinization) of their cells.^{47,48} The stratum corneum is the outermost layer and is composed of keratinized tissue. The stratum granulosum is composed of cells that contain keratohyalin granules, which help form the epidermal barrier. The stratum spinosum is composed of spinous cells that provide mechanical support to the skin. The stratum basal is composed of continuously dividing keratinocytes that help form the other strata of the epidermis.^{49,46–48}

In terms of electrical properties of the skin, the stratum corneum, functioning as a barrier, produces the greatest impedance (opposition to charge flow), expressed in resistance (both in alternating and direct currents) and in reactance (only in alternating current), when exposed to electrical stimuli.⁴⁹ However, skin hydration, or the use of a wet contact electrolyte (contact media), considerably lowers impedance.⁵⁰ Therefore, in electroacupuncture according to Voll (EAV), the use of water saturation or an electrolyte can greatly increase admittance (the inverse of impedance).^{33,49,50}

EAV is a method of measuring the electrical impedance of acupoints. It utilizes an electronic ohmmeter designed to measure the skin’s electrical resistance. An EAV device consists of a 12 microampere meter calibrated from 0 to 100 with an electromotive force (emf) of 1.2 V. The instrument has a high internal resistance because the electrical impedance of acupuncture points is lower and conductivity is higher than in the contiguous skin. When taking a measurement, the patient holds the negative electrode in one hand, and the physician presses the probe, which is the positive electrode, on specific acupoints mainly located on the hands and feet. The pressure applied to the skin on the acupoint should be constant, which Voll called electro-acupuncture pressure, such that it causes a stable electrical resistance for the overall reading.^{17,19,23}

Then, when using the probe to apply a steady pressure to an acupoint, if the reading of the meter goes to 50 (on a 0-100 scale of the device meter) and stays stable at that position, it indicates that the organ or system associated with that particular acupoint is energetically healthy. If the reading of the meter goes above 65 and stays stable at that position, it indicates that the organ or system associated with that particular point is energetically "irritated." However, if the initially-taken reading, whatever it might be, decreases and settles at a lower value of the scale, this is known as an indicator drop (ID), which suggests that the organ or system associated with that particular acupoint is energetically unhealthy. IDs occur because the organs or systems being measured cannot generate a bioelectric reaction to the initial electric measurement current transmitted by the probe to the acupoint.^{1,18,19,51,52}

Literature Review

For many years, electrodermal activity at acupuncture points (APs) has been explored by clinicians for both diagnostic and therapeutic monitoring purposes.^{1,3,17-19,23,53,54,15,34,55} Based on the work of a number of clinicians,^{1,18,53,56-58} electrodermal screening (EDS) is a diagnostic means that records measurements of electrical activities of the skin on APs. This determines energetic imbalances in the acupuncture channels and their associated systems and organs.^{18,23,54} The main theoretic tenets of EDS hold that APs have lower electrical impedance or resistance than nearby non-acupuncture sites^{19,23,54,57,59} and that skin impedance or resistance at APs differs in health states and disease states.^{33,49,60,61}

Several recent studies have proposed that the distinct electric property of acupoints—reduced electrical impedance and resistance—corresponds to the connective tissue planes.^{28,32,35,62,63} One possible explanation for low impedance and resistance might be the relative higher content of the interstitial fluid in loose connective tissues.^{63,64} Other researchers have theorized that connective tissue may be the structural network by which electrical signals travel within the acupuncture channel system.^{32,35} According to Chen et al., a number of prior studies have suggested that acupuncture channels and points are located along collagenous bands and the fascial planes—structures that are significantly associated with lower electrical impedance and resistance. Therefore, this unique biophysical characteristic offers a critical relevance to collagen in bioelectrical measurements.^{24,32}

Because there are a number of factors involved in bioelectrical measurements when performing EDS, the physician should observe skin hydration, age, gender, time of the day, stratum corneum thickness, skin structural integrity, and sweat gland density.^{49,60} For instance, in sweat ducts, charges can bypass the stratum corneum thereby causing an electrical short circuit. High densities of sweat ducts found in palms, soles of the feet, and face

promote lower resistance and impedance in these areas. In addition, sweat ducts may be the main reason why acupuncture points present lower impedances.⁴⁹ Skin conductance at acupoints can be higher in males, higher during the afternoon, and it tends to decline with age.⁶⁰

According to F. Li et al., there is enough evidence indicating that APs may have distinct physical properties. This justifies the need to continue this research in order to elucidate such phenomena.⁴² In pathological circumstances, APs can be diagnostically important because they may present reflex characteristics (*ashi* points) when palpated.²⁵ In healthy individuals, electrical skin resistance at acupoints seems to be significantly lower when compared to the nearby non-acupoints areas.^{42,65}

Several studies have consistently shown an association between EDS measurements on certain APs concerning both clinical outcome and treatment prescriptions. This suggests that a physiological basis for electroacupuncture according to Voll (EAV) measurements may exist.^{58,66,67,68,55,56} W.A. Tiller studied different electrodermal diagnostic acupuncture devices and concluded there is experimental support for the connectivity between organs and acupuncture points.⁷¹

Clinical findings by J. Tsuei et al. compared EAV measurements of the right-side Spleen 3 point (carbohydrate metabolism in EAV) of diabetic subjects (33 males, 22 females) with a control group (43 males, 52 females) and found that EAV was an effective method in the diagnosis of diabetes due to its sensitivity, reliability, and specificity.^{57,67} Additionally, this study on diabetes is significant because it demonstrated the ability of EDS of evaluating effective dosages of medicines before they are given to the patients.⁶⁷

In another of his studies, Tsuei et al. compared EAV measurements of the allergy control measurement points (AL CMPs) to other available diagnostic tests for allergy. Although only a small sample was used, the results showed that EAV had a high degree of compatibility with the other tests, with the advantage of being both noninvasive and sensitive.⁶⁹ By also studying allergies, J. Krop et al. found that EDS was 96% effective in detecting allergic and nonallergic substances in a double-blind capacity.^{68,70}

A randomized sham-controlled trial study using an EDS device showed that electro-dermal measurements may be significantly associated with clinical outcome in chronic pelvic pain patients.⁶⁶ A narrative review study suggested that (1) EDS may help differentiate disease-related APs from non-diseased points, (2) increased skin resistance in APs correlates with fatigue, and (3) EDS testing at the Jing-Well APs may help monitoring the effectiveness of acupuncture treatments.⁷² Finally, a double-blind study showed that the skin electrical characteristics of specific locations are dependent on the health state of the corresponding internal organs, confirming that the impedance of an AP related to a diseased organ is higher than that of an AP associated to a healthy organ.⁷³

Conclusion

Electrodermal testing involves measuring bioelectric impedance of acupuncture points in response to changes in the physiological functions of organs and structures of the body. It also evaluates bioelectric impedance of acupuncture points when substances, such as medicines, herbs, supplements, and homeopathics, are placed in the same electrical circuit with the patient.

The electrodermal testing method, Electroacupuncture according to Voll, can be a valuable tool in clinical practice because of its safety, noninvasive nature, cost-effectiveness, and clinical diagnostic value. As a systems approach, EAV is a simple method with holistic capabilities that can help practitioners identify and treat complex diseases that may involve a number of cofactors, including environmental toxins, viruses, bacteria, and food sensitivities, and more.

EAV provides the opportunity to let practitioners to work within a systems perspective, allowing the analysis of the characteristics of a problem in a holistic fashion instead of isolating the parts of a complex problem. In a simple way, EAV helps to shift the focus from the component parts to the whole by high-

lighting a number of possibilities regarding pathogenic signals that may affect homeostasis and cause disease. Once a multiparameter evaluation is completed, treatments can be designed to address all the detected pathogenic signals. In EAV, the center is the patient, not the disease.

Based on this review of English literature, evidence suggests that APs have distinguishable electrical characteristics, which can be measured and related to clinical findings. However, a number of studies of electrical characteristics of APs have been of poor quality regarding sample sizes, point location, methodologies, mixed conclusions, reproducibility, and so forth. Therefore, future studies should not only address the aforementioned shortfalls but also investigate the physiological characteristics of the acupuncture point.

For the last few decades, complex health problems have posed difficult challenges for both patients and practitioners. EAV may be well positioned to address the new realities of disease complexities that have become more prevalent today. EAV is a modern acupuncture system offering new strategies that can be added to our arsenal of diagnostic options, such as pulse and tongue. These strategies have slowly evolved through time but may not be enough nowadays. EAV should be considered as a new complement to the practice of Oriental medicine as a system of diagnosis and treatment.



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CONTINUED ON PAGE 40



Successful Treatment of Whiplash Associated Disorder Using Traditional Chinese Medicine and Other Healing Modalities at an Integrative Medical Facility: A Case Report

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Abstract

Whiplash injury occurs in up to 40% of motor vehicle accidents and is the most commonly occurring traumatic injury to the neck. Whiplash associated disorder is an injury caused by an acceleration-deceleration transfer of energy to the cervical spine. In this single case report, immediately after a motor vehicle accident, a 36-year-old female patient was experiencing neck, upper back, and rib-side pain, tension, and stiffness that was worse on the left side. She was also feeling an intermittent, frontal headache and had some tingling in the left arm and hand. She received traditional Chinese medical treatment, including acupuncture and cupping, for her whiplash associated disorder. She was treated in an integrative medical facility and received other treatment modalities, including pharmaceutical muscle relaxants, chiropractic adjustments, and massage. Acupuncture treatment was performed twice per week and cupping was performed once per week for eight weeks. Chiropractic adjustments and massage were also performed twice per week for eight weeks. The patient followed her treatment plan diligently for all modalities. She was fully recovered from her injury at the conclusion of her eight-week treatment cycle. Muscle relaxants were only required for the first two weeks following the injury. Regular follow-up treatments with the patient revealed no rebound pain from the injury. This case report contributes to the body of knowledge regarding traditional Chinese medical treatment for whiplash-associated disorder in a multidisciplinary setting.

Key Words: whiplash, musculoskeletal strain, acupuncture, cupping, integrative medicine

Introduction

Whiplash due to motor vehicle accident (MVA) is the most common traumatic injury to the neck. It occurs in up to 40% of automobile accidents.¹ The term “whiplash” was not officially defined until 1995 by the Quebec Task Force (QTF) on whiplash associated disorders (WAD). Their definition is “an acceleration-deceleration mechanism of energy transfer to the neck.”² This injury can occur during motor vehicle accidents involving collisions, driving, or most any other type of impact accident. The impact may result in injury to the bony structures or the soft tissues of the neck.³ Whiplash may also be described as musculoskeletal or cervical strain due to trauma.¹

This injury can lead to a variety of clinical manifestations; most common are neck pain and headache. Other symptoms may include stiff neck, pain, numbness, paresthesia, and weakness in the arms and shoulders, dysphasia, dizziness, difficult concentration, visual disturbance, and auditory disruption.³

Patients experiencing WAD may be classified into categories based on the severity of their symptoms. The categories range from Grade 0 to 4. Grades 1 and 2 are the most commonly occurring.⁴ Table 1 lists the categories and their signs and symptoms. Posture and range of motion (ROM) are assessed in the determination of severity of injury.¹ Table 2 describes the assessment of injury.

Table 1. Categories of WAD

Grade	Symptoms
0	No physical symptoms or complaints
1	No physical signs, but complaints of neck pain, tenderness, or stiffness are present
2	Neck complaints and musculoskeletal signs are present, including decreased ROM and muscle strength
3	Neck complaints and neurological signs of sensory deficit are present
4	Neck complaints and bone fracture/dislocation are present

“In general, whiplash injuries have a good prognosis; most patients recover from their injury. It is reported that 87% of patients recover within six months following injury and 97% recover within twelve months, however, these numbers are questionable.⁴”

Table 2. Assessment of WAD

Physical Testing
Shoulders become rolled forward or head has a forward posture
Flexion, extension, or rotation may be difficult, limited, or painful
The upper extremities may have sensory deficit to touch or temperature
Muscular strength of the arms may be weakened
Neck, shoulders, arms, and upper back may be tender upon palpation
Bone fractures or dislocation may be determined by X-ray
Other bony abnormalities may be determined by computed tomography (CT) scan
Soft tissue damage to disks, spinal cord, or nerve roots are detected by magnetic resonance imaging (MRI)

In general, whiplash injuries have a good prognosis; most patients recover from their injury. It is reported that 87% of patients recover within six months following injury and 97% recover within twelve months, however, these numbers are questionable.⁴ They may be due to the definition of recovery by the QTF: “cessation of time-loss compensation.”² There is no indication whether or not whiplash patients continued to have neck complaints or continued to need medical care in this study.⁴

Conservative treatments for whiplash injury may be used if there is no sign of bony damage and if soft tissue damage is minor. Non-steroidal anti-inflammatory drugs (NSAIDs) and opioids may be needed to reduce pain and inflammation. Muscle relaxants may be used if there is muscle spasm and to aid in sleeping.¹ Other conservative treatments include heat and ice therapy, neck collar immobilization, massage, traction, ultrasound, exercise, active mobilization, and pulsed electromagnetic therapy.⁴

Cervical foramen or facet injections of prednisone may be necessary to reduce inflammation in more severe cases. Patients should be referred to an orthopedic specialist when severe motor weakness is detected and if surgical decompression is indicated. Surgeries are successful in up to 90% of severe cases, but this should be used as a last resort.¹

In traditional Chinese medicine (TCM), whiplash falls under the category of neck pain or *jing xiang tong*. Neck sprain or strain can damage the sinews, muscles, and the network vessels in the neck. This hinders the flow of *qi* and blood through the local area, thus producing neck pain. The treatment strategy is to soothe the sinews and free the flow of the network vessels in the local area.⁵

“In a 2011 randomized controlled trial, WAD patients who received real acupuncture treatment showed greater improvement in pain and in conducting daily activities than those who received sham acupuncture.”

The sequelae of whiplash injury usually produce symptoms of headache or *tou tong* in TCM. Blood stagnation results from local trauma, which then leads to *qi* stagnation.⁵ Static blood enters the network vessels.⁷ This lack of blood flow, in turn, leads to malnourishment of the vessels in the brain causing headache. The treatment strategy is to move *qi* and blood to stop pain.⁶ Shoulder pain, or *jian tong* in TCM, may also result from whiplash. This is due to blood stagnation from local trauma blocking the channels and network vessels in and around the shoulder area, causing pain. The treatment strategy is to move blood and free the flow of the network vessels.⁵

In a 2011 randomized controlled trial, WAD patients who received real acupuncture treatment showed greater improvement in pain and in conducting daily activities than those who received sham acupuncture. The real acupuncture group received acupuncture at the points GB-39, GB-20, LI-14, and SI-6 bilaterally with electrical stimulation at 2-5 Hz and 1.5 volts for 30 minutes. The sham acupuncture group was given acupuncture at points 20-30 mm away from the real points with the same electrical stimulation. Acupuncture was conducted during twelve sessions over six weeks. The results, however, may not be clinically significant due to the small sample size.⁸

In a 2010 pilot study on whiplash, patients received physiotherapy and either real acupuncture or sham acupuncture. While this study group was small, there was a strong trend towards the effectiveness of acupuncture for pain relief.⁹ In a 2012 crossover trial, findings suggest that acupuncture activated endogenous analgesia in chronic WAD patients who exhibited centralized sensitization. One treatment session of acupuncture compared with one treatment session of relaxation resulted in greater improvement in overall pain sensitivity at both local neck points and distal points.¹⁰

There is little research on acupuncture for WAD due to MVA, most likely because most patients go to an emergency department (ED) following injury instead of their general practitioner. There are very few acupuncturists who practice in hospitals, and insurance coverage for their services is uncommon. Therefore, referrals for acupuncture treatment from ED doctors are unusual.¹¹

Case History

A 36-year-old female was admitted to an integrative medical clinic following a motor vehicle accident in which her vehicle slid on ice, hit a guardrail, and spun around 180 degrees. She was wearing her seatbelt and was able to ambulate after leaving the vehicle. Within two hours after the accident, she began experiencing neck, upper back and rib-side pain, tension, and stiffness that was worse on the left side. By the end of the day, she was having intermittent frontal and occipital headaches and some tingling in the whole left hand. She took Advil 400 mg for the pain but it provided little relief. She had difficulty falling asleep that evening and found it impossible to lie with her neck in a comfortable position.

The next day, the patient was examined by a medical doctor. She had diffuse tenderness throughout her cervical spine and paraspinous muscles, with muscle spasm on the left side of the neck. She had mildly decreased range of motion (ROM) with flexion and left lateral rotation of the cervical spine. She had full ROM at the shoulders bilaterally and no thoracic or lumbar spine tenderness. She did not appear to have any bony abnormalities, therefore X-rays were not recommended by the examining physician. She was diagnosed with musculoskeletal strain/whiplash and referred to acupuncture, chiropractic, and massage evaluation and treatment. To ease the tension and aid with sleep, she was prescribed muscle relaxant Flexeril (cyclobenzaprine) 5 mg TID for 30 days.

On the same day as her medical examination, the patient was also examined by a chiropractor, who determined she had tenderness upon palpation at vertebrae C1-5, T1-3, T-10, L-4, the left sacroiliac joint, and the left acetabular joint. It was discovered that her right hip and shoulder were lower than the left and her head had a slight right tilt. She also had a forward head posture. She expressed positive in a Maximum Cervical Compression Test, which is very common in whiplash injuries, indicating possible tearing and stretching of the ligaments in the neck. She had a slightly positive Romberg's Test, which can indicate impaired cerebellar function.¹²

The chiropractic treatment plan was set at twice per week for six to eight weeks, with re-examination after twelve adjustments. The treatment strategy aimed to realign the vertebrae, stimulate healing of stretched ligaments, and balance the nervous system with corrective and rehabilitative chiropractic adjustments. Maximum Cervical Compression and Romberg's Tests would be monitored.

The patient was also able to receive massage therapy that same day. The massage therapist used ROM, stretch and release, cross fiber, and myofascial techniques, focusing on the scalene, occipital, and suboccipital muscles. Massage was recommended twice per week for four to eight weeks.

Evaluation by the acupuncturist was conducted the next day. Upon palpation, her neck and upper back were very tight—the left side being worse. She reported that Flexeril (cyclobenzaprine) relieved this tension and helped her sleep. She took the medication only at night due to her concern that the side effect of sleepiness would prevent her from performing daily activities. Therefore, the neck, shoulder, and upper back tension and pain were still prominent during the day. She was still experiencing intermittent frontal and occipital headaches.

She was able to perform her job; however, she experienced fatigue very quickly and had to take breaks more often. After work, she would lie down for the remainder of the evening. Prior to the accident, she participated in many evening activities, such as exercising, cooking, and socializing. Since the MVA, she felt moderate stress even while driving. This manifested as feeling nervous when driving in moderate to heavy traffic, a feeling of oppression in both the chest and hypochondria areas. She also had intermittent feelings of depression and irritability, especially at night.

Additional history indicated normal sleep with low energy in the afternoon; normal digestion as long as she avoided dairy, soy, and most carbohydrates; bowel movements twice daily that ranged from normal to soft and sticky; frequent urination; spring allergies, including sneezing, stuffy nose, and frontal headache; asthma with difficult inhalation upon exertion; myopia corrected with contact lenses; irritability and bloating one week prior to menstruation; dysmenorrhea during the first two days of menses; and dark menstrual blood with clots. Caffeine consumption included a cup of green or black tea twice daily. Alcohol consumption was two servings of beer, wine, or liquor twice per week. Exercise included yoga, walking, hiking, jogging, or alpine skiing three times per week.

Due to occasional pain in her right hip due to scoliosis of the spine and her left leg being shorter than the right, she has worn custom orthotics and received monthly chiropractic adjustments for the past fifteen years. Her medications include ProAir HFA (albuterol) at two puffs PRN at 15-30 minutes before exercise for asthma as well as Loestrin 24 Fe (norethindrone acetate and ethinyl estradiol, and ferrous fumarate) 1 mg-20 mcg (24)/75 mg (4) for birth control.

Her pulse was thin and wiry overall, slightly deep and weak in both *chi* positions, and slightly slippery in the right *guan* position. Her tongue was dusky in color, with a puffy and scalloped body, a round indentation in the middle *jiao* area, a thin, white coating, and dark sublingual veins without distention.

The patient was diagnosed with *qi* and blood stagnation from physical trauma causing pain, tension, and stiffness in the neck, shoulders, and upper back and Liver *qi* stagnation from emotional trauma causing chest and hypochondria oppression, stress, depression, and irritability. Her underlying diagnoses included Spleen *qi* deficiency with dampness due to difficulty digesting certain foods, soft and sticky stools, fatigue in the afternoon, sinus congestion, a thin pulse that is slippery in the right *guan* position, and a puffy, scalloped tongue. Kidney *qi* deficiency was causing asthma with shortness of breath upon exertion, difficult inhalation, frequent urination, and a deep, weak pulse in both *chi* positions. Liver blood stagnation was causing cramping during her period, dark and clotted menstrual blood, a wiry pulse, and a dusky colored tongue. Liver *qi* stagnation was causing the pre-menstrual irritability and bloating, dusky tongue, and wiry pulse.

Treatment

The immediate treatment principle was to move *qi* and blood to stop pain and disperse the Liver to regulate *qi*. Once the pain and stress from the acute trauma was resolved, focus would then shift to the patient's underlying conditions. This treatment would include tonifying Spleen *qi*, tonifying Kidneys, invigorating blood to stop pain, and moving Liver *qi*.

The acupuncture treatment plan was set at two times per week for eight to twelve weeks. Acupuncture points and their functions are listed in Table 3. These points were applied bilaterally at each treatment for four weeks. All points were needled with Spring Ten brand, #36 gauge, 0.20 x 30 mm needles. The needles were retained for thirty minutes. A re-evaluation would occur at week five, after four weeks of treatment.

Table 3. Acupuncture Points During Weeks 1-4

Acupuncture Points	Function
Shen Mai UB-62, Hou Xi SI-3	Treats the spine by opening the <i>du mai</i> channel
Feng Chi GB-20, Jian Jing GB-32, Tian Zhu UB-10, Hua Tou Jia Ji (HTJJ) C2-7	Unblock the channels in the local area
Shen Dao GV-11	Calm the mind
Ge Shu UB-17, Gan Shu UB-18	Move stagnant <i>qi</i> and blood
He Gu LI-4	Stop pain
Yang Ling Quan GB-34	Relax the sinews and remove obstruction from the channel

Cupping was applied once per week for the first eight weeks to vigorously move *qi* and blood. Slide cupping was applied to the entire length of the thoracic area between the scapulas. Stationary cupping was applied at *Jian Jing* GB-21 and *Nao Shu* SI-10. Each cupping session lasted ten minutes or until petechiae appeared.

Cupping was performed with Pro Choice brand 1.8" diameter glass cups using a hand pump and Blue Poppy brand Chinese Herbal Sports Massage Oil. The Chinese herbal ingredients in this oil are used therapeutically in addition to providing glide action for slide cupping. The product base consists of *xing ren* (Armeniacae Semen) oil, *Ding xiang* (Caryophylli Flos), *tan xiang* (Lignum Santali albi), and *xiao hui xiang* (Fructus Foeniculi) move *qi*. *Mo yao* (Resina Myrrhae) and *ru xiang* (Resina Olibani) move blood. An *xi xiang* (Styrax Benzoinum) aromatically moves *qi* and blood. Together, these herbs help to relieve pain.¹³

In the first week, she reported her pain level at 7 on a scale of 1-10. During week two, the patient reported that she had stopped taking her muscle relaxants since she could sleep comfortably. Her pain level was at a 5 at this time. During weeks three and four, she reported a pain level of 4. At her re-evaluation at the beginning of week five, her pain level was at 3. She was no longer having occipital headaches or tingling in her left hand.

Acupuncture was applied at the same points during weeks five through eight, with the addition of points for her underlying syndromes. These points and their functions are listed in Table 4.

Table 4. Additional Acupuncture Points During Weeks 5-8

Acupuncture Points	Function
Zu San Li ST-36, San Yin Jiao SP-6	Benefit the Spleen and Stomach, tonify <i>qi</i> and blood
Yin Ling Quan SP-9	Resolve dampness
Tai Chong LR-3	Calm the mind, promote the smooth flow of Liver <i>qi</i>
Xue Hai SP-10	Move Liver blood
Tai Xi KD-3	Tonify Kidneys

"In this case, the patient experienced full recovery from her whiplash injury after eight weeks of regular acupuncture, cupping, chiropractic adjustments, and massage therapy. By using complementary and alternative medicine techniques, the patient was able to minimize the use of pharmaceutical muscle relaxants to only two weeks following the accident."

At the beginning of the seventh week of treatment (after twelve chiropractic adjustments), she was re-evaluated on all orthopedic and neurologic tests by the chiropractor. Maximum Cervical Compression and Romberg's Test were both negative at this time. She still had slight tenderness at the C1-5 vertebrae, the left sacroiliac joint, and the left acetabular joint. There was no more tenderness at T1-3, T-10, and L-4 vertebrae. She no longer had a forward head posture or a right tilt to the head. ROM with flexion and left lateral rotation of the cervical spine had fully improved.

The patient reported having no pain at the end of week eight. Follow up acupuncture treatments were scheduled weekly for four weeks, then monthly for three months to ensure that the pain from her injury did not return.

Results

In this case, the patient experienced full recovery from her whiplash injury after eight weeks of regular acupuncture, cupping, chiropractic adjustments, and massage therapy. By using complementary and alternative medicine techniques, the patient was able to minimize the use of pharmaceutical muscle relaxants to only two weeks following the accident. She had weekly follow-up visits for each treatment modality for one month, then, monthly follow-up visits of each treatment modality for three months. At each visit, the patient reported that her whiplash symptoms had not returned.

Discussion

The patient experienced complete relief of all symptoms after eight weeks of treatment. She was very dedicated to full recovery from her injury and instituted treatment the day after the motor vehicle accident. She was extremely diligent about receiving acupuncture, cupping, chiropractic adjustments, and massage at the recommended intervals. She was compliant with following

her treatment plan and did not miss any appointments. Most likely this factor greatly contributed to her rapid and complete recovery from all symptoms.

All practitioners involved in the patient's care were very experienced in treating patients with MVA-related injuries and were knowledgeable about the skills of their fellow practitioners. This also likely increased ease of communication among them. This collaboration may have contributed to the patient's complete and rapid recovery.

It would be helpful in future research involving WAD patients to include imaging results, which may include X-ray, CT scan, or MRI immediately following the injury. It would also be helpful in future case reports on this topic to include imaging after full recovery from the injury to compare the empirical results before and after treatment to provide helpful evidence indicating a successful treatment did occur. Since this particular integrative medical clinic treats many cases involving MVA patients, it may be worthwhile to collect data from each case.

Integration of treatment methods seems to be the direction toward which the modern medical system is moving. This can contribute to the overall body of knowledge about treatment of WAD that utilizes several different modalities of treatment.

Conclusion

Acupuncture was used to treat a patient's whiplash symptoms, which occurred following a motor vehicle accident. Other treatment modalities included pharmaceutical muscle relaxants, cupping, chiropractic adjustments, and massage. The patient was relieved of all symptoms following eight weeks of treatment from each complementary modality. Acupuncture, cupping, chiropractic adjustments, and massage were able to minimize the use of muscle relaxants to two weeks. The patient has experienced no relapse of symptoms after several follow up consultations.

It is, however, difficult to conclude that these therapies were the only factors that contributed to the patient's full recovery since this case is limited to the results from this one patient. More research into this subject is required to draw conclusions about the effectiveness of TCM and integrative medical treatment for whiplash injury.

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Founder and president of both BUCMAAA and TCMAAA Dr. Tian Haihe hosted the meeting.

By Executive Chairpersons Zhanxiang Wang, PhD, MD (China), LAc, Hui Wei, MD (China), Lic. AP, and Haihe Tian, OMD

Please see bios at the end of the article.

Evidence-Based Acupuncture: Report on the First Congress of Evidence-Based Acupuncture and Chinese Medicine

The Beijing University of Chinese Medicine American Alumni Association (BUCMAAA) and the Traditional Chinese Medicine American Alumni Association (TCMAAA) held a joint conference in Orlando, Florida, on October 3-4, 2015.

Founder and president of both BUCMAAA and TCMAAA, Professor Haihe Tian, OMD, organized these nonprofit organizations to strengthen ties between western and traditional Chinese medicine and to promote its accessibility and application while working to reduce medical costs and increase the quality of medical care in the U.S. Members of both groups total over a thousand licensed acupuncture practitioners formally trained in accredited medical education institutions in China. They have been practicing acupuncture in the United States for many years and hold some of the highest recognized credentials in the fields of acupuncture and other forms of traditional Chinese medicine. According to Dr. Tian, the mission of these two U.S.-based organizations is to provide the most current thinking and latest technological achievements in TCM practices, techniques, and products.

BUCMAA was the first to form WeChat TCM College, managed by Hui Wei, and is the first to host seminars in Chinese medicine and acupuncture via WeChat. BUCMAA and TCMAAA have also hosted many top-rated academic audio seminars and workshops via WeChat covering a variety of fields, including pain, allergy, cancer, and women's diseases.

The Congress theme, "Evidence-Based Acupuncture: Presenting and Gathering Solid Clinical Evidence in Chinese Medicine and Acupuncture," brought together over 200 U.S. and international practitioners. These attendees represented a full array of clinical and research evidences concerning acupuncture, traditional Chinese medicine, *Tai Ji*, *Qigong* and others. Programming included over 20 forums, presentations, roundtable discussions, and workshops. Topics covered included the integration of Chinese medicine and western medicine in dealing with pain, migraine, cancer, addiction, diabetic peripheral neuropathy, hypothyroidism, infertility, umbilical therapy, rehabilitation, insomnia, hypertension, Hashimoto's thyroiditis, Parkinson's disease, allergies, psycho-oncology, and cosmetic acupuncture.

More than 20 suppliers of alternative medical products from across the U.S. showed their support and exhibited their products during the conference. The newly formed New York-based Acupuncture Corporation of America (ACA) was the lead conference sponsor. Founded by doctoral graduates of China's prestigious Beijing University of Traditional Chinese Medicine, ACA seeks to become the first and largest Chinese acupuncture, medicine and herb franchise in the United States. ACA intends to provide some of the most current thinking and latest technological achievements in TCM practice, technique, and products.

Group papers featured at the conference are discussed here:

Clinical Research

Back to Simplicity and Fuse East and West: Re-Introduction of an Acupuncture Method for Musculoskeletal and Joint Pain

Lan, Fusheng, LAc, MS, The Center for Health and Healing, Franciscan Healthcare, Mayo Clinic Health System, Onalaska, Wisconsin

Three hundred sixty cases of patients with musculoskeletal pain were organized into 11 groups according to the location of their pain. After acupuncture treatment with the *ashi* point method, the effective rates are summarized here: *Ashi* point acupuncture is a simple, inexpensive and very effective treatment for musculoskeletal pain, and it should be in the front-line of therapeutic options for all patients with pain in the joints, neck or back. It is a repeatable therapy without major side effects.

Treating GERD Based on Modulating Bioelectricity

Wanzhu Hou, Guangpi Xu, All Natural Medicine Clinic, Rockville, Maryland

This paper addresses the treatment of gastroesophageal reflux disease (GERD) through the modulation of bioelectricity using acupuncture and patient self-applied acupressure. Sixty patients who were diagnosed with GERD received acupuncture treatments to stimulate certain points and area, which may modulate vagus nerve function through the sensory fibers. The total results were 65% positive in all 60 patients, including those who stopped taking anti-acid and or anti-depression medications. Thirty percent had total recovery, 30% improved, and 5% showed no improvement. Acupuncture/acupressure modulates bioelectricity of the GERD patient via the cranial nerve to mediate movement of LES and secretion of stomach acid and is passable in clinical practice. This treatment of GERD was simple and easily done without any side effects.



Acupuncture Corporation of America CEO Dr. Yan Zhu Liu discussing the ACA goals.

Effects of Chinese Patent Drug Combined with Triple Therapy on H.pylori Infected Chronic Gastritis: A Systematic Review

Zhang Xue-zhi Ye Hui, Department of Integrated Traditional Chinese Medicine, Peking University First Hospital, **Chen Yao**, Dongzhimen Hospital of Beijing University of Chinese Medicine

Random clinical trials on H. pylori infected chronic gastritis treated with Chinese and western medicine were searched and collected from CNKI, Wanfang data, VIP database, Pubmed, and Cochrane Library. The quality of the trials that were included was evaluated by Cochrane Collaboration's tool for assessing risk of bias. Meta-analysis was performed by the Review Manager 5.3 software package. Conclusions: H. pylori infected chronic gastritis, when treated with both Chinese and western medicine has less side effects. This combination can possibly be the complementary or alternative scheme of bismuth quadruple therapy.

Clinical Experience in Treating Infertility by the Integration of Traditional Chinese Medicine and Assisted Conception Therapy

Liqin Zhao, Zhong Jing TCM, Sheffield, UK

Assisted conception therapy (ACT) brings new hope for some infertile couples by using the most advanced technology. However, the success rate of ACT is still relatively low. This article briefly reviews research results on the integration of TCM and ACT as well as commonly used in-vitro fertilization (IVF) protocols and drugs in the UK. The author also introduced her own unique acupuncture program and Chinese medicine treatment strategies, which include the use of TCM diagnostic differentiation, TCM cycle therapy, and her specific plan of integration of TCM and ACT. The author shared several typical cases to illustrate the use of integrating TCM and ACT rationally and effectively.

“Founder and president of both BUCMAAA and TCMAAA, Professor Haihe Tian, OMD, organized these nonprofit organizations to strengthen ties between western and traditional Chinese medicine and to promote its accessibility and application while working to reduce medical costs and increase the quality of medical care in the U.S.”

Effects of Acupuncture in Treatment for Hypertension

Bilin Feng, Zhanxiang Wang, Yihyun Kwon, Acupuncture and Oriental Medicine, National University of Health Science, Lombard, Illinois.

This report describes the regular routine of treatments for hypertension. During the first five weeks of treatment with anti-hypertensive medications, the systolic pressure dropped 21 mmHg on average (before treatment 157.4+5.8 vs. after treatment 136.4+7.3 mmHg). During the last week of treatment without anti-hypertensive medications, the systolic pressure dropped 14 mmHg on average (before treatment 149.2+5.4 vs after treatment 135.2+3.6 mmHg). Acupuncture does not reduce the diastolic BP; in this case, overall systolic pressure was kept at 70.9+1.1 ~ 69.9+0.5 mmHg. This work indicates that for patients who cannot tolerate the side effects of antihypertensive medications, acupuncture provides a good alternative choice.

Regulating Shen & Qi with Acupuncture for Treatment of Insomnia: A Summary of 50 Cases

Liu ZhengHua, Professor of American College of Traditional Chinese Medicine, TCM Diabetes Center, San Francisco, California

The regulating *shen* and *qi* acupuncture techniques and points (GV-20, GV-24, Yingtang, Si-shen-cong, etc.) are based on “Acupuncture Treats the Spirit” in *Yellow Empire Nei Jing*. After 1 to 2 courses of treatment for each of the 50 cases, 40 cases recovered, 6 cases significantly improved, and 4 cases partially improved the total efficiency of the order of 100%.

Effect of Combination Therapy of Bing De Ling® and Acupuncture for Late Stage Cancer Patients

Ruan Jin Zhao, The Center for Traditional Chinese Medicine, Inc., Sarasota, Florida

A retrospective study was conducted where data were collected on 57 late-stage variety cancer patients enrolled between January 2004 and January 2009 at The Center for Traditional Chinese Medicine in Sarasota, Florida. The majority of them, 95%, were

still on chemotherapy, radiation therapy, or other anti-neoplastic drugs. The treatment protocol was that for the first three weeks, the patients came in twice per week for acupuncture treatment, then once per week as maintenance. At the same time, the patients were put on Bing De Ling®, liquid one fluid ounce twice a day. Acupuncture basic points used were: Du-20, Ht-5, Ren-12, Ren-5, Ren-6, St-36, St-40, Kid-3, and Liv-3, with a mild stimulation. If a patient had pain due to bone metastasis, acupoints GB-30, UB-22 and GB-34 may have been added in.

Bing De Ling® is a well-researched patented Chinese herbal extract. It is very easy for patients to take due to low dosage and no side effects. It does boost the Interferon- γ production. Acupuncture can relax a patient’s nervous system and the GI reaction to chemotherapy. There was no control group, but clinically, most of the patients (96%) quickly felt calmer and better. The patients’ clinical symptoms such as fatigue, nausea, and their worst sick feelings went away. It is not clear how much the combination therapy of Bing De Ling and acupuncture inhibits cancer growth, but the therapy was demonstrated to increase a patient’s tolerance for chemotherapy, radiation, or other antineoplastic drugs as well as extending the patient’s survival rate and improving their quality of life.

Basic Research

Clinical Observation Effect and Safety of Wu Wei Jiang Zhi Capsule in Hyperlipidemia.

Wenhong Shao, Beijing United Family Hospital, Beijing, China

To determine the effect and safety of the *wu wei jiang zhi* capsule, which was taken by 60 patients with hyperlipidemia. Methods: An 8-week randomized double-blind double imitate-control parallel observational study. According to TCM theory, the author observed *wu wei jiang zhi* capsule’s curative rate in the Dongzhimeng hospital of TCM. Results show that use of *wu wei jiang zhi* capsules improves the patients hyperlipidemia symptoms and signs while decreasing the level of total cholesterol, triglycerides, and low density lipoprotein cholesterol. It also increased the level of high-density lipoprotein cholesterol.

The Effect and Mechanism of Tuina Intervention on the Motor Pathway from the Spinal Cord to the Periphery in Peripheral Nerve-Injured Rats

Yu Tianyuan,¹ Xian Sitong,² Steven Gregory Wong,¹ Zhou Qiang,³ Yao Binbin,¹ Mei Xuhui,⁴ Wu Jiancong,⁵ Gao Yufeng,⁶ Pan Fan,⁷

1. Acupuncture and Massage Institute of Beijing University of Chinese Medicine; 2. Spleen Department of the First Affiliated Hospital of Guangxi University of Chinese Medicine, Guangxi; 3. Graduate School of Beijing University of Chinese Medicine, Beijing; 4. Michaella Care Limited, New Zealand Auckland; 5. Beijing Massage Hospital, Beijing; 6. Affiliated hospital of Inner Mongolia University for the Nationality, Inner Mongolia; 7. Beijing Tao Ran Ting Community Health Service Center, Beijing) Funding support: Natural Science Foundation of China (NO: 81373759)

This paper analyzed and observed the expression of neuroactive substances in the motor pathway from the spinal cord to the periphery after *tuina* intervention in peripheral nerve injured rats. This research indicates that *tuina* plays a regulating role in the motor pathway from spinal cord to periphery in peripheral nerve-injured (PNI) treatment. It can promote the binding of nerve growth factors (NGF) and neurotrophic factors NT-3 with their receptors and active neuronal regeneration. *Tuina* treatment can improve the protein expression of kinesin, dynein, and dynacin as well as promote axonal transport and enhance the pathway of nutritional transport between neurons and their target organ. It can improve the expression of neuronal cytoskeleton protein MAP-2 and NF-M and inhibit microtubule and neurofilament deoligomerization so as to maintain the integrity of the neuronal cytoskeleton. It can enhance the level of inducing factor agglomeration agrin, which may in turn accelerate the transcription of γ - ϵ in the neuromuscular junction and raise the efficiency of synaptic transmission. It can also improve the expression of growth associated protein -43 in the target organ and provide a favorable environment for repairing the injured nerve.

For more information, please visit:

www.bucmaaa.com or
www.tcmaaa.org.

For more information about Acupuncture Corporation of America:
www.acacares.com

Zhanxiang Wang, PhD, MD (China), LAc received his medical degree from the Beijing University of Chinese Medicine and his PhD from the China Academy of Traditional Chinese Medicine. Dr. Wang has been a clinical practitioner of and an academic researcher in Chinese medicine for over 20 years. He has authored six books and published more than 20 research and clinical articles on various topics of medicine in many prestigious journals. Dr. Wang was an assistant professor of research in Indiana University School of Medicine for many years. Currently he is a professor and clinician at the National University of Health Sciences in Chicago, and he serves as vice-president of the Beijing University of Chinese Medicine America Alumni Association (BUCMAAA).

Hui Wei, MD (China), Lic. AP first graduated as an MD in China in 1990 and worked as a pulmonary physician for two years before studying at the Beijing University of Chinese Medicine where she received her second doctor of medicine degree in traditional Chinese medicine. She moved to the U.S. in 2000 and now practices acupuncture in Florida. She has 25 years of experience in the medical field. Currently Dr. Wei is CEO of the Traditional Chinese Medicine American Alumni Association (TCMAAA) and the vice president of Beijing University of Chinese Medicine America Alumni Association (BUCMAAA). She is also serving on the board of directors for the Florida Acupuncture Association (FAA).

Haihe Tian, PhD, MD (China), Lic. AP graduated from Beijing University of Traditional Chinese Medicine and practiced in the affiliated hospital for many years before relocating to the U.S. Currently he is academic dean, clinical director, and professor of the American Institute of Traditional Chinese Medicine in Tampa Bay, Florida. Dr. Tian is a nationally certified CNT instructor and an ACAOM site visitor. He is the president of both the Traditional Chinese Medicine American Alumni Association (TCMAAA) and the Beijing University of Chinese Medicine America Alumni Association (BUCMAAA). Dr. Tian is a past board member of the American Association of Oriental Medicine (AAOM). He has published 60 professional papers and 20 medical books.



SIO 2015: Report on the 12th International Conference of the Society for Integrative Oncology

By Carla Wilson, PhD, DAOM, LAc

Carla Wilson, PhD, DAOM, LAc serves as director of the Doctoral Program and Research at the American College of Traditional Chinese Medicine in San Francisco, California. The focus of her research has been to develop a mixed methods research approach for HPV-related cancer, education, and community health. Mixed methods research calls for real-life contextual understandings and cultural influences while employing rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative analysis.

The annual **Society for Integrative Oncology** (SIO) conference, held November 14-17 in Boston, was attended by over 353 participants from 19 countries. Researchers, clinicians, educators, advocates and thought leaders in integrative oncology presented exciting research findings, shared rich clinical insights, and discussed novel programmatic developments.

More than 80 speakers, 30 engaging panels, many workshops, poster sessions, and thought-provoking discussions provided plenty of networking opportunities that will allow us to continue to support one another more effectively in our roles as champions of integrative oncology. Many patient advocates joined us to learn the skills necessary to connect patients whose lives have been impacted by cancer, with multiple options for evidenced-based integrative therapies.

Sponsored by the Osher Center for Integrative Medicine, SIO partnered with the **Society of Acupuncture Research** (SAR), and the **Fascia Research Society** (FRS) to co-host a one-day Joint Conference on Acupuncture, Oncology and Fascia, sharing the platform at the Joseph B. Martin Conference Center, Harvard Medical School.

This one-day joint conference provided a unique forum for the three societies to bring together experts in their respective fields regarding cancer treatment using integrative medicine. The blend of clinical and basic science research highlighted the importance of connective tissue in cancer biology and the role of acupuncture in an integrated approach to health promotion and cancer prevention. Three key areas of overlap in research on acupuncture, oncology and fascia were explored:

- Acupuncture and oncology: The role of acupuncture in the care of cancer patients including the management of pain, fatigue and sleep
- Oncology and fascia: The importance of the connective tissue matrix in tumor growth and metastasis
- Fascia and acupuncture: Transduction of mechanical signals from acupuncture needles to connective tissue

Highlights at the pre-conference session included the following:

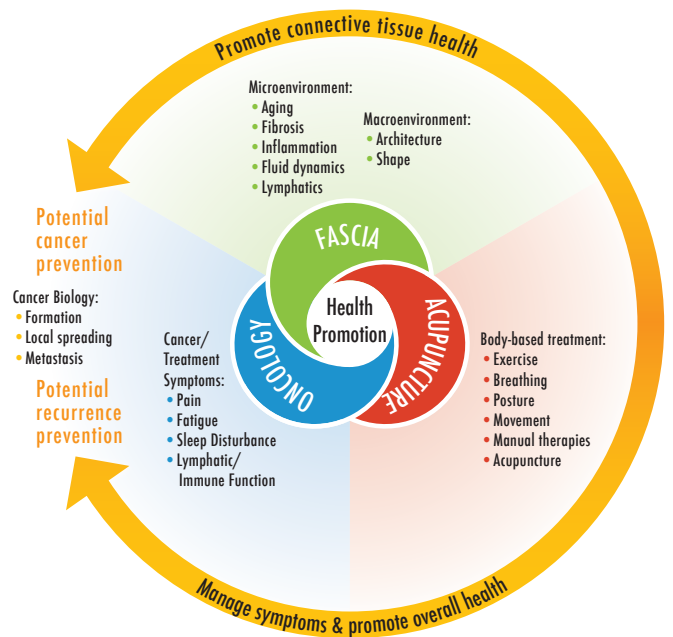
The director of the Osher Center for Integrative Medicine, (a collaboration between the Harvard Medical School and the Brigham and Women's Hospital) Helene Langevin, MD, discussed her research on the mechanisms of manual and movement-based therapies. Her studies of both humans and animal models have shown that mechanical tissue stimulation during both tissue stretch and acupuncture causes dynamic cellular responses in connective tissues. Dr. Langevin showed us actual images of tissue moving around acupuncture needle insertion. Seeing these images on screen was confirmation that we are now well into an era that helps us to understand the actual mechanism of acupuncture. Her work lays the foundation for more research on imaging as part of the evidence that supports the proof of this mechanism and action.

Environmental Health Sciences Professor Suzanna Zick, ND, MPH, from the School of Public Health, University of Michigan and out-going president of SIO, presented the following question to conference participants: "What is the most common medical issue for people during their cancer journey—pain, depression/anxiety, GI distress or fatigue?" Her research shows that 45% of patients' ongoing cancer treatment indicates moderate to severe fatigue as their key issue. Three percent of cancer survivors also note fatigue as significant.

Dr. Zick's presentation specifically addressed the use of acupressure for reducing fatigue and sleep disruption in breast cancer survivors, pointing to the relationship between fatigue, inflammatory cytokines and the brain neurotransmitters creatine, glutamate and gaba-aminobutyric acid (GABA). Her work indicates that as much as 30% of patients can be treated and helped using acupressure or acupuncture, with few side effects. This research can encourage people to utilize these modalities to help manage their fatigue and sleep disorders.

Dr. Beverly de Valois, a research acupuncturist at the Mount Vernon Cancer Center in the United Kingdom, presented on the use of acupuncture to manage side effects experienced by women with breast cancer who receive adjuvant hormonal therapies and have related upper body lymphedema. Her groundbreaking work investigates the use of acupuncture in the management of cancer and non-cancer related lymphedema.

Dr. de Valois discussed the impact of acupuncture on lymph and the possibility of acupuncture in the stimulation of new drainage routes. She emphasized the need for more studies to ensure the safety of acupuncture treatment to the affected areas and to establish syndromes associated with the Chinese medicine syndromes to better understand patterns of treatment.



The diagram encompasses the spirit of the joint conference with a focus of bringing together oncology, acupuncture, and fascia. All three of these are aimed at health promotion as potential cancer prevention and potential prevention of recurrence.

Dr. de Valois's work points toward the possibility of acupuncture treatment as standard preventive care for lymphedema for breast cancer patients.

Over the course of the three days during the SIO conference, I spoke with a number of practitioners of Chinese medicine about the conference highlights. Here are comments and perspectives from some of the acupuncturists:

Susan Froehlich, LAc, Mosier, Oregon:

"The SIO 2015 conference, with the additional bonus day of 2 other research organizations - the Fascia Research Society and the Society for Acupuncture Research—was an over-the-top conference. It was amazing to hear cutting-edge research on acupuncture, fascia and integrative models of health, along with other disciplines of yoga, massage, naturopathic, biomedicine. All with the utmost respect of each other's discipline. It was truly an opportunity to share information with practitioners, researchers, as well as advocates. I am hopeful that this Society will continue to grow and expand throughout our healthcare system."

Professor of Research Sivarama Vinjamury, MD (Ayurveda), MAOM, MPH, Irvine, California:

"The conference was very useful for acupuncture folks in many ways—an exclusive acupuncture session dedicated to clinical research was very helpful to learn what is upcoming in the United States and globally. The presentations showed the immense role

“Dr. Zick’s presentation specifically addressed the use of acupressure for reducing fatigue and sleep disruption in breast cancer survivors, pointing to the relationship between fatigue, inflammatory cytokines and the brain neurotransmitters creatine, glutamate and gaba-aminobutyric acid (GABA).”

acupuncture can play in the treatment of cancer patients, especially as a supportive care. The presentations by Heather Greenlee on healthy cooking training to Hispanic breast cancer survivors were really impressive. The presentation by Misha Cohen and colleagues (*Misha Cohen, OMD, LAc; Carla Wilson, PhD, DAOM, LAc; Naomi Jay, NP, PhD; J. Michael Berry, MD*), ‘Topical Chinese Herbal AJP Ointment to Treat Anal High Grade Squamous Intraepithelial Lesions (HSIL) in HIV+ Persons,’ on the use of topical Chinese herbs is not only very comprehensive and thorough, it also demonstrated the potential of the scope of Chinese herbs. The positive outcomes obtained in this study are the result of some exemplary work by Cohen and her colleagues. Kudos to her!

A special treat for everyone was a workshop on meditation, *qi gong* and laughter therapy. It made the workshop attendees more relaxed, shed their inhibitions, and helped get them more energized. Everyone walked out laughing and happy. This workshop was presented by the MD Anderson integrative medicine team, led by Alejandro Chaoul, PhD.”

John Chang, LAc, San Diego, California:

“The Society for Integrative Oncology’s 12th International Conference embodied a lively spirit of cooperation and a sharing of ideas. As a practitioner of traditional East Asian medicine and a new member of the society, I felt welcomed into this meeting of minds focused on integrative medicine and a collaborative effort toward patient centered health care. During the conference session titled “Integrative Care Management Board,” four of the leading minds in integrative oncology reviewed a case study and lent their insights into integrative healing options. I was inspired by the efforts of these medical practitioners in providing evidence informed health care while embracing a clinical methodology that empowered the patient through an emphasis on mutual respect and communication.”

Amy Sear, Acupuncture Physician, Pembroke Pines, Florida

“I found the SIO conference to be rewarding and worthwhile. This is exactly the kind of event that our health care delivery system needs. In addition to being a superb source of distinctly integrative oncology focused research, it is an invigorating place and way to meet an outstanding and heartfelt group of peers. The quantity of TCM and acupuncturists at the event has grown exponentially, and this rewarded my spirit with kindred fellowship. I encourage anyone with any interest in any aspect of integrative oncology to make this a yearly ‘must do.’”

Harris Frank, LAc, Newnan, Georgia:

“Acupuncture research has evolved. Gone are the days where the scientific community is asking “does acupuncture actually work?” Instead, they are now asking: “how does it work” and “when does it work best?” From the standpoint of a clinician who is traditionally trained but interactively focused, these are much more important and valuable questions to ask.”

I moderated a panel of five acupuncture researchers, whose topics and research methods are confirmation of Harris Frank’s perspective on “how does acupuncture work” and “how does it work best.” Summaries of the five research topics:

1. Electro-Acupuncture vs. Gabapentin for Sleep Quality Among Breast Cancer Survivors Experiencing Hot Flashes: A Randomized Placebo-Controlled Trial

Authors: Sheila Garland; Jun Mao; Angela DeMichele; Qing Li; Sharon Xie

Sheila Garland, Department of Family Medicine and Community Health, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, presented a study evaluating the effects of electro-acupuncture vs. gabapentin for sleep quality among breast cancer survivors experiencing hot flashes. Nightly nocturnal hot flashes are among the most problematic because they can cause significant sleep disruption and fatigue. Disrupted sleep has been associated with poorer overall psychological and physical health outcomes.

Methods: The group analyzed data from a randomized controlled trial involving breast cancer survivors experiencing bothersome hot flashes twice daily or greater. Participants were randomly assigned to receive eight weeks of electro-acupuncture or daily gabapentin (total dose of 900 mg per day). The primary outcome was change in the total Pittsburgh Sleep Quality Index (PSQI) score between groups at week 8. Secondary outcomes include specific PSQI domains.

Findings: Among 58 participants, mean age was 51.7 (SD=8.5), 74.1% white, 22.4% black. Eighty-six percent were post-menopausal and 63.8% were on hormonal treatments. By week 8, the mean reduction in PSQI was significantly greater in the electro-acupuncture group compared to gabapentin (-2.6 vs. -0.8, $p=0.044$). Also compared to gabapentin, electro-acupuncture also had improved sleep latency (-0.5 vs. 0.1, $p=0.041$) and sleep efficiency (-0.6 vs. 0.0, $p=0.05$). Compared to baseline, by week 8,

electro-acupuncture improved sleep duration, sleep disturbance, sleep latency, daytime dysfunction, sleep efficiency, and sleep quality ($p < 0.05$ for all); whereas gabapentin improved duration and sleep quality ($p < 0.05$).

Conclusions: Compared to gabapentin, electro-acupuncture significantly improved sleep quality among women experiencing hot flashes, specifically in the area of sleep latency and efficiency. Larger randomized controlled trials with longer follow-ups are needed to confirm this preliminary finding.

2. Effect of Acupuncture for Radioactive-Iodine-Induced Anorexia in Thyroid Cancer Patients: A Randomized, Double-Blinded, Kim-Sham-Controlled Pilot Study

Authors: Hwa-seung Yoo, Ju-Hyun Jeon, Chong-Kwan Cho, Hwa-Seung Yoo, Daejeon, Republic of Korea, presented the findings of this study.

Methods: The aim of this study was to evaluate the efficacy and safety of acupuncture for radioactive-iodine-induced (RAI) anorexia in thyroid cancer patients.

Methods: Fourteen thyroid cancer patients with RAI-induced anorexia were randomized to a true acupuncture or sham acupuncture group. Both groups were given six true or sham acupuncture treatments in two weeks. Outcome measures included the change of the Functional Assessment of Anorexia and Cachexia Treatment (FAACT; Anorexia/Cachexia Subscale [ACS], Functional Assessment of Cancer Therapy. General [FACT-G]), Visual Analogue Scale (VAS), weight, body mass index (BMI), ACTH, and cortisol levels.

Findings: The mean FAACT ACS scores of the true and sham acupuncture groups increased from baseline to exit in intention-to-treat (ITT) and per protocol (PP) analyses; the true acupuncture group showed higher increase, but with no statistical significance.



Jennifer Stone and Liz Spetnagle at NCCAOM booth.

Between groups, from baseline to the last treatment, statistically significant differences were found in ITT analysis of the Table of Index (TOI) score ($P = .034$) and in PP analysis of the TOI ($P = .016$), FACT-G ($P = .045$), FAACT ($P = .037$) scores. There was no significant difference in VAS, weight, BMI, ACTH, and cortisol level changes between groups.

Conclusions: Although the current study was based on a small sample of participants, the findings support the safety and potential use of acupuncture for RAI-induced anorexia and quality of life in thyroid cancer patients.

3. Post- Mastectomy Acupuncture for Pain, Anxiety, Nausea, and Coping: A Randomized Controlled Pilot Study

Authors: Jill Johnson; Jeffery Dusek, Adam Reinstein

This study, presented by Jill Johnson PhD, MPH, Minneapolis, evaluated the use of acupuncture plus standard of care (AQ) compared to standard of care alone (SC) on self-reported pain, anxiety, nausea, and ability to cope among hospitalized post-mastectomy breast cancer patients.

Methods: This was a randomized controlled trial of AQ compared to SC among 30 female breast cancer patients who had a unilateral or bilateral mastectomy. AQ patients received up to two sessions during their post-surgical hospitalization. The study acupuncturist treated four points bilaterally with up to an additional nine needles depending on patient presentation. SC patients were visited by a research assistant up to two times during their hospitalization. Outcomes were: change in patient-reported pain, anxiety, nausea, and ability to cope, assessed before and after a 30 minute acupuncture or waiting period, depending on group. Outcomes were assessed using a numeric rating scale (0-10), with higher scores indicating higher levels of pain/anxiety/nausea/ability to cope.

Results showed the following: AQ patients had Visit 1 post scores that were significantly lower from pre-scores for pain ($p < 0.001$), anxiety ($p = 0.006$), and nausea ($p = 0.045$), and significantly higher ability to cope scores ($p = 0.029$); Visit 2 post scores remained significantly different for pain ($p < 0.001$). There were no significant differences between Visit 1 or Visit 2 pre and post scores among the SC group. Mean change scores were significantly different for pain (-1.47 vs. -0.07, p -value=0.011), anxiety (-1.33 vs. +0.53, p -value=0.039), nausea (-1.53 vs. +0.73, p -value=0.011), and coping (+1.87 vs. -0.47, p -value=0.012) between the AQ and SC groups at Visit 1. Mean pain change scores were significantly different between the AQ and SC groups at Visit 2 (-1.50 vs. -0.43, p -value=0.017).

Conclusions: Compared to SC, AQ produced short-term reductions in pain, anxiety, and nausea, among post-surgical mastectomy patients. Additional studies with larger sample sizes and more extensive outcome measures are needed.

4. Moxibustion for Cancer-related Fatigue in Patients with Colorectal Cancer: A Randomized, Double-blinded, Placebo-Controlled Pilot Study (127)

Authors: Menghu Guo; Jun J. Mao Huijuan Mao, Ke Cheng, Xueyong Shen.

This randomized, double-blinded and placebo-controlled pilot study among 25 early stage colorectal cancer patients diagnosed with CRF was presented by Meng Guo.

Methods: This group conducted a randomized, double-blinded and placebo-controlled pilot study among 25 early stage colorectal cancer patients diagnosed with CRF. The recruited participants were randomly assigned into two groups, receiving either active moxibustion (n=12) or sham moxibustion control (n=13) at acupoints Zusanli (ST-36) bilaterally and Guanyuan (CV-4) three times a week for four weeks. Patients were taught how to correctly locate the acupoints and treat themselves at home with the moxibustion devices provided by the physician. The primary outcome was measured by changes in the Brief Fatigue Inventory–Chinese (BFI-C) between two groups after four weeks treatment and a follow-up at week 6 for durability of the intervention.

Findings: The preliminary data suggests that moxibustion has potential efficacy in the treatment of CRF in patients with colorectal cancer. Based on the effect size observed, an adequately powered RCT with long-term follow-up is needed to definitively demonstrate the efficacy and safety of moxibustion for CRF in patients with CRC.

5. A Pilot Study of Laser Acupuncture Treatment for Breast Cancer Related Lymphedema (126)

Authors: Lizhen Wang, Mingzi Jin, Ting Bao

This research, presented by Lizhen Wang, is especially promising as breast cancer related lymphedema (BCRL) is a treatment toxicity associated with surgery or radiation treatment performed on women with breast cancer. This group of researchers identified laser acupuncture as an alternative to needling, using low-level laser to stimulate acupuncture points. The focus of this pilot study was to evaluate the feasibility of laser acupuncture to treat chronic upper-limb lymphedema for women after surgery for breast cancer.

Methods: This was an open-label single arm trial that enrolled 14 women with stage I-III breast cancer and with a clinical diagnosis of BCRL. Participants received He-Ne laser radiation on ten specific acupoints twice a week for six weeks. The acupoints prescription

“Too often we hear of challenges faced by patients and their caregivers as they interface with the health care system. What if we could redesign health care FOR patients with perspectives FROM patients as well as others across the continuum of care?”

includes ten acupoints. Six are on the affected arm: HT-1, LI-15, LU-5, PC-3, LU-4, SJ-2. Two are on the lower limb of the same side: SP-9, ST-36 and two are on the abdomen: CV-6, CV-9. Each acupoint was radiated for five minutes. Affected arm circumference was measured before and after the treatment. Paired t-test was used to evaluate pre-post differences.

Results: The results of this pilot showed the following: All the patients completed the study. There were no adverse events and no infection or severe exacerbations during 12 treatment sessions. The affected arm circumference before (1282.14±71.57mm) and after treatment (1269.86±71.95mm) was statistically significant (P<0.01). Findings from this pilot study suggest that laser acupuncture is safe and potentially effective for BCRL. This preliminary data requires the justification of a randomized controlled trial of adequate sample size to evaluate the safety and efficacy of laser acupuncture for BCRL.

I spoke with one of the participants who attended the conference as a health care advocate—a woman who has successfully fought the return of breast cancer for over 15 years and remains cancer-free to this day. She attributes this wellness to the use of Chinese medicine and having a physician that supports her integrated approach to wellness. It was wonderful for the sessions to include healthcare advocates and folks living with cancer, as this group poses important questions about the continued development and role of integrative oncology.

In summation, this conference was dynamic and evolutionary, with a focus on new knowledge and new ideas, best practices, and innovative research geared towards transforming the current landscape of oncology treatment. Too often we hear of challenges faced by patients and their caregivers as they interface with the health care system. What if we could redesign health care FOR patients with perspectives FROM patients as well as others across the continuum of care? With the collaborative and visionary work of SIO, I believe we are well on our way toward this future.



SAR 2015 International Research Conference: Reaching Across Disciplines to Broaden the Acupuncture Research Network

By Greg Golden, DAOM, Dipl OM (NCCAOM)

Greg Golden, DAOM, LAc, Dipl OM (NCCAOM) practices at Meridian Eastern Medicine in Indianapolis, Indiana. He received his Master's of Science in Oriental Medicine from the National University of Health Sciences in Lombard, Illinois and his Doctor of Acupuncture and Oriental Medicine from the Oregon College of Oriental Medicine in Portland, Oregon.

In 2014, for its first conference outside of the U.S., the Society for Acupuncture Research (SAR) partnered with the China Association of Acupuncture and Moxibustion and held their joint meeting in Beijing, China. In 2015, the Society for Acupuncture Research (SAR) held their international conference November 12-14 in Boston at the Harvard Medical School. On the final day of this conference, SAR continued its recent theme of international and collaborative expansion by joining with both the Society for Integrative Oncology (SIO) and the Fascia Research Society (FRS).

The SAR conference opened with its welcome session, titled "Innovative Clinical Acupuncture Research: From RCTs to Comparative Effectiveness Research." This three-part presentation and subsequent panel discussion focused on the importance of certain key areas of acupuncture research as well as its particular forms and systems of communication of the research itself:

Specific Effects of Acupuncture—Where do we stand where should we go?

In part one, Claudia Witt, MD, MBA, known for being a proponent of comparative effectiveness research, discussed the opposite end of the research spectrum—efficacy research. She elaborated on the importance of knowing specific effects of acupuncture so as to inform other areas of research as well as to improve clinical outcomes.

Pragmatic Trials of Acupuncture: Exploring Longer-Term Benefit

Hugh MacPherson, PhD discussed how pragmatic trials are increasingly being used to evaluate the real world benefits of acupuncture, citing examples of collected outcomes of thousands of patients using acupuncture for back pain, hypertension, and osteoarthritis in the UK. Specifics of a study of using acupuncture for chronic neck pain were presented as an example to look at other factors that may influence the long-term benefits of acupuncture versus standard of care.

[Untitled]

Jeffery Dusek, PhD took a broader view of acupuncture research in integrative oncology setting. He noted that this area focuses on collected data from a multitude of integrative clinics throughout the U.S., comparing overall reported outcomes to those of non-integrative clinics. Integrative modalities, in addition to acupuncture, included conventional medications as well as music therapy and yoga.



Thursday evening included a poster presentation and reception, when 74 presenters of distinct posters intermingled and discussed their research projects.

Friday commenced with another three-part presentation and subsequent panel discussion titled “From Neuroimaging to Clinical Trials: The Changing Role of Placebo in Acupuncture Research:”

- Richard Harris, PhD discussed neuroimaging work using acupuncture for fatigue within the oncology setting at the University of Michigan, Ann Arbor.
- Irving Kirsch, PhD explored extensive meta-analyses indicating that placebo is just as effective for treating depression as SSRIs, while contending that placebo is actually a safer intervention with considerably less side effects.
- Professor Ted Kaptchuk, OMD, Kirsch’s colleague and founder and director of the Program in Placebo Studies at Harvard Medical School, discussed his trials and travails during decades of acupuncture research. Saying that this research mode has been trying to structure the research of eastern medicine into a western model, he was compelled to create the Placebo Studies Program at Harvard. The program suggests the possibility that the placebo response may be utilized as an actual component of medicine rather than the long-standing practice in western trials of disregarding placebo response as a statistical anomaly.

The remainder of Friday’s program consisted of oral presentations of selected submitted research. The initial presentation was a conglomerate of basic science and clinical research poster presentations. During the following session, these categories were split into two separate presentation areas. Attendees could listen to oral presentations about basic science or clinical research.

In the late afternoon there was another three-part presentation by Elisabet Stener-Victorin, RPT, PhD. She discussed the role of

acupuncture in reproductive and metabolic disorder. The role of acupuncture in cardio-vascular disease was discussed by John Longhurst MD, PhD and the role of purinergic signaling in relief of chronic pain was discussed by Takahiro Takano, PhD. In the early evening another poster presentation reception was held for an additional 74 poster presenters.

The following is a brief synopsis of the posters selected for oral presentation:

Plenary Abstract Presentations: Both Basic Science and Clinical Research

Acupuncture-Enhanced Psychotherapy for Painful Endometriosis: A Randomized Controlled Pragmatic Trial with Brain Imaging

Florian Beissner, Christine Preibisch, Annemarie Schweizer-Arau, Roxana M. Popovici, Isabel Lange, Barbara de Oriol and Karin Meissner

Trial researcher concluded that patients with a history of endometriosis, and also reported suffering from pelvic pain, could obtain substantial benefit from acupuncture-enhanced psychotherapy. Results were obtained by quality of life, depression, and anxiety scores as well as functional well-being, in addition to neuroimaging involving brain regions of the emotional memory and somatosensory systems.

Decreased Brain Activity and Functional Connectivity during Pressure Pain after Sham but not Verum Treatment in Fibromyalgia

Yuanxiang Xu, Johnson Hampson, Eric Ichesco, Scott Mist, Vitaly Napadow and Richard Harris

The findings of this study suggested that both evoked-pain activity and connectivity may be objective markers that reflect sham acupuncture but not verum acupuncture in fibromyalgia patients.

Brain Response to Electroacupuncture and Improved S1 Neuroplasticity Following a Course of Acupuncture Therapy Predicts Long-term Clinical Improvement in Carpal Tunnel Syndrome

Yumi Maeda, Norman Kettner, Jieun Kim, Stephen Cina, Cristina Malatesta, Jessica Gerber, Claire McManus, Rebecca Ong-Sutherland, Alexandra Libby, Pia Mezzacappa, Leslie Morse, Joseph Audette, Ted Kaptchuk and Vitaly Napadow

In this study, patients were divided into three groups: local, distal, and sham acupuncture. The long-term clinical improvements were

only seen for the verum acupuncture groups. Additionally, long-term improvements in carpal tunnel syndrome symptomology were observed following an eight-week course of acupuncture therapy, which can be predicted by acupuncture-evoked insula response and S1 neuroplasticity.

A Randomized Study Comparing the Effectiveness of Acupuncture [A] or Morphine [M] versus the Combination [AM] for the Relief of Dyspnea in Patients with Advanced NSCLC and Mesothelioma

Jacqueline Filshie, Anna Minchom, Ravi Punwani, Jaishree Bhosle, Kofi Nimako, Ranga Gunapala, Sanjay Popat and Mary O'Brien

Acupuncture was found to be as effective as morphine in treatment of dyspnea as well as having additive value for anxiety relief and relaxation. Acupuncture spares patients the necessity of morphine and should be an available treatment for lung cancer patients with dyspnea.

Treatments and Weeks Needed to Show Response to Acupuncture for Menopausal Hot Flashes

Nancy Avis, Remy Coeytaux, Scott Isom, Kristen Prevette and Timothy Morgan

The median number of treatments to obtain a response was six treatments, while the median time to response was 4.4 weeks. By the 3rd treatment, 29% of women had responded, while by the 12th treatment, 76% responded. Approximately 50% of women experienced at least a 35% reduction of symptoms, with probability of having a response diminishing after six treatments. The findings of this study may help inform expectations of clinical response to acupuncture for menopausal hot flashes.

Acupuncture-Induced Bodily Attention and Cortical Activation Patterns

Younbyoung Chae, In-Seon Lee and Won-Mo Jung

Study demonstrated that enhanced bodily attention triggered by acupuncture stimulation is able to activate the salience network and deactivate the default mode network, regardless of actual stimulation. These findings suggest that the component of enhanced attention to a certain part of the body plays an important role in the brain responses to acupuncture stimulation. Acupuncture-induced sensation is coming not only from the bottom-up modulation in the somatosensory receptor but from the reciprocal interaction with the top-down modulation of the brain as well.



NCCAOM booth, SAR/SIO conference

Basic Science Oral Poster Presentations

Therapeutic Alliance Between Patient and Practitioner is Associated with Acupuncture Analgesia in Chronic Low Back Pain

Ishtiaq Wawla

Across treatment types and despite intended patient-practitioner interaction neutrality, the subjects' experience of analgesia was linked with their perception of being cared for with empathic understanding. These results suggest that enhanced therapeutic alliance is important for beneficial clinical outcomes and could complement standard acupuncture protocols in real world clinical settings.

Brain White Matter Microstructure Changes Following Acupuncture is Associated with Improved Clinical Outcomes for Carpal Tunnel Syndrome: A DTI Study

Hyungjum Kim

Verum acupuncture improved both symptoms of and peripheral nerve conduction in carpal tunnel syndrome. Acupuncture additionally induced changes in M1-associated white matter microstructure. This change in white matter was associated with long-term improvements in symptom severity. Brain white matter neuroplasticity is sensitive to acupuncture therapy.

Acupuncture for Inflammatory Pain and Central Sensitization—A Pilot Study

Nicholas Phillips

Although the feasibility of the model was demonstrated, there were not significant differences detected between the intervention and control groups on primary outcomes. Researchers suggested that the techniques utilized to preserve blinding in the crossover design limited the magnitude of the effect and generated a type II error. Suggestions for future studies included employing larger amplitude for electrostimulation as well as employing a non-crossover design.

Acupuncture Effect on Functional Connectivity for Sensorimotor Network in Bell's Palsy; fMRI Study

Jeungchan Lee

Researchers found that in the Bell's palsy group, increased sensorimotor network [SMN] connectivity with different brain regions due to neuroplasticity. These results were found even within short duration at an early stage and at both hemispheres. This may be

a compensatory way to solve the impairment of facial movement. Speculatively, acupuncture controlled SMN connectivity changes due to Bell's palsy in order to recover SMN connectivity patterns towards normal functioning.

Acupuncture at PC6 Protects Myocardium against Ischemia and Ischemia-Reperfusion Injury through Epigenetic Regulation

Bing-Mei Zhu

This study demonstrated for the first time that, in rat myocardial ischemia [MI] models, acupuncture can effectively regulate gene expressions through H3K9 acetylation modification directly at the gene promoter. Genome-wide gene expression profiles were generated both in the rat MI and rat ischemia-reperfusion models as well as in human patients with and without acupuncture treatment. Researchers are continuing to explore the epigenetic modifying patterns in both the patients and the animals using ChIP-seq analysis.

CONTINUED ON PAGE 35



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CLINICAL PEARLS



The topic selected for this issue is:

How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?

Chemotherapy induced peripheral neuropathy (CIPN) is painful nerve condition caused by use of drugs that treat cancer. This condition is a side effect of modern cancer treatments that use powerful drugs such as cisplatin, carboplatin, oxaliplatin, thalidomide, ixabepilone, and docetaxil. The neuropathy can affect up to half of all cancer chemotherapy treatment patients. Statistics have shown that the prevalence of CIPN tends to decrease after six months of chemotherapy treatment.¹

Symptoms of CIPN can range from numbness and tingling in the extremities to burning, stabbing pain and loss of fine motor skills. Other neuropathological side effects include temperature sensitivity, balance and gait problems, muscle weakness, muscle atrophy, and blood pressure fluctuations. Many of these issues can severely affect daily activities of living and require some lifestyle adjustment on the patient's part.

Since the pathomechanism of CIPN has not been determined, there are varying methods that continue to be used to alleviate symptoms. Both western and eastern medicinal treatments have been sought out with mixed results.

In TCM, this type of peripheral neuropathy can be seen as deficiency and/or stagnation due to a complex combination of *qi*, blood, and *yang*. The broad scope of traditional Chinese medicine allows multiple modalities to be used together and that complement each other. As with every Chinese medicinal diagnosis, the patient must be comprehensively evaluated and a full health history should be noted before treatment.

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How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?

By Erin Hurme, MSTOM, LAc

After receiving her master's degree in traditional Chinese medicine and Chinese herbology from Pacific College of Oriental Medicine San Diego, Erin Hurme also attended Chengdu University of Traditional Chinese Medicine in China. For many years she focused on treating professional athletes, including the NFL Tennessee Titans. She now practices acupuncture and provides a full granular pharmacy in her clinic, Amityville Wellness, in Amityville, New York. Erin also hosts the radio shows "Living Wholistically" and the "Erin Hurme Radio Show," and she is a professor of acupuncture at the New York College of Health Professions in Syosset, New York. In May 2016, Erin will receive her DAOM degree from Pacific College of Oriental Medicine San Diego. For more information, please contact her at: erin@amityvilleacupuncture.com

The most common root pathomechanisms in chemotherapy-induced peripheral neuropathy are blood deficiency, *yin* deficiency, blood stagnation and heat. Treatments are focused on restoring blood and *yin*, invigorating the blood and clearing heat.

Depending on which diagnosis is predominant will determine where needling and style of needling is focused. If the patient presents primarily with blood stagnation signs, such as a numb, stabbing pain that is constant and a purple tongue with choppy pulse, then the treatment style is more aggressive with invigorating points, deeper needling, and needle retention for thirty minutes. If the patient presents as more of a deficiency, with a thin frame, pale, dry tongue, thin, weak pulse and pain described as dull numbness, then the treatment style is gentle, with light needling, more superficial needle placement, and shorter needle retention (for fifteen to twenty minutes).

"Acupuncture points used to treat chemotherapy-induced peripheral neuropathy branch symptoms are focused on increasing *qi* and blood to the extremities and the treatment principal according to their root diagnosis."

Acupuncture points used to treat chemotherapy-induced peripheral neuropathy branch symptoms are focused on increasing *qi* and blood to the extremities and the treatment principal according to their root diagnosis.

Branch points used to treat peripheral neuropathy in the legs and feet are: LV-3 (Taichong), SP-9 (Xiongxiang), GB-41 (Zulingqi), GB-34 (Yanglingquan), ST-36 (Zusanli), SP-6 (Sanyinjiao), ST-34 (Liangqiu), EX-LE10 (Bafeng), SP-10 (Xue Hai) and electrical stimulation to LV-3 (Taichong) and GB-41 (Zulingqi) at 50 Hz.

Branch points used to treat peripheral neuropathy in the arms and hands are: LI-4 (Hegu), LI-11 (Quchi), SI-3 (Houxi), and HT-3 (Shaohai) and EX-UE9 (Baxie), LI-10 (Shou San Li) and electrical stimulation to LI-4 (Hegu) and HT-3 (Shaohai) at 50 Hz.

The treatment plan is for acupuncture three sessions a week for three weeks and then reevaluate. All points are treated bilaterally and retained for the same amount of time as the branch points. Electrical stimulation is kept up for the entire length of the treatment.

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How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?

By Michelle N. Fedder, LAc

Michelle Fedder, MSTOM, LAc holds a post-graduate international certificate in specialty clinical training in oncology, gynecology, internal medicine, advanced acupuncture techniques, and traumatology from the International Education College of Shanghai University of TCM Shanghai, China (Shu Guang Hospital, Long Hua Hospital and The Qi Gong Institute). She also completed a one-year acupuncture fellowship at St. Vincent's Manhattan Hospital, working in the areas of rehabilitation, oncology, and geriatrics. For the past nine years, Michelle has held positions as COO of Kamwo Herbal Pharmacy in Chinatown, New York, director of clinical services at Pacific College of Oriental Medicine (PCOM) New York, and adjunct faculty at PCOM, while maintaining a private practice, Reclining Buddha Acupuncture Clinic, in New York City. She will receive her DAOM from Pacific College of Oriental Medicine in spring 2016. michelle@recliningbuddhaacupuncture.com

When I was a master's student at Pacific College of Oriental Medicine in New York City, I was among the first to participate at the assistant level in our then newly-created clinical externship program at the St. Vincent's Comprehensive Cancer Care Center (now known as Mount Sinai Beth Israel Comprehensive Cancer Center-West Campus). Under the supervision of Dr. Ning Ma, LAc, MD (China), we participated in a 15 week clinical training primarily to address the needs of those patients undergoing cancer treatment.

"The protocol that we learned, used specifically in the treatment of chemotherapy-induced peripheral neuropathy, included the use of strong manual stimulation at Ji Quan HT-1."

The protocol that we learned, used specifically in the treatment of chemotherapy-induced peripheral neuropathy, included the use of strong manual stimulation at Ji Quan HT-1. The thumb of the non-dominant hand is placed on the axillary artery to avoid puncture, then Ji Quan HT-1 is needled with a relatively thick gauge needle (30 gauge or larger) with strong manual stimulation applied, while asking the patient to indicate when they felt the sensation reach the cubital crease, wrist, fingers, then ultimately the fingertips if possible.

The vast majority of patients reported significant improvement in their neuropathy by the third or fourth weekly treatment; however, since many of these patients were in a fragile state, some were reluctant to pursue further courses of this treatment protocol because it was somewhat aggressive in nature and could be painful.

In my private practice, I tend to rely predominantly on needling Ba Xie (EX) and Ba Feng (EX), using Seirin J-Type 30 mm x 20 mm (36 gauge), with no stimulation. I find that the patients tolerate this treatment well, so follow-through with longer-term compliance by seeing the patients weekly, rather than using the previously described protocol, ultimately achieves similar outcomes with a less aggressive technique.

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How Do you Treat Chemotherapy-Induced Peripheral Neuropathy in your Clinic?

By Arnaldo Oliveira, PhD, DAOM, LAc

Arnaldo Oliveira specializes in Electroacupuncture according to Voll. He is a diplomate of Oriental medicine (NCCAOM) and received his Doctor of Acupuncture and Oriental Medicine from Oregon College of Oriental Medicine. Dr. Oliveira has been in practice in his clinic in Honolulu, Hawaii, for nine years. He may be reached at (808) 536-6333, droliveira@ibemedicine.com

Some antineoplastics that are commonly used to treat breast cancer can cause nerve damage and produce symptoms such as pain, tingling, and numbness in the arms and legs, which has been defined as chemotherapy-induced peripheral neuropathy (CIPN). Distal axonopathy is the most clinical presentation of CIPN. These side effects can significantly reduce a person's quality of life and wellbeing.¹

“A point prescription with Master Tung’s points and ear Shenmen seems to be effective to address the complaints related to CIPN.”

Although in conventional care there is no standard approved treatment for CIPN,¹ it is my clinical experience that patients usually respond well to acupuncture treatments. The treatment protocol presented here is focused on the pain

and numbness complaints. Chemotherapy agents usually damage the Blood and the *yang*. A point prescription with Master Tung’s points and ear Shenmen seems to be effective to address the complaints related to CIPN. Acupuncture is given for 30 minutes on the contra lateral areas to the main pain sites. The patient is asked to move the affected regions during the treatment—for instance, finger, hand, elbow, and so forth. If still painful, needles should be further stimulated or repositioned.

Point prescription:

1. Da Bai-22.04, Ling Gu-22.05: The Dao Ma combination (Da Bai-Ling Gu) promotes strong therapeutic actions in terms of regulating *qi* and Blood. These two points also have the function of warming the *yang*.^{2,3}
2. Ren Shi-33.13: Pain in the palm or fingers, arm^{2,3}
3. Ren Zong-44.08: Hand pain, painful and swollen elbow, motor impairment^{2,3}
4. Ce San Li-7.22, Ce Xia San Li-77.23: In Dao Ma combination for lateral epicondylitis, motor impairment of the shoulder^{2,3}
5. Ear Shenmen: Peripheral neuropathy, neuralgia, stress, tension, anxiety, depression, insomnia, excessive sensitivity⁴

Needle retention for 30 minutes, light stimulation until achieving “*de qi*” sensation. Needle depth varies (consult Master Tung’s texts). Acupuncture applied on the opposite side of the complaints. I use Serin needles 0.20 mm x 30 mm.

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How Do You Treat Chemotherapy-Induced Peripheral Neuropathy in Your Clinic?

By Jennifer A. M. Stone, LAc

A 1991 graduate of the Midwest College of Oriental Medicine in Chicago, Illinois, Jennifer A. M. Stone, LAc is an adjunct clinic and research faculty member in the Indiana University School of Medicine, Department of Radiation Oncology. She is co-principal investigator of a cancer study, which is examining the impact of acupuncture on chemotherapy-induced peripheral neuropathy. She has participated in NIH-funded research on animal and human subjects. She maintains a clinic, East West Acupuncture, Inc., in Bloomington, Indiana.

Many chemotherapeutic agents cause neurotoxicity that may decrease the quality of life for patients and necessitate discontinuation of chemotherapy.¹ Types of neuropathy include chemotherapy-induced peripheral neuropathy (CIPN), motor weakness, myalgia, and arthralgia. Between 60 and 90% of patients receiving taxanes develop mild to moderate neuropathy, and as many as 30% of treated patients are likely to develop a disabling sensory neuropathy with up to 40% of patients requiring narcotics for pain management.²

“The treatment is designed to strengthen the *qi* and gently open the exterior at the same time. Points may be adjusted and tailored to each patient.”

Studies investigating the effect of acupuncture on chemotherapy-induced neuropathy are limited but report promising results.^{3,4,5}

Empirical evidence reported by clinicians is very positive.

About 75% of the CIPN patients I treat have post-CIPN, receiving their last chemo

treatment 6-12 months prior to seeking acupuncture treatment. The other 25% are patients currently undergoing chemotherapy treatment and the acupuncture is used to help prevent side effects such as neutropenia, leucopenia and CIPN. They are treated differently.

For most post-CIPN patients I needle bilaterally in arms and legs: Many antique points including he sea; *qi* cleft points; Bai feng and Bai xi. In severe cases I use *jing well* points.

Patients should notice some change in nerve sensation such as pins and needles and sharp pains within two to three treatments. This indicates the treatment is working. I have observed complete recovery of the neuropathy in as little as two treatments and as many as eight in patients who did not have prior diabetic or spinal stenosis neuropathy.

For patients currently receiving chemotherapy I needle bilaterally: SP-6, -9; ST-36, -37; K-3, -7; GB-41; TB-5; LI-4; GB-20. Bai feng and Bai xi are not needled because I do not want to draw the chemotherapy to the extremities. LI-4 and GB-20 are used to open the gates for the windy arthralgia that is experienced by patients during chemo treatments. The treatment is designed to strengthen the *qi* and gently open the exterior at the same time. Points may be adjusted and tailored to each patient. Care is taken to strengthen the *yin, yang* and *qi* without driving the energy to the interior.

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Clinical Research Presentations

A Qualitative Analysis of the Experience of Acupuncture for Chronic Pain in a Low-income, Ethnically Diverse and Medically Underserved Patient Population

Benjamin Kligler

Themes that emerged in this population were found to be very similar to those that have emerged over the last decade of qualitative research on the acupuncture experience in more homogenous, middle class patient populations.

Degree of Wide Spread Pain Predicted Clinical Response to Acupuncture—Preliminary Results from A Pragmatic National Pain Registry Study at a Tertiary Pain Center

Jiang-Ti Kong

This study found a trend in relationship between widespread pain and acupuncture analgesia utilizing patient reported outcomes from Collaborative Health Outcomes Information Registry. More data will be collected and analyzed against pain as well as other reported outcomes including physical and emotional function.

Acupuncture with Manual and Electrical Stimulation for Labour Pain

Linda Vixner

Regardless of stimulation type, acupuncture did not differ from standard of care without acupuncture in terms of reducing women's experience of pain during labour, or their memory of pain and childbirth overall two months after the birthing process. Other forms of obstetric pain relief were less frequent in women receiving a combination of both manual and electrical stimulation. This suggests that this combination method could facilitate coping with labour pain.

Evidence-Informed Manualization: Development and Feasibility Assessment of a Manual for Acupuncture during Acute Post-Stroke Care

Claudia Citkovitz

Researchers concluded that "evidenced-informed manualization" of acupuncture treatment is accepted by both acupuncturists and patients. Creation of this type of manual can provide both individualization and repeatability as well as allowing for revision on the basis of patient encounters.

"Communication spanned many countries, both East and West, to broaden the knowledge and the network of like-minded researchers, teachers, practitioners, and the interested public."

Group Acupuncture for Acupuncture

Scott Mist

The purpose of this study was to assess feasibility and acceptability of group acupuncture versus group education and stretching in a population of women with fibromyalgia. Group acupuncture was found to be both feasible and acceptable. Further studies are needed to determine treatment curve as well as whether central sensitivity, as measured by the nociceptive reflex, is improved.

The Acceptability and Clinical Outcomes of Acupuncture Provided in the Abbott Northwestern Hospital Emergency Department

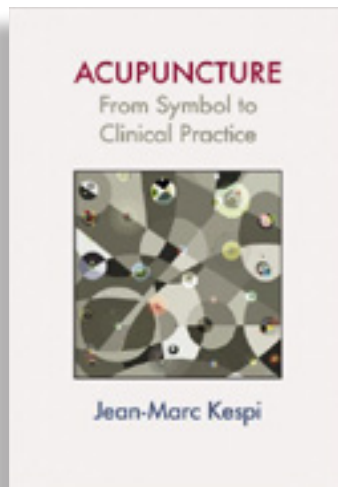
Adam Reinstein

Results indicated that acupuncture was acceptable and effective for pain and anxiety reduction and will inform designs of future randomized trials.

On Saturday, the joint SAR/SIO/FAS conference, chaired by Dr. Helene Langevin, took place among the three research groups covering acupuncture, oncology, and fascia. That evening, a poster presentation and reception featured 40 more research posters drawing from two or all three categories of each respective conference. These examples included: *Examination of Acupuncture for Chemotherapy-Induced Neuropathies: Effectiveness and Mechanisms* by J. Stone et al. (bridging acupuncture and oncology); *Quantification of Distant Effects of Acupuncture Needling on Connective Tissue Using Ultrasound Elastography* by S. Olenich et al. (bridging acupuncture and fascia); and *Re-evaluating Early Chinese Medical Texts: Fascia and the Vascular Model of Cancer* by E. Neal et al. (bridging acupuncture, fascia, and oncology).

Communication spanned many countries, both East and West, to broaden the knowledge and the network of like-minded researchers, teachers, practitioners, and the interested public. There is no definite date or theme set yet for the next SAR conference, but one organizer estimated that it would likely take place in spring 2017, somewhere in the western U.S.

BOOK REVIEW



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Joseph Adams, LAc is a second-generation acupuncturist and currently serves as an instructor and clinical supervisor at the Acupuncture and Integrative Medical College in Berkeley, California. Joseph also is a resident acupuncturist for Kaiser's Chronic Pain Department in San Francisco and maintains a private practice with his wife Elise in Marin County, California.

Acupuncture from Symbol to Clinical Practice

By Jean-Marc Kespi

Book Review by Joseph Adams, LAc

Dr. Jean-Marc Kespi draws upon over fifty years of study, practice, and fascination with acupuncture practices concerning both western and Oriental medicine in this remarkably approachable and clinically relevant discourse. Dr. Kespi is the honorary president of the French Acupuncture Society. He finished his medical studies in 1962 and embarked on his lifetime pursuit of Chinese medicine after taking a class on *yin* and *yang* given by Jean-Clause Darras.

Many of Kespi's colleagues originally regarded Chinese medical practices as archaic and purely metaphoric, having no medical validity. Initially, Dr. Kespi had similar reservations but was inexplicably drawn to explore further. After reading work on this topic by Georges Soulié de Morand and Choain, Dr. Kespi studied with Chamfrault, Nguyen van Nghi, and others. He slowly became convinced of the depth and validity of the Chinese approach. As he observed, listened, felt and touched patients during his western medical education, he found these skills readily translated to Chinese medical inquiry. He began focusing on the pursuit of Chinese medicine with the same zeal that he had dedicated to his western medical studies.

After many years of study, tutelage, and practice, Dr. Kespi came to understand that traditional symbols, reflected in the names of points and descriptions of physiological processes, act as intermediaries between the formal rules of medicine and their manifestations in the human body. To him, symbols also signify "that there is a natural order to life, both terrestrial and celestial," and that "all life is governed by laws reflected in their structure, functions and relationships, expressed in symbolic language and the resonances of certain numbers."

Dr. Kespi also suggests that acupuncture points carry symbolic meanings reflecting mind, body, and spirit and are the mediating intermediaries between the visible and the invisible, thereby connecting the two. In fact, the vision of traditional Chinese medicine is not anatomical but actually functional and symbolic. Chapter eight outlines what these symbols are and introduces significant symbols of Chinese medicine and their clinical applications.

Dr. Kespi proposes that our bodies represent the "scenery of all physical and psychological memory." In addition to integrating positions on the radial artery as well as examination of the tongue, he writes that practitioners must ask themselves how to apply symbolic categories such as heaven and earth, water and fire to the human body. A complex system of connections linking, for instance, lungs and the skin, lungs and a sense of justice, and lungs and the suffering due to bereavement, make this possible.

There are many questions that Dr. Kespi asks himself when contemplating the symbolic relevance of points. "Which point records the record of adolescence?" "Which points govern the diaphragm?" and "Which points control the movement of *qi*, *yin* and *yang* to each part of the body?"

“In addition to laying out his ideas on the foundations of acupuncture, Dr. Kespi shares his wide experience in this book through over one hundred case histories, which gives the reader the opportunity to see how this approach works in the clinic. ”

Along with dictionaries published by the Institut Ricci, Dr. Kespi calls upon sinological colleagues, such as Larre and Rochat, Andres, Milsky, Guillaume and Duron, to gain insight into the names of the points and their related signs and symptoms. He has concluded that goal “is to assist the body to recall the normal mode of functioning that it knew before, but has since forgotten.”

His approach proceeds from symbol to diagnosis and onto the insertion of a needle in a precise point on the body. Dr. Kespi typically uses one to three needles to treat what he describes as the “disequilibrium found at the root level.” A single point utilized in this way can be significant enough to resolve complex, long-term symptoms that have not responded to any other intervention. Dr. Kespi maintains that even people with the same condition often have very different underlying issues, requiring treatment using specific points reflective of their unique presentation. In this manner, he shows the practitioner how to see beyond the symptoms and address the whole person.

In addition to laying out his ideas on the foundations of acupuncture, Dr. Kespi shares his wide experience in this book through over one hundred case histories, which gives the reader the opportunity to see how this approach works in the clinic. In one case, a patient felt helpless because he couldn’t understand why his wife divorced him and couldn’t bear to be apart from his two young daughters. Needling CV-15, a point which, according to Kespi, “governs expressions of the heart” and “can release internally repressed heart fire,” facilitated the patient gaining perspective, taking charge, and understanding his part in the painful failure.

The book’s layout invites the reader to visit many common Chinese medical themes. Dr. Kespi begins by exploring the six main, twelve primary, sixteen *luo* channels, the musculo-skeletal and extraordinary channels, the connecting and alarm points, and the window of heaven points. He then moves on to *yin/yang*, and *qi* movement in the organs. From there, he discusses three burners, the diaphragm, and seasons in Chinese medicine. In the chapter Diagnosis and Treatment, the causes of disease and insights into the relevance of quietude amidst the practitioner and patient consults are described.

Chapter six brings life to the symbolism of specific points, in which he groups points with similar names and also provides an in-depth discussion of Barrier and Command points. Acupuncture points, he writes, are “empty,” like a mountain cavern, symbolically referring to the space where exterior and interior energies meet and gather. Emptiness, he says, “is not nothingness but, rather, the gap between the spontaneous

emergences of sequential phenomena in which solutions are allowed to arise of their own accord.” Appendices at the end of the book provide helpful charts of the musculoskeletal and primary channels as well as and information on specific points mentioned in the text.

My only criticism arises from the section of the preface titled “Purpose of This Work,” where Kespi unsuccessfully describes how his methods differ from conventional approaches in modern-day China and in the English-speaking world. Despite this small issue, I have found that *Acupuncture from Symbol to Clinical Practice* rewards the reader with an intellectually stimulating and scholarly exploration of medical theories geared at guiding acupuncture treatments.

The book weaves basic concepts such as *yin-yang* with more complex symbolic medical concepts. Both the novice and seasoned practitioners are left with many possibilities for blending and applying the presented methods. Dr. Kespi maintains throughout the book that the most effective approach “is to always treat the person and not the symptoms.” The abundance of cases makes this book especially handy for practitioners interested in embracing Kespi’s unique way of doing this.

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Teaching Research Literacy: Spotlight on PCOM NY

Meridians Editor in Chief interviews Principal Investigator Beau J. Anderson, MSAOM, PhD



Dr. Anderson earned her doctoral degree in molecular biology from the University

of Sydney (Australia), and her Master's in Acupuncture and Chinese Herbal Medicine from the New England School of Acupuncture, Boston, Massachusetts. Dr. Anderson has over 20 years of administrative, clinical, research and teaching experience. Recent research positions have been at Memorial Sloan Kettering Cancer Center and at NESAs, in collaboration with Harvard Medical School. Dr. Anderson is currently the academic dean and research director at Pacific College of Oriental Medicine (PCOM-NY), the largest college of Chinese medicine in the U.S., with campuses in New York, San Diego and Chicago. She is an assistant professor at Albert Einstein College of Medicine (Yeshiva University, NY) and maintains a private practice at New York University Fertility Center. Dr. Anderson is widely published, serves as an editor for several complementary and alternative medical journals, regularly participates on National Institute of Health (NIH) National Center for Complementary and Alternative Medicine (NCCAM) study sections, and is a member of the Research Working Group of Academic Consortium for Complementary and Alternative Health Care.

Interprofessional student education: exchange program between Albert Einstein College of Medicine and Pacific College of Oriental Medicine.

Anderson BJ; Herron PD; Downie SA; Myers DC; Milan FB; Olson TR; Kligler BE; Sierpina VS; Kreitzer MJ.

Abstract

The growing popularity of complementary and alternative medicine (CAM), of which estimated 38% of adults in the United States used in 2007, has engendered changes in medical school curricula to increase students' awareness of it. Exchange programs between conventional medical schools and CAM institutions are recognized as an effective method of interprofessional education. The exchange program between Albert Einstein College of Medicine (Einstein, Yeshiva University) and Pacific College of Oriental Medicine, New York campus (PCOM-NY) is in its eighth year and is part of a broader relationship between the schools encompassing research, clinical training, interinstitutional faculty and board appointments, and several educational activities. The Einstein/PCOM-NY student education exchange program is part of the Einstein Introduction to Clinical Medicine Program and involves students from Einstein learning about Chinese medicine through a lecture, the experience of having acupuncture, and a four-hour preceptorship at the PCOM outpatient clinic. The students from PCOM learn about allopathic medicine training through an orientation lecture, a two-and-a-half-hour dissection laboratory session alongside Einstein student hosts, and a tour of the clinical skills center at the Einstein campus. In the 2011/2012 offering of the exchange program, the participating Einstein and PCOM students were surveyed to assess the educational outcomes. The data indicate that the exchange program was highly valued by all students and provided a unique learning experience. Survey responses from the Einstein students indicated the need for greater emphasis on referral information, which has been highlighted in the literature as an important medical curriculum integrative medicine competency.

Explore: The Journal of Science & Healing. 8(6):377-81, 2012 Nov-Dec.

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JS: Dr. Anderson, congratulations! In addition to the K07 (academic career award), I understand that you also received a Patient-Centered Outcomes Research Institution (PCORI) award for clinical research. Thank you so much for granting this interview. I am often questioned about federal funding from AOM school faculty. I think our readers would like to hear more about the process and outcomes.

What influenced your decision to apply for the KO7 award to develop evidence-informed practice (EIP) for faculty development and for students in the AOM master's program at Pacific College of Oriental Medicine New York? Did you meet with any resistance from the faculty or administration?

BA: PCOM-NY had been collaborating with Albert Einstein College of Medicine (Einstein, Yeshiva University) in an interprofessional student exchange program for five years.¹ I had previously worked with colleagues at Oregon College of Oriental Medicine and some of the other CAM colleges that received NIH funding to enhance research literacy in their curricula,¹ so I was somewhat familiar with the program announcement [the grant description] and the process.

Together we decided to apply for federal funding for faculty research enhancement at PCOM. Many of the PCOM faculty had previous research experience and were enthusiastic about the grant, although some of the faculty had very legitimate concerns about how the western medical research model might negatively impact the AOM profession.

JS: For our readers who might be interested in applying for federal funding, would you briefly describe the process?

BA: For the first round of the process, I completed the documentation and set up electronic submission for PCOM through the NIH's eRA Commons online interface. I listed myself as principal investigator (PI) and PCOM as the institution that would receive and manage the funds. That application did not get funded but did get scored, which meant I was given an opportunity to revise and resubmit.

While preparing the grant resubmission, I spoke often to the program officers at the NIH who were extremely helpful in advising me on what the NIH is looking for. They encouraged me to resubmit and felt that I had a good chance of getting funded. In preparation for the resubmission I surveyed the PCOM students and faculty to assess research literacy and concerns so that I could include significant data in the grant application.

Our team decided to resubmit with colleagues from Albert Einstein College of Medicine as co-PIs, and this time we chose to submit the application through Einstein Yeshiva University as the sponsoring institution. The NIH prefers to fund institutions and universities that have previous experience in managing federal funding, and Einstein Yeshiva University had received many federal grants. They had the infrastructure to manage the project.

In our second application round, we included letters of support from faculty at Einstein who would serve as mentors on the project. The resubmission was much easier for me because the research support staff at Einstein assisted in the application process and submitted the application through their offices for our team.

JS: What were the outcomes of the PCOM faculty survey? Is the data published?

BA: Yes the data is published in the *Journal of Alternative and Complementary Medicine*.² I was surprised to discover that approximately 50% of faculty had prior research training and around 75% showed advanced research literacy. It is interesting to note that faculty who responded to an open-ended question (19.6% of respondents) expressed concerns about the relevance of research to Chinese medicine and the possibility of co-option by biomedicine.

JS: One specific aim of this project was to develop your skills through coursework in education research at Einstein and Columbia University. What courses did you take and how did they supplement your knowledge base in research education?

BA: I took classes in curriculum development as well as classes in education that focused on how different students learn. A current interest of mine is the different style of teaching and learning that allopathic students are exposed to vs. students in AOM schools.

JS: Cultural change seems to be an important aspect of developing EIP in the CAM professions. What has been your experience with that at PCOM?

BA: The NIH award has sparked a valuable dialogue among faculty and students. Topics include the benefits of evidence-informed practice for clinicians and discussions of the problems and concerns about how the western research model might hurt as well as help our medicine. Prior to the project, students and faculty simply did not discuss research and how it might impact the profession. Now students are beginning to see how better research literacy might help clinicians discuss the science behind AOM with their patients and allied health professionals. Additionally, when AOM providers give public talks and presentations, infusing scientific data on efficacy and mechanisms into their presentations can produce a more robust presentation that is more palatable for western audiences.

JS: Thank you for your time and for discussing this very important information, Dr. Anderson. You have shown us how it is possible for a school that is not a research institution but has faculty and/or students who want to apply for research grants to collaborate and partner with an established research institution to do their research.

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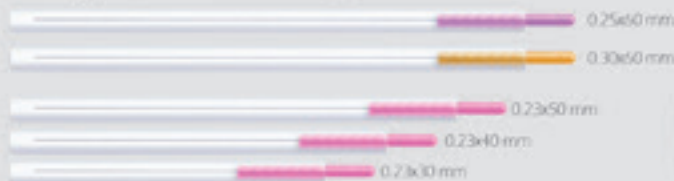
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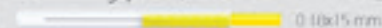
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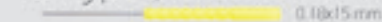
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