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I N S I D E

The Use of CAM to Facilitate Cure Through Standard Care: A Case Report Utilizing the Electroacupuncture According to Voll Perspective

The Effects of Eastern and Western Medicine on Female Infertility Associated with Advanced Maternal Age: A Literature Review

Integrative Management of Alopecia Areata with Acupuncture and Ayurveda: A Case Report

The Legend of Waichi Sugiyama, the Father of Japanese Acupuncture

Health Knowledge Related to Non-Use of Acupuncture and Other Complementary Therapies

Commentary: Ethics and Legalities of Medical Billing

Book Review: *The New Chinese Medicine Handbook: An Innovative Guide to Integrating Eastern Wisdom with Western Practice for Modern Healing*



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Cover Image: Under the Old Japanese Maple Tree in Autumn, Portland Japanese Garden.
Photo by Jit Lim

MERIDIANS

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



With this fall issue of Meridians JAOM, we celebrate the one year mark of the publication of this journal. We could not have done the first four issues without you—our authors, peer reviewers, advertisers, and our readers! Thank you all for our success; we will continue to work hard to publish a quality, professional, peer reviewed scientific journal for the profession.

In this issue, we first present a literature review on the effects of eastern and western medicine on female infertility associated with advanced maternal age authored by Stacy Frankovitz Reisner, MPH. This piece is a valuable resource for both AOM students and practitioners who treat female infertility. The article includes the combined findings from RCTs, prospective cohort studies, retrospective cohort studies, case control studies, retrospective reviews, and systemic reviews.

We also have two case reports about topics that are not usually covered. The first one is by Sivarama Prasad Vinjamury, MD (Ayurveda), MAOM, MPH, Daniel Hoover, DC, MAOM, HM and Jennifer Noborikowa, titled “Integrative Management of Alopecia Areata with Acupuncture and Ayurveda: A Case Report.” This piece discusses both traditional Chinese medicine and Ayurvedic medicine methods that were utilized synergistically and were successful in treating a 55-year-old patient with this condition.

We are also pleased to present Arnaldo Oliveira’s investigation of “Electroacupuncture According to Voll.” This case report discusses the utilization of the fundamentals of Chinese classical acupuncture, homeopathy, and modern electronics in treating a patient with severe mitral valve regurgitation.

Our “Perspectives” section features a piece, “The Legend of Waichi Sugiyama, the Father of Japanese Acupuncture” by Michael Devitt, MA. Blind acupuncturist Waichi Sugiyama practiced in 17th century Japan and is credited with inventing the *shinkan*, a type of hollow tube used to aid in the insertion of acupuncture needles. Sugiyama also was highly skilled in the areas of abdominal diagnosis and palpation, and during his lifetime he established more than 40 schools that train blind people to become acupuncturists. Devitt’s piece brings alive the history of this significant and historical figure.

We also include two commentaries of special interest. The first one, by Adam Burke, PhD, MPH, LAc and Elizabeth Sommers, PhD, MPH, LAc, reports on data collected from a 2007 survey about the findings regarding the *non-use* of complementary therapies by certain populations that could benefit from this type of care. The second commentary, “Commentary: Ethics and Legalities of Medical Billing” Marya Deda, LAc, discusses the multifaceted and highly complex ethical and legal issues regarding charging patient copayments and/or coinsurance payments at the time of service and the implications of waiving copays.

The New Chinese Medicine Handbook: An Innovative Guide to Integrating Eastern Wisdom with Western Practice for Modern Healing by Misha Ruth Cohen, OMD, LAc is reviewed by Looice Brown, LAc. Brown describes the book as both a comprehensive clinical guide and a patient

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primer for understanding and introducing Chinese medicine theory and application. The book is a useful tool for patients and laypeople who wish to learn more about Chinese medicine from an expert.

The journal staff continues to welcome submissions by AOM practitioners, students, and research faculty on all AOM topics. Both established authors/researchers and first-time authors receive top-notch professional feedback from our dedicated peer reviewers for each and every piece.

Again, thank you everyone for making *Meridians: The Journal of Acupuncture and Oriental Medicine* such a success throughout our first year of publication!

Jennifer A. M. Stone, LAc

Editor in Chief, MJAOM

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The Use of CAM to Facilitate Cure Through Standard Care: A Case Report Utilizing the Electroacupuncture According to Voll Perspective

By Arnaldo Oliveira, PhD, 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 the Institute of Clinical Acupuncture and Oriental Medicine, Honolulu, Hawaii, and received his Doctor of Acupuncture and Oriental Medicine degree from the Oregon College of Oriental Medicine in Portland, Oregon. Dr. Oliveira practices acupuncture and Oriental medicine in Honolulu, Hawaii, and specializes in the Electroacupuncture according to Voll technique. Email: droliveira@ibemedicine.com

Above: The use of a technique called Electroacupuncture

Abstract

The incidence and prevalence of valvular heart disease is high, and such disorders account for 10-20% of all cardiac surgical procedures in the United States.^{1,2} Symptoms and signs might be either absent or mimic those of heart failure, such as dyspnea, fatigue, cough, ankle edema, tachycardia, pulmonary rales, and so forth. The treatment of mitral regurgitation varies according to its severity; however, surgical corrections, repair or replacement, are the gold standard. The current pharmacologic regimen is comprised of β -adrenoreceptor blockers, angiotensin receptor-blockers, diuretics, inotropic agents, and other agents.

This case concerns a patient with severe, chronic mitral valve regurgitation and chest pain. She chose to pursue an alternative treatment for this condition, a technique developed by Reinhold Voll using electroacupuncture. This technique, known as "Electroacupuncture according to Voll," plus the use of nosode therapy, helped alleviate the patient's chest pain, improved her quality of life, and increased her confidence level such that she was able to travel to receive the necessary biomedical intervention needed to resolve the underlying issue.

Electroacupuncture according to Voll, an effective methodology for detecting disease, treating symptoms, and expediting treatment delivery, was used to treat this patient by synthesizing the application of Oriental medicine and homeopathy. These methodologies may also be used to facilitate treatment in patients with other related complex conditions. More research is warranted on this topic.

Key Words: mitral regurgitation, acupuncture and Oriental medicine, medicine testing, coxsackievirus, Electroacupuncture According to Voll, nosodes, homeopathy

Case History

A 71-year-old female with an eight year history of severe chest pain, non-occlusive coronary-artery disease, hypertension, and dyslipidemia presented for care. Since the onset of her condition the patient had been hospitalized several times with atypical chest pain. On January 5, 2007, she awoke during the night with severe chest pain, diaphoresis, and

nausea. She was taken to the Queen's Medical Center Emergency Department. Her initial electrocardiogram (ECG) and troponins were negative and eventually her chest pain resolved. However, a few hours later, she had a recurrence of severe chest pain and was re-admitted for cardiac catheterization.

An angiogram revealed severe spasm of the proximal right coronary artery and moderate spasm in the right ventricular branch with mild, eccentric 20% stenosis. There was no significant plaque in the left coronary system. The left ventriculogram showed a hyper-dynamic ventricle with mild mitral regurgitation. The patient was evaluated and treated by a cardiologist.

On June 5, 2014, the patient was again taken to the Queen's Medical Center Emergency Department due to severe chest pain. An ECG showed no ischemic changes and troponins were negative. Her chest pain was relieved with oral nitroglycerin and aspirin. The ECG revealed normal left ventricular systolic function with ejection fraction of 55-60% with no wall motion abnormalities.

On June 18, 2014, the patient presented to my clinic. She stated that since 2007 she had suffered several episodes of chest pain, which had been followed by a cardiologist. According to the patient, the pain was not associated with any clear triggers. She denied shortness of breath, orthopnea, paroxysmal nocturnal dyspnea, lightheadedness, and syncope. She confirmed having occasional heart palpitations and bilateral ankle edema; she complained of slight dyspnea with exertion, insomnia, and a general cold sensation.

She was on a drug regimen that included (1) Amlodipine 5 mg once a day in the mornings, (2) Nitroglycerin 0.3 mg sublingually as needed, (3) Isosorbide mononitrate 30 mg once a day in the mornings, and (4) Irbesartan 75 mg twice a day, (5) Omeprazole 20 mg once a day before breakfast, (6) Rosuvastatin 10 mg once a day, and (7) ASA 81 mg once a day. The patient was 5'3" tall and weighed 175 lbs. She was almost always cold and denied any perspiration. Her face was slightly pale, eyes were a slightly yellow with malar mounds, and her lips were purple. Her skin was delicate, and she would develop ecchymosis with any soft trauma.

She was never thirsty and had a poor appetite. Her diet included vegetables, grains, and animal protein. She complained of loose stools and frequent urination. She complained of having insomnia averaging four days per week and invariably awoke around 3 a.m., unable to fall back asleep. She did not have any complaints about any emotional sensitivities. Her energy level was poor. Her physical activity consisted of working in the house and travelling; she reduced exercising significantly due to fear of chest pain.

At the first evaluation visit, her pulse was regular and weak. It was knotted at the heart position, slippery at the spleen site, and deep

at both kidney positions. She described her chest symptoms as "a stabbing, oppressing sensation" in her precordium. Shortness of breath especially on exertion, chest pain, and fatigue were her most important complaints. Her tongue was pale, flabby and purple, and the coat was thin, clear, and slightly dry with teeth marks. Her peripheral-blood oxygen saturation was 97% at rest and 92% on exertion.

An Electroacupuncture according to Voll (EAV) examination indicated, among other findings, a possible mitral valve dysfunction. The patient was recommended a homeopathic treatment and told to seek a second opinion from another cardiologist. She consulted with a new cardiologist and told him that per my examination, there could be a problem in the mitral valve. A transesophageal echocardiogram was performed, which detected severe mitral valve regurgitation.

The patient was recommended valve replacement surgery in her home city, Honolulu, but she was reluctant to proceed with such a significant procedure as a first step. She was subsequently given the option of a simpler valve repair procedure, a recommendation she was more inclined to accept. This surgery would need to take place at Baylor Hospital in Plano, Texas, but she was very afraid to travel due to fears associated with the chest pain.

The Electroacupuncture According to Voll Perspective

Reinhold Voll, MD studied traditional Chinese medicine (TCM) and homeopathy and created a diagnostic and therapeutic system which became known as Electroacupuncture according to Voll (EAV). The first device he developed in the 1950s combined the fundamentals of Chinese classical acupuncture and homeopathy with modern electronics. Dr. Voll found that electrical resistance could be measured on acupuncture points, thereby precisely locating these acupoints.

Later he discovered energetic relationships between acupuncture points of both traditional Chinese acupuncture points and, after years of research, several new measurement points and additional channels not known within classical Chinese acupuncture.^{3,4} He also took into account organs, systems (digestive, circulatory, nervous, etc.) and their related physiological functions and structures. He then delineated useful diagnostic meanings for measuring acupuncture points by observing the behavior of the electric resistance of these points.

EAV utilizes an electronic ohmmeter designed to measure the skin's electrical resistance at specific acupoints. An EAV device consists of a 12 microampere meter, calibrated from 0 to 100, with an electromotive force of 1.2 V. The instrument has a high internal

“EAV utilizes an electronic ohmmeter designed to measure the skin’s electrical resistance at specific acupoints.... with the probe applying a steady pressure onto an acupoint, if the reading of the meter goes to 50 (in a 0 to 100 scale of the device meter) and stays stable at that position, this indicates that the organ or system associated with that particular acupoint is energetically healthy.”

resistance because the electrical impedance of acupuncture points is lower and the conductivity is higher than in the contiguous skin.

To take a measurement with this device, a patient holds the negative electrode in one hand and a physician presses the probe (the positive electrode) onto specific acupoints mainly located on the hands and feet. The pressure applied to the skin on the acupoint must be constant. Voll called this “electroacupuncture pressure.” It causes a stable electrical resistance for the overall reading.³⁻⁵

With the probe applying a steady pressure onto an acupoint, if the reading of the meter goes to 50 (on a 0 to 100 scale of the device meter) and stays stable at that position, this 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.”

Theoretically, in high readings, the bioelectric resistance is low due to increased blood flow, which may be a sign of inflammatory or allergic processes. However, when the initial reading, whatever it might be, decreases and settles at a lower value of the scale, it is called an “indicator drop” (ID), which suggests that the organ or system associated with that particular acupoint is energetically unhealthy.

IDs occur in theory 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. Although the indicator drop is the most significant sign in EAV, high readings over 65 should be further evaluated in terms of treatment strategies to pursue when dealing with either inflammation or allergies in the clinical setting.³⁻⁷

Voll explains the indicator drop, which at that time he termed “indicator deflection:” In the case of organs which have disturbances of their functions, the bioelectric resistance of the organ to the measurement current decreases; the organ is unable to maintain a fixed resistance with respect to the incoming current. This decrease in bioelectric resistance is shown by the indicator deflection prior to the establishment of the equilibrium state between the stimulation by the measurement current and the reaction capacity of the organ.⁸

Medicine Testing

In 1954, Voll coincidentally discovered what he called “medicine testing” during one of the several demonstrations of electroacupuncture diagnosis to the German medical community. The text below illustrates in detail the circumstances in which Dr. Voll realized that the EAV device could be an important medical tool for precisely prescribing medicines to patients:

I diagnosed one colleague as having chronic prostatitis and advised him to take the homeopathic preparation called Echinaceae 4x. He replied that he had this medication in his office and went to get it. He returned with the bottle of Echinaceae in his hand. I tested the prostate measurement point again and made the discovery that the point reading, which previously was up to 90, had decreased to 64, an enormous [sic] improvement of the prostate value. I had the colleague put the bottle aside and the previous measurement value returned. After holding the medication in his hand the measurement value went down to 64 again, and this pattern repeated itself as often as desired. This procedure could be reproduced. The interest of the gathered colleagues was now aroused and the question was on their minds whether heart medications; for instance, heart tablets put into the hand would also improve the measurement value. This too could be established. The procedure was again and again reproducible. However, to obtain the ideal value of 50, the dosage of the medication had to be determined. With regard to Echinacea 4x, the ideal value of 50 was reached with ten drops into a handheld glass, only to increase again with the further addition of drops. This was also the case when testing the heart medication. One tablet would result in the 50 value, one and a half and two tablets would depart from the ideal value of 50.⁹

With his EAV system in place and capable of measuring acupoints in a reproducible fashion, Voll created his “medicine testing.” He observed that IDs could be corrected, or “balanced,” when the right test substance was introduced into the circuitry by being either placed on the plate or held by the patient.

Test substances, such as homeopathic remedies, allopathic drugs, herbal products, supplements, or other substances, can be directly placed on an aluminum plate, or well, or attached to the negative lead of the EAV device, which is also connected to the patient

through the negative electrode. In addition, test substances can be held by the patient in contact to the patient's body or in close interaction with the patient's electromagnetic field.³⁻⁷

Werner and Voll elegantly summarize their initial understanding of medication testing, stating that it is the most excellent achievement of electroacupuncture. In medication testing it is obvious that very small energies, which the medication in the glass ampule conveys on to the patient, have an impact on the autonomic nervous system (somatic tissue primarily) of the patient via the acupunctural system.⁸

When tested, there will be immediate changes in the measurement values of the acupuncture points being tested. If the medicine is the correct one, and the dose or potency is correct for the patient's condition, then the measurement values tend to be stable readings at 50. Medicine testing involves not only the selection of which medicine to prescribe but also its strength and potency.

In addition, when testing allopathic medicines, Voll observed that generic drugs made by different laboratories produced dissimilar measurement values due to variations in the manufacturing process, fillers, dyes, and so forth. This phenomenon is still observed today when testing generic and brand-name drugs, which achieve distinctive measurement values.^{3,5,6}

The medicine testing phenomenon occurs in theory because all substances have distinct magnetic fields that produce vibratory signals or vibrational identifications. A vibratory signal from the testing substance, placed on the EAV plate or directly held by the patient, enters the patient's magnetic field and reacts with it.⁵ According to Voll, any substances correcting an ID cause a beneficial therapeutic effect on the patient when taken.⁹ Unchanged meter responses imply that the substance produces no effect. Worsening meter responses, or IDs, indicate a potential negative therapeutic effect.

As previously described, once a test substance corrects an ID, the next step is to determine the correct dose and potency of the medicine.⁸ For instance, if a patient presents an ID of the right heart control measurement point (CMP) and a remedy called mycoplasma pneumonia Sdf TR 63 balances or "corrects" the aforementioned CMP, the physician then needs to identify the correct potency of the medicine, which is available from the sixth strength to the two hundredth dilution.¹⁰ Once the right potency of the remedy is established, with the reading of the meter staying stable at 50, the organ or system associated with that particular point is energetically balanced, and the medicine is predicted to be effective and tolerated.^{7,9,10}

Electroacupuncture According to Voll: Patient Evaluation

The patient came in to the office for an initial EAV evaluation, which included medicine testing as described above. When the EAV testing session was performed, a few indicator drops were detected on the circulation, heart, spleen, and kidney control measurement points (CMPs) (see Figure 1). In addition to designing a treatment plan with the medicine testing procedure, the patient was referred to a cardiologist.

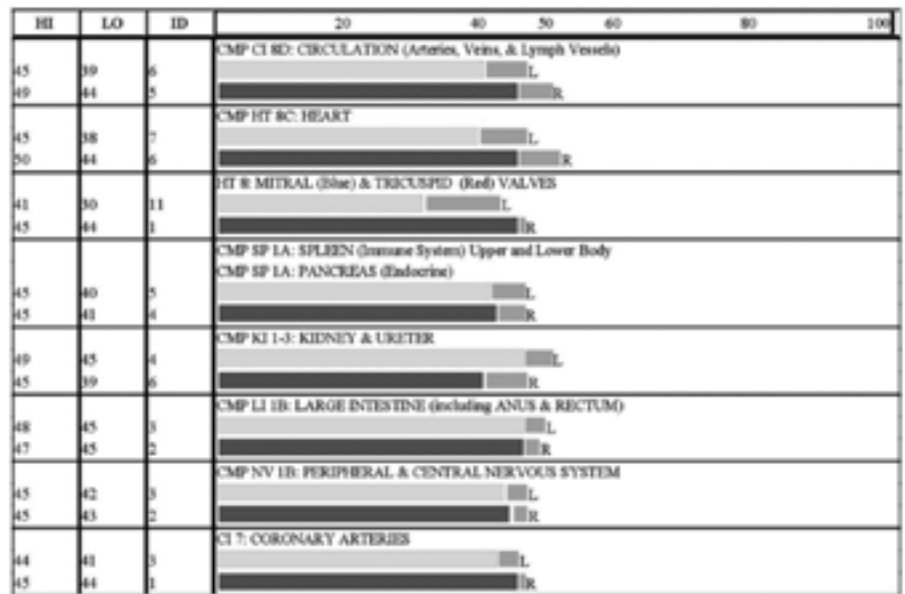


Figure 1. Partial EAV Chart Showing the Main Indicator Drops

Figure 1 shows the measurement point of the mitral valve (HT 8, left side) and coronary arteries (CI 7), and the control measurement points of circulation (CMP CI 8D), heart (CMP HT 8C), spleen and pancreas (CMP SP 1A), kidney (CMP KI 1-3), large intestine (CMP LI 1B), and peripheral and central nervous system (CMP NV 1B). Note that the bigger the number under the "ID" column, the more severe the pathology, which is graphically represented by the indicator drop (ID) at the end sections of the bars. "L" represents left, and "R" indicates the right side. "HI" means the highest readings and "LO" is the lowest readings. Observe that the numbers under "ID" are the result of "HI" minus "LO."

Electroacupuncture According to Voll: Treatment Planning

The treatment plan was designed with the goals of alleviating chest pain and improving dyspnea. The medicines were selected through the process of “medicine testing” explained above. The initial treatment plan included nosodes (homeopathic remedies derived from sterilized diseased tissue) and other homeopathic remedies that were given once a week for ten weeks along with supplements, which were all selected by medicine testing. The remedies were selected from a group of medicines that are known in EAV to treat heart and chest symptoms, but only those that balanced the points were selected. The patient had a halfway checkup during week five and a final checkup during week ten.

The homeopathic prescription was a combination of coxsackie B3, interferon, and glonoinum, manufactured by Staufen-Pharma GmbH & Co. KG in Göppingen, Germany. Each remedy box contains ten vials with dilutions that go from 5x to 200x (See Table 1).

Coxsackie B3 was selected through medicine testing. In past cases this specific nosode helped balanced the left heart (HT 8C) control measurement point (CMP) combined with interferon. Glonoinum was selected because it corrected the indicator drop of the mitral valve (HT 8, left side). A number of other nosodes that could potentially correct IDs of the left heart such as Streptococcus haemolyticus, Naja tripudians, Lachesis, and so forth were tested, but they did not correct the IDs of the left heart (HT 8C). The same process was pursued to determine the use and dosage of Perfusia-sr and SE-zyme, and they were selected because when placed on the testing plate, the IDs of the (HT 8, left side), coronary arteries (CI 7), circulation (CMP CI 8D), and heart (CMP HT 8C) got corrected.

Medicine	Week									
	1	2	3	4	5	6	7	8	9	10
1) Coxsackie B3	6x	6x	8x	10x	12x	15x	30x	60x	100x	200x
2) Interferon	6x	6x	8x	10x	12x	15x	30x	60x	100x	200x
3) Glonoinum	5x	6x	8x	10x	12x	15x	30x	60x	100x	200x

Table 1. Homeopathic Medicines and Their Potencies Throughout the Ten Weeks of Treatment

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The supplementation was first tested by the EAV method. Medicine testing helped establish the optimum doses. Perfusia-sr, which contains 1 g of L-arginine, made by Thorne Research, was prescribed one capsule three times a day. SE-zyme, which contains 100 mcg of selenium, made by Biotics Research, was prescribed one tablet twice a day.

All doses were established following the medicine testing procedure, which is described above. The homeopathic solution was to be taken fifteen drops sublingually every fifteen minutes, until the vial. This process was to be done once per week for ten weeks. The supplements were to be taken every day. The prescription of the selected homeopathic medicines, L-arginine, and selenium are commonly prescribed for myocarditis, a common cause of dilated cardiomyopathy.^{11,12} A theoretical explanation for this is that in left ventricular dilatation, leaflet tethering by displaced papillary muscles might induce mitral regurgitation.^{13,14}

L-arginine is a non-essential amino acid²⁷ and a precursor in the actions of nitric oxide synthases (NOS), which produces nitric oxide (NO).^{24,28} NO is an endothelial-derived vasodilator that plays an important role in modulating various physiological processes, such as (1) tissue homeostasis, (2) neurotransmission, and (3) inflammation.^{27,28} NO is a product of NOS, which converts arginine and oxygen into NO and citrulline.^{24,29} Increased NO concentration in the serum, lungs, and aorta alleviates left ventricular after-load and facilitates left ventricular systolic function.³⁰

There is evidence indicating a major protective role of NO against viral infections in general but specifically against coxsackie B3 virus which has been shown to cause myocarditis in mice.^{24,27-29} In this case, a combination of two nosodes (coxsackie B3 and interferon), one classical homeopathic remedy (glonoinum), one trace element (Selenium), and one amino acid (L-arginine) were given to the patient in a course of ten weeks.

Remedies Rationale

In 1831, Constantine Hering became the first practitioner to detail the use and application of nosodes in medicine.¹⁵ Nosodes are understood to stimulate the immune system to eliminate toxins that are trapped in the connective tissue or the so-called "mesenchyme;" these toxins are believed to cause energy blockages that first produce symptoms and later progress into full-blown diseases.^{3,7,9,16}

Coxsackies are nosodes prepared from inactivated coxsackie viruses. This virus belongs to the Picornaviridae family of non-enveloped viruses of the genus Enterovirus.¹⁷ Coxsackie remedies are used for sinusitis, cystitis, upper-respiratory infections, and conjunctivitis;¹⁶ however, in EAV, their main indications are for headaches, palpitations, hypochondriac pain, chest pain, laryngitis with loss of voice, coughing, and intestinal problems.^{3,8,16}

Enteroviruses are the most common etiological agents of human viral myocarditis.²⁸ Several studies have isolated coxsackie B viruses in the myocardium in a significant proportion of patients with idiopathic dilated cardiomyopathy (DCM). Therefore, considering these important findings, antiviral agents to coxsackie B virus could be used more often in order to prevent further damage in the heart.^{11,18,19} Coxsackie virus B3 causes myocarditis in humans.¹⁹

Interferon is a nosode prepared from leukocyte, fibroblast, and lymphocyte interferons. Interferons are glycoproteins produced by the cells of the immune system in response to viral and bacterial infections as well as tumor stimulation. Interferons reduce viral replication within host cells, activate natural killer cells and macrophages, increase antigen presentation, and promote the resistance of host cells to viral infection.^{17,20} In EAV, interferon is used as an accompanying remedy along with several viral nosode remedies.^{3,9,10}

Glonoinum is a remedy made from nitroglycerin, which is a nitrate drug used as a heart medication. Therefore, glonoinum is indicated for tachycardias and chest pain.^{3,9,10,16}

Selenium is an essential trace element in humans and animals. It is known for its potent antioxidant activity. Selenium is vital for good health.²⁰⁻²² Several studies showed that selenium deficiency in mice may increase heart damage caused by a cardiovirulent strain of coxsackievirus.^{20,22,23}

Viral infections, especially coxsackie virus B3, take advantage of oxidative stress in myocardial cells due to a decrease in the activity of glutathione peroxidase, which is caused by selenium deficiency. Such a theoretical model was demonstrated in mice models injected with viral genome, and the incidence of myocarditis in the selenium-deficient group was much higher.^{20,24} In addition, a selenium-deficient diet is likely to increase the virulence of otherwise benign viruses.^{25,26}

Electroacupuncture According to Voll: Course of Treatment and Results

At the five week halfway mark, the patient reported no chest pain and no shortness of breath upon exertion. The EAV testing still showed an indicator drop of the mitral valve measurement point (HT 8, left side) but an improvement of the readings of the heart CMPs (HT 8C). Transesophageal echocardiogram showed severe mitral regurgitation with prolapse of the A3 segment of the anterior mitral valve leaflet (see Figure 2).



Figure 2. Severe Mitral Valve Regurgitation

Performing the valve repair surgery at Baylor Research Heart Hospital was again suggested, but the patient still did not have enough confidence that she could endure a trip from Hawaii to Texas. Homeopathy and supplement therapy was continued.

During the next two weeks of treatment, the patient's pulse continued to improve; however, it was still slightly weak and knotted at the heart position. Her tongue was pale, flabby with teeth marks, and the coat was thin and clear. Her peripheral blood oxygen saturation had no change (97% at rest and 92% on exertion).

At the last checkup, after ten weeks of treatment, the patient said she was feeling well, that she had more energy, that she was sleeping better, and that her appetite had remarkably improved. Her pulse was still weak, slightly knotted, and choppy at the heart position, and regular-slow (65 bpm). Her tongue was pale red, and the coat was thin and clear. No chest pain episodes were reported. She did not complain of dyspnea. She felt she had gained sufficient confidence to go to Texas for the valve repair surgery.

Discussion

A single report is not enough to create solid scientific evidence; however, this article highlights several points that may be useful for engendering discussion, generating new hypotheses, and inspiring practitioners to experiment with this approach. An important aspect of this case is the use of EAV together with medicine testing, which allows the bridging Oriental medicine with homeopathy.

The EAV assessment and treatment benefited the patient in multiple fashions. First, the EAV findings may have been critical in convincing the patient to seek a second cardiology opinion. These findings showed her that there was something abnormal with her mitral valve that was not detected in previous studies. Second, the homeopathic medicines, L-arginine, and selenium selected

and applied by this methodology may have helped to alleviate her chest pain in a way she had not experienced for the past eight years. Finally, with a clear diagnosis of mitral valve regurgitation and no chest pain episodes, the patient gained confidence to travel from Hawaii to the mainland to undergo valve repair surgery.

The treatment prescription was designed to address the symptoms; however, it is difficult to ascertain whether the nosodes and homeopathic medicines could contribute to a non-surgical repairing of the mitral valve. A systematic search of the literature utilizing PubMed and other health-related databases produced no prior related studies. No data were found showing an association between homeopathic treatments and valvular disease. In addition, the patient's improvement could have been connected with the placebo effect.

Three questions should be considered for further deliberation: (1) Should EAV be incorporated into use by acupuncturists and allied healthcare professionals? (2) Given that EAV appears to effectively integrate Oriental medicine and homeopathy, should the study of homeopathy be formally incorporated into the Oriental medical curriculum? (3) Should main stream medicine embrace alternative methods that it does not fully recognize or understand, as their use might facilitate more willing receipt of standard care by a certain subset of patients?

Conclusion

In this case study, weekly ingestion of a systematically chosen homeopathic solution plus daily supplements for ten weeks helped the patient achieve her primary therapeutic goals of alleviating chest pain, improving dyspnea, and having more energy. The elimination of the symptoms also helped the patient to improve her quality of life, giving her the confidence to travel and undergo a valve repair procedure, which was medically indicated for her case of severe mitral valve regurgitation.

This case demonstrates how EAV, which combines Chinese and homeopathic strategies, was used to facilitate and optimize the integrative care of a patient who also required biomedical interventions. More research is needed to fully explore the potential of this strategy.

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The Effects of Eastern and Western Medicine on Female Infertility Associated with Advanced Maternal Age: A Literature Review

By Stacy Frankovitz Reisner, MPH

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Above: Sculpture by Charles Leplae, *Two Pregnant Women*. 1953.
Photo by Jules Grandgagnage

Abstract

Background: The prevalence of female infertility in women of advanced maternal age has significantly increased in the last two decades. It has been associated with a dramatic decrease in reproductive potential. The decline in fecundity in women over the age of 35 commonly results in a decreased probability of conception and an increased incidence of pregnancy loss when using autologous eggs. This review will assess the effects of eastern and western medicine on infertile women of advanced maternal age with primary ovarian insufficiency as well as critically analyze select sex hormone levels and pregnancy outcomes.

Methods: A search of the literature was conducted through PubMed, Ovid, Science Direct, Research Gate, Journal of Chinese Medicine, Cochrane Library, and Google Scholar to analyze peer reviewed articles and journals on female infertility in traditional Chinese and western medicine.

Results: Current literature on this topic is primarily comprised of 12 pilot studies and 11 Phase II studies. This review represents combined findings from seven randomized control trials (RCT)(N = 966), six prospective cohort studies (N = 323), five retrospective cohort studies (N = 3486), four case control studies involving 32 total subjects, two retrospective reviews (N = 113) and one case series study (N = 31). Additionally, data from a systematic review of 185 total subjects (involving eight RCTs, 13 cohort studies, three case series, and six case studies) and one cross sectional longitudinal analysis involving 120 subjects are included in this discussion.

Conclusion: The integration of eastern and western medicine treatments was found to be beneficial in treating women with this condition. In western medicine alone, using donor oocytes appears to be the most effective in improving fertility outcomes. However, more randomized control trials are needed to evaluate the role of traditional Chinese medicine as the sole method of treating women of advanced maternal age who seek fertility assistance.

Key Words: advanced maternal age, female infertility, acupuncture, premature ovarian failure, Chinese herbal medicine, traditional Chinese medicine, in vitro fertilization, pregnancy

Introduction

Age is a significant factor that can affect a woman's ability to conceive. As many women are postponing childbearing for later in their reproductive lives, infertility is becoming increasingly prevalent. According to the 2013 National Vital Statistics Reports,¹ birth rates for women aged 30-39 years and 45-49 years increased (2% and 15% respectively), whereas birth rates declined 2-10% in women under the age of 30. While reasons for delaying childbearing can be various and specific to every woman, several reasons commonly emerge from statistical analysis.

Delay in childbearing is often attributed to pursuing a higher education and the desire for personal establishment with a career or partner. This deferment can compromise one's ability to conceive. The cause of this decline in fertility is multifactorial, including decreases in viable number of eggs and variations in hormone levels. Females are born with approximately 1-2 million eggs followed by an abrupt decline of egg production at puberty and then a gradual decline to roughly 25,000 eggs by the age of 37. Hormones, such as follicle stimulating hormone (FSH), estradiol (E2), and progesterone, also rapidly shift later in child-bearing years, thus contributing to poor egg quality, decreased ovarian reserve, recurrent miscarriages, and menopause. In fact, by the time a woman reaches 40, her chance of conception declines to roughly 10% or less.^{2,3,4}

"Females are born with approximately 1-2 million eggs followed by an abrupt decline at puberty, and then a gradual decline to roughly 25,000 eggs by the age of 37... by the time a woman reaches 40, her chance of conception declines to roughly 10% or less."

Women over the age of 35 are considered to be of "advanced maternal age" (AMA), when fertility and fecundity typically begin their rapid decline.⁵ As a result of the decreased ovarian reserves and hormonal imbalances, it is recommended for women 35 and older who have not been able to successfully conceive after six months of unprotected sex to see a specialist.³ Many women of AMA seek treatments to improve their chances of conception and desirable pregnancy outcomes.

In the United States, conventional western medicine's assisted reproductive techniques (ARTs) and medications have been most commonly used to diagnose and treat women with AMA infertility. While the use of these techniques has been effective in producing live births, eastern medicine, such as traditional Chinese medicine (TCM), has been used to help balance hormones and can complement western medicine. Ultimately, a woman's choice between the two different approaches may be dependent upon available health care coverage, finances, personal beliefs, awareness, and treatment previously sought.⁶⁻⁸

Although there is a substantial amount of literature covering female infertility, this review focuses on one area of AMA infertility that was prominent throughout the literature reviewed: primary ovarian insufficiency (also referred to as poor ovarian reserve or diminished ovarian reserve or premature ovarian failure). This article reviews the existing evidence on the effects of eastern and western medicine on AMA-associated infertility and evaluates the research conducted on select hormone levels (FSH and E2) and pregnancy outcomes when using TCM and western treatments independently or in tandem.

Etiology of Infertility in AMA

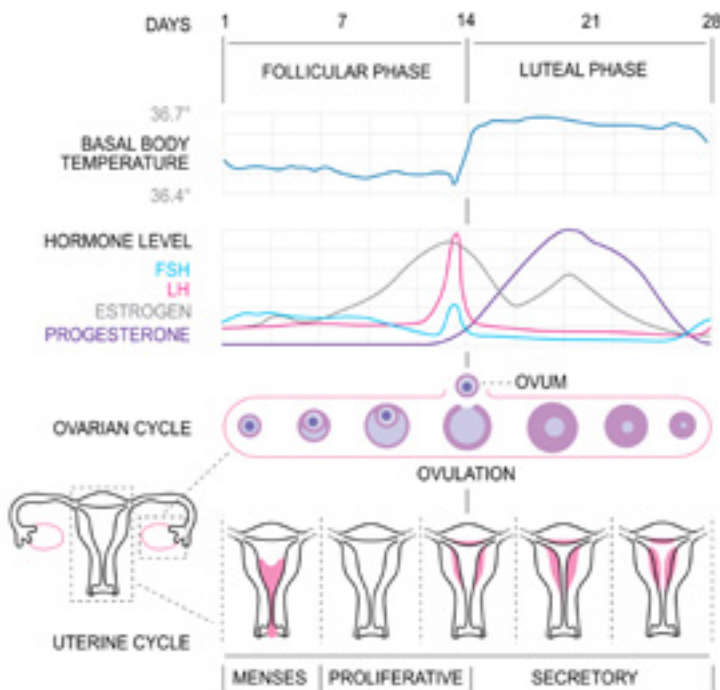
In TCM, it is understood that imbalances in *yin* and *yang*, the Five Elements, and Zang-fu organ principles are responsible for the reproductive challenges faced by women of advanced age. Both western medicine and TCM share the concepts of stagnations of energy (*qi*) or material (Blood). Stress and emotional effects have a tendency to impact *qi* stagnation. Herbal medicine formulas, acupuncture, and moxibustion are routinely used in TCM to prevent and remove these stagnations. The whole medical systems approach utilized in TCM contrasts with the conventional approach of western medicine in which a narrow focus, such as lifestyle, guides treatment and intervention.^{7,9,14,16}

Due to the multifaceted series of events involving interactions between the hypothalamus, pituitary gland, adrenal glands, the ovaries, and the uterus, varying amount of sex hormones are produced each month. These hormones include but are not limited to gonadotropin-releasing hormone (GnRH), follicle-stimulating hormone (FSH), estradiol (E2), luteinizing hormone (LH) and progesterone. The onset of menstrual cycle irregularities caused by imbalances in these hormones, other than by certain medical conditions, often begin to occur as a woman's reproductive potential declines with advanced age.^{4,17,18}

The relationship between functioning hormones is very delicate and directly influences ovulation. FSH must stimulate the production of ovarian follicles and E2.¹² When E2 peaks, the pituitary gland produces LH, which acts as a catalyst for ovulation.

The declining hormonal environment affecting fecundity is highly complex. Studies have shown that egg quality and quantity diminishes as a result of increased FSH level secretion.² This occurs

Phases of the Menstrual Cycle¹⁹



when the ovaries do not respond well to FSH secreted by the pituitary gland during the follicular phase of the menstrual cycle. The production of ovarian follicles and E2 stimulated by the FSH secretion, which support ovulation and the production of LH, become inadequate, thus resulting in an increase of FSH levels.

As a woman ages, this response system continues to generate higher FSH levels as the ovaries lose sensitivity. This rise in FSH secretion is indicative of a decline in the woman's reproductive potential and the remaining reserve, as it notably reflects what is known as primary ovarian insufficiency. Measuring these hormones is one method commonly used by reproductive endocrinologists to determine treatment efficacy in this population.^{11,13,18,20}

Although the oocyte (mature egg) degenerative process commences at birth and continues until menopause, it occurs most rapidly in AMA females. However, the rate in which it occurs varies per individual. Generally, between the ages of 35 to 50, progesterone and estrogen decrease to 75% and 35%, respectively. The imbalance may be caused by luteal insufficiency that is commonly due to perimenopause. Women of AMA experience menstrual changes several years before the termination of menstruation. Once the transition to menopause begins, fewer than 1000 follicles containing eggs remain, making it unlikely for a woman to conceive.^{4,23-25}

Women of advanced age often experience a decline in pregnancy rates and an increase in miscarriage rates. While there are multiple causes of recurrent pregnancy loss, the rate of miscarriage

appears to be higher in women with POI. In fact, the risk of fetal loss is two-to-three-fold higher in women of AMA due to chromosomal abnormalities or due to a deficiency in progesterone levels. AMA females aged 40-42 have a 25% chance of miscarriage that steadily rises to 50% or more when a woman becomes 43-46 years of age.^{10,13,22,24}

Tests and Diagnosis for Infertility Attributed to Advanced Maternal Age

Women of AMA who experience POI are typically diagnosed with *yin* deficiency with heat. However, excessive *yang*, Spleen *qi* deficiency, Kidney *yin* and *yang* deficiency, and Blood deficiency have also been attributing patterns to POI. Signs and symptoms, often similar to the western diagnosis of menopause, can include night sweats, increased dryness, inadequate estrogen production, fluctuating FSH levels, and absent or markedly irregular menses. Other vacuity patterns can be seen as a red with thin yellow or no coat on her tongue and a fine and rapid pulse.^{10,12,25}

In contrast, the evidence-based approach to infertility in western medicine focuses on the physical condition and disease. The self-administered diagnostic test of basal body temperature (BBT) readings is sometimes used to monitor a woman's temperature throughout her cycle. This method examines whether or not ovulation has occurred as well as possible defects to her menstrual cycle. Readings from this method may foster a greater understanding of temperature levels as it relates to hormones such as FSH and progesterone. A decrease in progesterone, for example, may be marked with lower temperature readings in the second half of a woman's menstrual cycle, suggesting a luteal phase defect or possibly a threatened miscarriage.^{7,17,26}

Other diagnostic measures include blood tests to measure hormone levels and over the counter ovulation predictor kits (OPKs) to anticipate ovulation. The analyses of basal FSH and estradiol levels in the blood have been historically used to predict an AMA woman's ovarian reserve. FSH levels greater than 10 IU/L, when measured on day 3 of the menstrual cycle, can signify poor ovarian response. Likewise, estradiol levels greater than 60-80 pg/mL also suggests POI.

Measurements of both FSH and E2 on day 3 of the menstrual cycle, rather than independently, are most useful in determining POI. Alternatively, OPK urine tests measures LH and E2 hormones to predict ovulation. Twenty-four to 36 hours preceding the release of an egg, LH levels dramatically surge. However, in women with POI, this diagnostic test may not be as reliable due to consistently elevated LH levels and low levels of E2.^{4,13,27}

Similarly, the clomiphene citrate challenge test (CCCT) and gonadotropin-releasing hormone agonist stimulation test (GAST) measure FSH levels to assess ovarian reserve and perimenopause status in women 35 years or older. There is also evidence that the anti-Mullerian hormone (AMH) is a reliable marker for ovarian function, since it is more stable and predicts ovarian response to ART as well. Testing serum progesterone levels can support the identification a luteal phase defect responsible for recurrent pregnancy loss in women of AMA. Ultrasounds are another test to determine antral follicle count for ovarian reserve and fetal viability.^{4,7,17,28}

Eastern Treatments

TCM provides a variety of treatment options such as Chinese herbal therapy, acupuncture, acupressure, moxibustion, dietary and lifestyle recommendations, and massage for balancing *yin* and *yang*.^{7,8} Current literature in eastern medicine examines the effects of the most widely used treatments of acupuncture and Chinese herbal medicine. Several studies reported positive results using these techniques.²⁹⁻³⁴

As a major element of TCM, acupuncture promotes the flow of *qi* and blood within the channels to restore energy and hormone balance within the body.³⁰ Acupuncture has been found to decrease FSH and LH levels and increase E2 levels, which might be evidence of possible mechanisms behind the effectiveness of acupuncture modulating the menstrual cycle. In a small prospective observational study, Zhou et al. (2013) published that there was a difference of 39.8 IU/L overall decrease in serum FSH levels, a 14.81 IU/L decrease in serum LH, and an 184.18 pmol/L increase in serum E2 levels compared to baseline levels in all 11 patients treated with electroacupuncture. The effects of this treatment were observed throughout the three month follow-up period.

In addition to modulating certain hormone levels, more recent studies concluded improvements in menstruation or its symptoms.^{33,34} Chen et al. (2014) highlighted that 19.4% of the 31 women evaluated in their prospective case series pilot study saw improvement in their menses after three months of treatment. Similar effects on the reduction of FSH and LH and an increase in E2 levels were noted in these women. Wang et al.'s (2014) results from their prospective cohort study found menstruation was recovered in 16.7% of the 30 cases assessed and saw an improvement in perimenopausal symptoms in POI women at six months in this study. However, contrary to Zhou et al.'s (2013) and Chen et al.'s (2014) studies, there was no statistical difference in FSH levels before and after treatment.

Chinese herbal medicine (CHM) is another widely used treatment of TCM. CHM has been found to promote restoration of hormones and improve pregnancy outcomes with minimal to no side

effects.²⁹ There are more than 100 different herbs that can be formulated for an individual's specific symptoms. The premise of Chinese herbs is to help the body regulate correct levels of hormones on its own.⁶ In Wing & Sedlmeier's (2006) prospective cohort clinical study, the authors saw the same significant reduction in FSH levels between the pre and post treatment assessments in both younger and older women at six months, suggesting that CHM is just as effective for women of AMA. Additionally, after six months of treatment, there was an overall 56% pregnancy outcome in this study.

A subsequent systemic review by Reid & Stuart (2011) confirmed CHM's efficacy by observing a 3.5 times increase in pregnancy outcomes with CHM compared to western medicine's drugs alone in 1851 women with infertility over a four-month period. In a more recent clinical observation study, Huang et al. (2014) noted that after three consecutive months of taking a particular combination of CHM, 40 POI patients saw an effective therapeutic rate of 92.5% compared to 73.68% of the 38 cases of POI patients taking hormone replacement therapy (HRT).

The available literature on acupuncture and CHM show promising results for women of AMA with POI. Since there is a decline in egg quality and quantity in these women, the data suggests that acupuncture and CHM may enhance a woman's reproductive environment by improving hormone imbalances and increasing pregnancy outcomes. While these two methods are commonly practiced in tandem, the independent results from these approaches indicate that women of AMA may improve their treatment results with either option.

Western Treatments

There are several different treatment modalities available within western medicine for female infertility. For women with POI, treatments options include hormone injections, hormone replacement therapy, dehydroepiandrosterone (DHEA) supplementation, cryopreservation of oocytes and/or ovarian tissue, donor oocytes and assisted reproduction technologies (ART), primarily via IVF. Of these, the literature in western medicine suggests that IVF with donor oocytes may be the most promising means of overcoming age-related infertility.^{4,35}

The success rate with the use of donor oocytes during IVF is reported to be as high as 48.4%, with an increase in success rate in patients undergoing successive cycles. In one 2007 retrospective study involving 8,430 donor oocyte cycles, patients undergoing three cycles had success rates of 87% while those undergoing five cycles had success rates as high as 96.8%.³⁶

The proposed explanation for the increased rate of success with the use of donor oocytes versus autologous oocytes is age-related

oocyte deterioration. This was demonstrated in a prospective observational study of 86 AMA females with decreased FSH and peak E2 levels, in which poor IVF responders in AMA and non-AMA groups achieved different success levels despite similar treatment regimens after 11 days of ovarian stimulation. The study ultimately demonstrated that poor response to hormones and age-related deterioration of the oocytes contributes to the challenges that women with POI face with traditional IVF treatment.³⁷

Similarly, this study also supports the evidence that higher success rates were achieved when using donor oocytes during IVF in AMA females. While higher success rates have been seen with donor oocytes, there are inconsistent findings that suggest using donor oocytes in women of AMA may be at increased risk for pregnancy complications. Pregnancy-induced hypertension was seen in as many as 26% of women compared to the 8% seen in the standard IVF group. Despite such complications, the use of donor oocytes over autologous oocytes is still preferred.^{38,39}

The success rate of fertilization in women of advanced maternal age using autologous oocytes and are undergoing IVF alone is considerably low. Multiple studies have shown a decreased number of clinical pregnancies each year after the age of 40 along with a simultaneous rise in spontaneous miscarriage after IVF treatment. Several studies have reported low rates of conception, with women ages 41-43 having pregnancy rates between five and 15% and successful delivery rates of a healthy infant between two and 7%. In these studies, the data revealed that women over 45 years old had 0% success rate with IVF alone.

Despite the low success rates, many AMA females wish to use autologous eggs to become pregnant. To address the low success rate of IVF in women of AMA who wish to use autologous oocytes, hormone supplementation and modification was added to the treatment protocols.^{21,35,40,41}

Pretreatment with HRT and DHEA is often used to enhance increased ovulation as well as possibly help restore hormone balance. In a double-blinded study of 50 women ages 24-39 with POI, subjects were pretreated with ethinyl-E2. Of the previously anovulatory women, 32.4% achieved successful ovulation after two weeks of ovarian stimulation.⁴² DHEA has also been demonstrated to increase pregnancy rates when used as a pretreatment method and during IVF treatment, with birth rates reaching 21% versus 4% in controls in a study involving 33 POI women with a mean age of 36.9 years.⁴³

Additional studies have shown an increase in pregnancy rates and restoration of sex hormones to relatively normal levels after supplementation with DHEA. Barad & Gleicher's (2006) case-control study found that DHEA yielded increased fertilization rates and embryo quality. A further retrospective cross-sectional and longitudinal analysis study by Gleicher et al. (2010) in 120

"The success rate of fertilization in women of advanced maternal age using autologous oocytes and are undergoing IVF alone is considerably low. Multiple studies have shown a decreased number of clinical pregnancies each year after the age of 40 along with a simultaneous rise in spontaneous miscarriage after IVF treatment."

patients demonstrated a 23.64% pregnancy rate and 60% mean improvement in AMH concentration after 90-120 days on DHEA. Similarly, in an observational study conducted by ASRM (2009), results showed a reduction of FSH levels while simultaneously increasing E2 levels post-treatment of DHEA, supporting DHEA's role in helping to achieve optimal hormone levels necessary for conception.⁴⁴⁻⁴⁶

Other treatment options available to women of AMA with POI who wish to use autologous oocytes are cryopreservation and transplantation and ovarian stem cells. Cryopreservation is a process where tissue or eggs are preserved by freezing them in temperatures below zero degrees. The first live birth from using transplanted cryopreserved ovarian tissue was seen in a 31-year-old female patient previously treated for Hodgkin's disease. Subsequent studies have also reported an increased number of live births using this approach. In a recent two year prospective study, 37 patients with POI underwent ovariectomy using a new technique for tissue cryopreservation with subsequent re-transplantation of ovarian tissue strips which resulted in follicle growth in 45% of the patients and two live pregnancies.⁴⁷⁻⁴⁹

While ovarian tissue cryopreservation is a possible alternative for women of AMA, it appears more effective in women under 40 in the earlier stages of POI. Alternatively, cryopreserving oocytes has become increasingly popular. In a prospective randomized study involving 230 subjects during a four year period, newer techniques in cryopreservation have reported pregnancy rates as high as 38% compared to 13% using regular methods of cryopreservation due to less damage to the DNA during the thawing process.⁵⁰

The use of stem cells is also being explored in female infertility. Their ability to differentiate into different cell types offers great promise, as these cells could differentiate into genetically identical gametes of the AMA woman's oocyte. Innovative approaches involving the use of ovarian stem cells (OSCs) may offer a possible strategy for enhancing a woman's ability to conceive. Evidence in a mouse model demonstrated that transplanted ovarian germline stem cells can form functional oocytes. This result supports the findings in Bukovsky et al.'s (2006) and Marques-Mari et al.'s (2009)

earlier reviews stating that the differentiation of germs cells from stem cells could eventually be a possible method of producing autologous oocytes for women of AMA.⁵¹⁻⁵³

Many of the treatment options for women of AMA experiencing POI show some success in achieving a live birth; however, the outcome is still very low. The literature on women wishing to pursue IVF with autologous oocytes shows that this method is not the most effective treatment modality for improving conception rates. HRT and DHEA supplementation offer only slightly higher pregnancy rates than other methods of treatment.

Cryopreservation and transplantation techniques may not improve the age-related decline in egg quality in older women. Therefore, this experimental approach is most suitable when sought earlier in the reproductive years.⁴⁹ Similarly, ovarian stem cells may offer alternative solutions in the future, but the data to support this approach are extremely limited. Ultimately, IVF with donor eggs demonstrate the most optimal outcome; however for women of AMA who want to use autologous eggs, the treatments above are viable options.

Integrative Treatment

Although IVF is the most commonly used technology for fertility assistance, the average IVF live birth rate is only 5-15% with autologous oocytes. Today, many women of AMA undergoing IVF are seeking TCM as an adjuvant therapy to improve their pregnancy outcomes. Several studies have described beneficial results when implementing eastern medicine in conjunction with Western medicine.

A landmark study conducted by Paulus et al. (2002) compared the pregnancy rates of two groups of women 21-43 years old undergoing IVF. In their prospective randomized study involving 160 patients, they found that the group receiving acupuncture had a 42.5% pregnancy rate compared to a 26.3% pregnancy rate in the non-acupuncture control group 14 to 16 days after embryo transfer.

Haeberle et al.'s (2006) abstract substantiated the results of Paulus et al.'s (2002) study and further observed a statistically significant improvement in IVF fertilization rates in women over the age of 35. Improved pregnancy outcomes with combined acupuncture and IVF therapy was also demonstrated in a prospective randomized trial including 273 women with an average age of 37 years.^{9,21,40,41,54,55-57}

Of the three randomized groups studied (control group who received no acupuncture, ACU 1 who received acupuncture on day of egg transfer (ET), and ACU 2 who had acupuncture on the ET day and again 2 days later), clinical and ongoing pregnancies

were significantly higher in the acupuncture group (ACU 1) (39%, 26%, and 36%) compared to the control group (22%). While clinical and ongoing pregnancies were higher in ACU 2 compared to control, statistical significance was not demonstrated. These studies show that acupuncture used during IVF egg retrieval and embryo transfer result in higher pregnancy results.⁵⁵⁻⁵⁷

In contrast to the earlier findings comparing acupuncture alone with IVF, recent studies demonstrated no statistical differences in pregnancy outcomes by age group when women of AMA undergoing IVF were included. These studies included comparisons between a sham group to an acupuncture group. The sham design was used to control for placebo effects. Moy et al.'s (2011) randomized control study observed a 45.3% clinical pregnancy rate in the acupuncture group compared to the 52.7% sham arm in 160 infertile women ages 18-38. Results were assessed 14 days after retrieval followed by two days post the first positive serum beta-hCG reading.⁵⁸⁻⁶⁰

A more recent and smaller 60 patient randomized controlled, multi-center, sham-treated trial by Udoff et al. (2014) published that the pregnancy rates in the acupuncture group was 57.1% versus 52.4% in the control groups. However, the authors noted a trend that the acupuncture group had a slightly higher delivery rate (54.5%) compared to the sham group (42.9%).

While there is limited literature on the effects of acupuncture in combination with CHM as an adjuvant treatment to IVF, a few investigations support the benefits of this combination therapy in women of AMA. In a single case study involving a 41-year-old female with POI, Rubin (2010) demonstrated that the combined effects of CHM and acupuncture during IVF had safely produced a viable baby girl. While pregnancy was achieved in a 41-year-old female, Daghighi (2011) saw a decrease in FSH and an increase in E2 levels in addition to symptoms reductions in a 39-year-old female case study using the integrative treatment. In a four-month timeframe, FSH levels dropped 15 values and E2 values increased 19.94, which put the female within the normal range.

In a recent retrospective cohort study, 1,231 IVF patient records were evaluated for effects of CHM and acupuncture on IVF.⁵⁴ This study compared three groups of women with a mean age of 35 years old experiencing diminished ovarian reserve or other infertility challenges: usual care, whole systems traditional Chinese medicine, and ACU. Women were also differentiated by donor and non-donor cycle types. Of these groups, 85.7% of women treated with both CHM and acupuncture had live births compared to 62.5% in usual care and 59.5% in acupuncture alone.

Treatment alternatives for women of AMA using an integrative approach are becoming increasingly common. The literature on acupuncture accompanying IVF has demonstrated inconsistent results as an effective adjuvant treatment for women of AMA. The

inconsistencies may be primarily attributed to possible placebo effects, nonstandard acupuncture points, and acupuncture performed by multiple practitioners. Additionally, while the sham is believed to control for the placebo effect, there are concerns that sham has some active properties.⁶⁰ This may also suggest that the sham points were a weaker form of acupuncture, therefore, proving that real acupuncture is truly effective. However, while there is limited available data combining CHM and acupuncture in IVF, this approach appears to have the most beneficial results in women of AMA.

Conclusion

A review of the literature on the effects of eastern and western medicine in AMA infertile women with POI illustrated that as sole therapies as well as in conjunction, eastern and western medicine may be effective in supporting *yin* and *yang*/hormone balance and pregnancy results. While, the studies using acupuncture and CHM had shown beneficial effects on hormone and pregnancy outcomes, many of them were seriously limited by their sample sizes and sources of bias, including non-random misclassification of exposure (NME) from the lack of blinding in treatment methods.

In addition, several of the study designs lacked controls, standardized treatments, and randomization; they were also prone to possible confounding and limited generalizability due to a lack of a representative population. Despite these limitations, many of the studies were able to confirm previous findings from other authors which strengthened the argument that TCM may improve reproductive outcomes. While some of the sample sizes may not have been statistically significant, these studies still offer valuable information to practitioners seeking to understand the potential efficacy of these approaches.

Similarly, some of the studies for western medicine had notable limitations. The observational studies cited may have been subject to selection bias, confounding, and difficulty in establishing temporality between the female's hormone levels/pregnancy outcomes and the treatment provided. These biases may have threatened the overall internal validity to the research conducted. Similar to the studies conducted on eastern medicine treatments, many studies on western medicine treatments also evaluated only a homogenous population, which limited generalizability.

Additionally some of these studies, such as donor oocytes, tissue/embryo cryopreservation, and ovarian stem cells, are considered experimental and controversial due to the ethical considerations they impose on society. In spite of these validity concerns, there were sufficient well designed randomized control trials that demonstrated beneficial effects of some techniques that women of AMA could use as possible treatment options.

Ideally, a larger heterogeneous population evaluated in a randomized control setting is needed to minimize selection bias, NME, and confounding as well as to enhance generalizability for both eastern and western studies. Furthermore, more research is needed within eastern medicine to understand the mechanism of action and application of acupuncture and CHM without compromising individual treatment methods.

In some cases, the use of more in vivo studies in western medicine would make the technique more translatable to the effects that it would have on the human system. Introducing more studies that specifically evaluate women of AMA with POI are needed for both eastern and western medicine. Additionally, recognizing the inherent differences between the two medical cultures may facilitate a wider understanding and broadened treatment options for these women.

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Integrative Management of Alopecia Areata with Acupuncture and Ayurveda: A Case Report

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Please see bios at the end of the article

Abstract

Alopecia areata, also known as “spot baldness,” is an auto-immune disorder that affects the population regardless of sex, age, or hair color. Because this condition can cause cosmetic and emotional distress, treatment is often sought, usually consisting of anti-inflammatory steroids such as hydrocortisone or minoxidil to promote hair regrowth. While some patients will see results, those who do not may seek alternative care. In this case report we describe the clinical outcomes of a 55-year-old Caucasian female, who was diagnosed with alopecia areata. Traditional Chinese medicine (TCM) and Ayurvedic medicine were utilized synergistically to successfully regrow her hair. The TCM diagnosis was determined as *excess heat causing wind*, and an Ayurvedic diagnosis of *Indralupta* was made. Local acupuncture was used as well as the application of *Croton tiglium* herbal paste on the affected areas. The patient had successful uniform hair regrowth and did not complain of relapse thereafter. This suggests that the acupuncture treatment protocol stimulated local circulation and cleared wind that accumulated due to heat, while the application of *Croton tiglium* induced contact allergy induction that stimulated local circulation as well.

Key Words: alopecia areata, hair growth, Ayurveda, acupuncture, Indralupta, integrative medicine

Introduction

Alopecia areata (AA), commonly known as “spot baldness,” is an auto-immune disorder that occurs in both men and women. In the general population, there is a lifetime risk of 1.7%. In the U.S. and the U.K., AA will account for 2-3% of all new dermatology cases. While AA can occur at any age and affect those of any hair color, 20% of cases occur in children, with 60% occurring before the age of 20. Additionally, the highest prevalence of AA occurs in those individuals between 30 and 59 years of age.

There is also a high prevalence of AA within families, with family members affected in 8.7– 20% of cases.¹ When onset occurred before the age of 30, these people were more

likely to have a history of family incidence.² A study of twins demonstrated there is a 55% concordance rate in identical twins. This was linked to the autoimmune and possible inherited nature of AA.³

AA can occur not only on the scalp but anywhere on the body. The growth and maintenance of hair occurs in 3 phases: anagen (active growth phase), catagen (involution phase), and telogen (resting phase). In normal hair shedding, hair is shed after telogen. In alopecia areata, hair shedding occurs before anagen can begin, resulting in an empty follicle or kenogen.¹ This condition has been associated with human leukocyte antigen (HLA) class I and II as well as other autoimmune diseases, such as rheumatoid arthritis, type 1 diabetes mellitus, vitiligo, and systemic lupus erythematosus.³

Diagnosis can be done readily and without laboratory tests. Circular hairless patches or large alopecic areas are indicative of alopecia areata. Exclamation mark hairs, broken hairs, shorts hairs, and black dots also indicate alopecia areata.⁴ Spontaneous regrowth often occurs in many patients, with 50-80% of patients experiencing hair regrowth within one year. Many patients will have more than one episode of hair loss and a few will not regain their hair. AA is mainly a cosmetic concern and treatment focuses on curtailing disease activity.

Due to their anti-inflammatory properties, the mainstay of AA treatment is the use of corticosteroids administered topically, orally, and parenterally, with success ranging from 28.5-61%. In spite of this large and variable range, topical steroids are the first choice for treatment due to ease of application. However, over-application of topical steroids can result in atrophy, folliculitis, and telangiectasia. Applications should be alternated to prevent atrophy. Minoxidil has been successful in hair regrowth by stimulating proliferation and is most effective in younger patients, especially when used in combination with topical steroids. Though usually well tolerated, 3% of women who used Minoxidil also grew unwanted facial hair.¹

Because of poor or unsatisfactory treatment outcomes, patients with this condition often look for alternatives. Chinese medicine often interprets alopecia as a blood deficiency resulting in the stirring of internal wind or the invasion of external wind. This condition can be further complicated by the presence of blood stasis or blood heat. This deficiency can be viewed as an under-nourishment of the hair follicle due to poor life style or a stress reaction.⁵

The role of acupuncture in this condition has not been investigated and reported in literature. In Ayurveda, AA is known as *Indralupta*. Its pathogenesis is explained as the disturbance of pitta located at the hair roots by out of balance vata, which causes depletion of hair. In addition, excess kapha combined with vitiated

blood blocks the hair roots and prevents new hair growth. It is considered a complex condition in which all the three doshas and blood are involved. The purpose of this case report is to demonstrate a positive outcome in a patient with alopecia areata, who was treated with acupuncture and a topical Ayurvedic herbal application.

Case History

A 55-year-old Caucasian female who was schizoaffective presented with symptoms of sudden hair loss that occurred in patches at various parts of her scalp for several months before her appointment. She was accompanied by her mother. The symptoms started gradually with a very small patch. She noticed that the patches increased in number and in size each week. Both the patient and her mother were concerned that she would soon become fully bald. The patient denied redness, itching, scaling, or any rash at the site of hair loss. She also denied history of any major illness or use of medications prior to her hair loss.

The patient and her mother were interested in addressing her condition with integrative approaches and therefore did not seek any conventional care. No significant past medical history was given other than being slightly overweight and schizoaffective. She was on Clonazepam 10 mg once a day at bedtime for her mental disorder. Her mother has osteoarthritis of knee, her father passed away due to pancreatic cancer. No family history of auto-immune disorders was reported by the patient. The patient did not smoke and denied drinking alcohol, but she periodically ate junk food and had no regular exercise regimen. She reported that she had a good appetite but complained of frequent constipation of bowels, attributing it to her unhealthy dietary habits. A review of other systems did not identify any other significant symptoms or concerns.

The physical examination findings revealed a moderately heavy (150 lbs) female, who was cooperative but anxious due to her schizoaffective state. There was no pallor or edema, vitals were

Figure 1: Before Treatment



within normal limits, and overall general health appeared good. The patches were located in the temples and above the ears (Figure 1). There were 4-5 patches in sizes ranging from 1x2 cm to 3x4 cm. The patches had smooth skin with well-defined margins that appeared to be connected to each other. Her tongue was pink with slightly thick white coating and the pulse was wiry and slightly rapid.

“This case report describes the management of alopecia areata by integrating acupuncture and Ayurvedic medicine treatments. This may be the first such case report that describes integration of these two ancient Asian medicines for this condition. The positive outcome could be attributed to contact allergy induction by the topical application of *Croton tiglium* seed paste along with focused local acupuncture treatments.”

She was diagnosed with alopecia areata based on the classical presentation and history. AA is a diagnosis of exclusion of other conditions. From a traditional Chinese medicine perspective, a diagnosis of excess heat in the blood causing wind was made. An Ayurvedic diagnosis of *Indralupta* was also made keeping in mind the integrative approach for her treatment.

Intervention

Local *ahshi* acupuncture treatment was provided once a week, which included local bleeding techniques for ten weeks by a senior intern. Additionally, acupuncture at SP-10 (Xuehai), ST-6 (Zusanli), and LI-4 (Hegu) was done during each session. This treatment included insertion of Seirin® needles (0.25 mm thickness and 1 cun long) diagonally 1 mm deep along the margins of the patches. Four to six needles were used per patch depending upon the size of the patch. Needles were stimulated manually 1-2 times, but no *deqi* was elicited. They were retained for 20 minutes during each treatment session. The selection of points was based on traditional literature and the treating clinician’s experience.

Additionally, a topical Ayurveda herbal treatment was also added after six weeks to provide a synergistic effect and enhance the clinical outcomes. A paste of seeds of *Croton tiglium*, also known as *Bā Dòu* in traditional Chinese medicine and *Jayapala* in Ayurveda, was given to her to apply topically once a day in addition to her regular acupuncture treatments. She was told to discontinue the application of this paste for a couple of days if there was local irritation, burning, or bruising. Irritation and redness and rashes did occur within a week after topical application. Once the irritation subsided, the paste was resumed for a second time for another week after 14 days from the first application and until skin turned red and irritation was observed, which was three weeks from the first application day. Acupuncture was continued during this time. The patient was informed about the possible skin irritation prior to the application and oral consent was obtained. Informed consent was also obtained from the patient and her mother for publication of this case report.

Outcomes and Follow Up

Hair growth in the bald areas was considered as a positive outcome. After ten acupuncture treatments and three weeks of Ayurvedic herbal paste application, new hair growth was observed. This growth was uniform within all the hairless patches,

Figure 2: After Treatment



and the new hair continued to grow at the end of week ten. During follow up at the end of 12 weeks, the hair uniformly grew to a length of ½ centimeter (Figure 2).

As mentioned above, prior to the hair growth, local irritation and bruising was observed at the local site within a week after the topical application. No other adverse events were observed during the entire treatment period. The patient

tolerated the integrated acupuncture and Ayurveda treatments well. As of August 2015, a year after the treatment for AA was discontinued, the patient reported no relapse of any symptoms.

Discussion

This case report describes the management of alopecia areata by integrating acupuncture and Ayurvedic medicine treatments. This may be the first such case report that describes integration of these two ancient Asian medicines for this condition. The positive outcome could be attributed to contact allergy induction by the topical application of *Croton tiglium* seed paste along with focused local acupuncture treatments. *Croton tiglium* is also known as *Ba Dòu* in Chinese medicine. It falls into the category of Downward Draining Harsh Expellants and is considered hot, acrid, and toxic. It is only used in its defatted form, as it is known to be very irritating to the skin and mucosa by both direct contact and inhalation, which can result in acute dermatitis, skin edema, vesicles, a burning sensation and lacrimation. It is used in cases of constipation or severe chronic diarrhea.⁶

Croton tiglium has been used in research for its ability to induce dermatitis but has also been used in facial rejuvenation.⁷ It can be speculated that *Croton tiglium* functioned in this study by inducing inflammation in the treatment area and by stimulating healing and blood flow to the area.

One of the treatment principles of the acupuncture was to increase local blood circulation to extinguish the wind accumulated due to excess heat in the blood. Our patient's outcome was similar to those reported elsewhere in the literature when topical steroids were applied, which suggests an integrative approach could be utilized in such cases where conventional care may be contraindicated or not tolerated well.

However, these outcomes need to be interpreted with caution due to several limitations in our case report. First, this outcome is noted in a single self-selected patient; hence, no causation can be attributed. Second, the condition might have improved due to spontaneous hair growth that occurs in 50-80% of AA patients within a year. Finally, we cannot determine whether the outcome was due to either acupuncture or the topical application or the combination of the two together.

Conclusion

Local acupuncture along with *Croton tiglium* seed paste when applied topically may help induce new hair growth in cases of alopecia areata. It is of clinical significance that remission not only occurred in our patient in less than three months but that hair growth was noted within two to three weeks of the application. This case report warrants further studies that adopt a control group to compare these treatments with conventional care and no treatment to understand the specific therapeutic benefits and make causal associations to outcomes.

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The Legend of Waichi Sugiyama, the Father of Japanese Acupuncture

By Michael Devitt, MA

Michael Devitt served as the managing editor of *Acupuncture Today* from 2000 to 2006. In the process he earned an “Excellence in Journalism” award from the National Guild of Acupuncture and Oriental Medicine. He has authored several papers and book chapters on acupuncture and related therapies and is currently writing a book on the history of acupuncture in the United States.

Above: Portrait of Sugiyama Waichi after a scroll from the Edo period.
From: Fujikawa Yu, *Nihon no igakushi [History of Japanese Medicine]* (土川游『日本の「史」』). 1904.
Photo courtesy Wikipedia.

Abstract

Waichi Sugiyama, a blind acupuncturist who lived and practiced in seventeenth-century Japan, is generally regarded as the “father of Japanese acupuncture.” He is credited with inventing the *shinkan*, a type of hollow tube used to aid in the insertion of acupuncture needles. The *shinkan* transformed the practice of acupuncture in Japan, and is still widely used by sighted and non-sighted practitioners today. Sugiyama also was highly skilled in the areas of abdominal diagnosis and palpation and during his lifetime established more than 40 schools of acupuncture for the blind.

Key Words: acupuncture, palpation, guide tube, abdominal diagnosis, Waichi Sugiyama

Acupuncture is one of the most popular forms of complementary and alternative healing in the developed world. In the United States, it is estimated that more than 4% of the general population has received acupuncture at some point in time, and that 1.5% of American adults receive acupuncture at least once a year.^{1,2} In Japan, acupuncture is even more popular; results from national surveys show between 24-32% of the Japanese population has tried acupuncture at some time during their lives and that between 6% and 7% of Japanese adults utilize the services of an acupuncturist at least once per year.³⁻⁵

One reason for acupuncture’s popularity in Japan may be the high level of skill and personal attention delivered by its practitioners.⁵⁻⁷ In modern Japanese-style acupuncture, there is more of an emphasis on palpation before needles are inserted, which allows for careful location and stimulation of specific acupuncture points.^{5,8} Needling practices in modern Japanese-style acupuncture are generally more gentle than those used in traditional Chinese acupuncture, and typically incorporate needles that are thinner and sharper.^{9,10}

Whereas traditional Chinese acupuncture involves inserting needles to specific depths, in modern Japanese-style acupuncture, needles are inserted more superficially; with some procedures, needles do not even break the skin.¹¹ In addition, needles are not manipulated to the same degree as with traditional Chinese acupuncture. This combination of techniques has led some authors to suggest that modern Japanese-style acupuncture is significantly

less invasive than traditional Chinese acupuncture and that it may be associated with a reduced incidence of adverse effects such as pain.¹¹⁻¹⁴

Many of the elements of modern Japanese acupuncture can be traced back to Waichi Sugiyama, a blind acupuncturist who lived and practiced in the seventeenth century. Known traditionally as the “father of Japanese acupuncture,” Sugiyama spent his early life learning from other practitioners, studying classical Chinese and Japanese medical texts, and developing and refining his skills as a healer. He is most famous for inventing a type of tube called the *shinkan*, which made it much easier to insert needles into a patient and transformed the practice of acupuncture in Japan. Sugiyama also was extremely gifted in the areas of palpation, diagnosis, and traditional Japanese massage. During his lifetime, he helped to establish more than 40 schools of acupuncture for the blind.

Early Life, Training, and Discovery

The details of Sugiyama’s early life are the subject of considerable speculation. He was born the first son of a samurai family in 1610, in Hamamatsu, a coastal city in Tōtōmi Province. His father, Gonemon Shigemasa Sugiyama, was a vassal in the service of Todo Takatora, a local *daimyo* (feudal lord) who achieved fame as a designer of military castles.¹⁵ Virtually nothing is known about Sugiyama’s mother or the rest of his family.

Accounts differ regarding the nature of Sugiyama’s blindness. According to some authors, Sugiyama lost his eyesight after contracting smallpox as a small child.^{15,16} Other authors suggest that he came down with an unknown eye disease as an infant and became blind when he was only one year old.^{17,18} Still others claim that Sugiyama did not go blind until he reached ten years of age.^{19,20} Regardless of when his blindness occurred, Sugiyama knew that the inability to see would prevent him from becoming a samurai. As a result, he decided to pursue a career in medicine and become an acupuncturist, one of the few professions in Japan then available to blind people.

Accounts also differ as to when Sugiyama began studying acupuncture. Some authors suggest that he left home and began studying abroad as a child, perhaps as early as ten years of age. Other authors suggest that he did not begin studying until he reached adulthood.^{16,18,21}

Sugiyama’s experiences in his quest to become a skilled acupuncturist are literally the stuff of legend. Although he learned about acupuncture from a number of famous instructors, there are questions as to who he studied with first and for how long. According to one popular version of the story, Sugiyama’s first teacher was Ryomei Irie, a renowned master of medicine who specialized in his

“Sugiyama’s experiences in his quest to become a skilled acupuncturist are literally the stuff of legend. Although he learned about acupuncture from a number of famous instructors, there are questions as to who he studied with first and for how long.”

own style of acupuncture as well as in *anma*, a type of traditional Japanese massage. After only a brief apprenticeship, however, Irie dismissed Sugiyama on the grounds that he thought Sugiyama “too dull” to ever make a good practitioner.¹⁷

According to other authors, however, Sugiyama first studied at the hand of Takuichi Yamase, a well-known blind acupuncturist who, like Irie, resided in Edo.^{15,19,20} In this version of the story, Sugiyama apprenticed with Yamase for five years, only to be dismissed because of poor memorization skills and lackluster needle technique. Only after Yamase dismissed him, and only after Sugiyama made a spiritual journey to the island of Enoshima for guidance, did he travel back to Edo to learn under the direction of Irie.

In another variation of the story, Sugiyama studied extensively with both Irie and Yamase before he ever set foot on Enoshima. In this version, Yamase trained Sugiyama for several years before finally dismissing him due to a lack of skill; in particular, he was criticized as being “clumsy” and his methods of needle insertion “painful.”^{21,22} On the way home, Sugiyama collapsed from exhaustion and started to cry. A stranger encountered Sugiyama in the street and asked him what was wrong. That stranger turned out to be Irie, who also happened to be Yamase’s mentor.

Irie agreed to take on Sugiyama as a student. Although Sugiyama’s needling skills improved considerably, he failed to impress his new teacher enough that Irie would allow Sugiyama to practice on patients. After several years of instruction, Irie eventually reached the conclusion that Sugiyama was “without talent” as an acupuncturist and would never succeed in that profession. He expelled Sugiyama from his tutelage.²²

Having been rejected by two prominent instructors, a desperate Sugiyama chose not to return home but instead journeyed to Enoshima, a small island off the southern coast of Japan near Kamakura. The island was home to a shrine of Benten, a Japanese goddess and the only female deity among Japan’s seven gods of good fortune.^{21,22} Sugiyama believed that Benten could help improve his acupuncture skills. To curry favor with the goddess, Sugiyama entered a cave on the island, where he prayed and fasted at the feet of a statue of Benten. The goddess rewarded Sugiyama’s diligence by bestowing upon him a *shinkan*, a small tube used to help practitioners insert acupuncture needles

more effectively. The *shinkan* would go on to revolutionize the delivery of acupuncture throughout Japan and would forever link Sugiyama's name with the practice.^{17,23}

Just as there is considerable debate regarding Sugiyama's early life and training, there also are questions regarding his activities on Enoshima and his discovery of the *shinkan*.^{15-18,20-22,24-28} Although the most common version of the story holds that Sugiyama prayed and fasted at the Benten shrine for 21 days,^{20-22,25} some authors have claimed that Sugiyama stayed on Enoshima for as little as five or seven days.^{17,24,26} It has also been suggested that Sugiyama prayed before Benten for as long as 100 days.²⁸ Other accounts provide only general information, without stating how long Sugiyama was on Enoshima.^{15,16}

While it is widely agreed that Sugiyama learned of the *shinkan* after paying homage to Benten, there are several variations as to how that knowledge was conveyed to Sugiyama.^{15-18,20-28} Some authors have asserted that Sugiyama tripped over a rock outside the cave to the shrine, at which point a pine needle pierced

Influences on Japanese Acupuncture

Whether the *shinkan* resulted from personal observation, divine inspiration, or something in between, Sugiyama's invention revolutionized the practice of acupuncture in Japan in a number of ways. First, it simplified the technique by allowing practitioners to position and insert needles in a patient's body with one hand. The tube also prevented needles made of soft metals, such as silver or gold, from bending. This enabled acupuncturists to insert needles to the proper depth.²⁹

Placing the rounded edge of the tube against the body acted as a form of distraction by stimulating a patient's skin receptors; as a result, patients often were unable to feel a needle as it was inserted into the skin.³⁰ This effect greatly reduced the amount of pain that occurred during needle insertion and significantly increased acupuncture's popularity.³¹ In addition, because of the *shinkan's* length, a needle being inserted with a guide tube could never be inserted

"While it is widely agreed upon that Sugiyama learned of the *shinkan* after paying homage to Benten, there are several variations as to how that knowledge was conveyed to Sugiyama. Some authors have asserted that Sugiyama tripped over a rock outside the cave to the shrine, at which point a pine needle pierced Sugiyama's leg."

Sugiyama's leg.^{21,22} Others, however, claim that Sugiyama tried to steady himself while tripping, that he supported himself on a nearby rock while coming out of the cave, that he fainted, or that he simply fell to the ground in despair.^{25,27,28}

Based on these reports, Sugiyama was pierced in the hand or buttocks, rather than the leg; a few authors even claim that he was not pierced at all and that he grabbed the *shinkan* while trying to regain his balance or that he found it lying on the ground.²⁵⁻²⁸ In some accounts, Benten seems to have been an active participant, either by approaching Sugiyama with a *shinkan* in a dream²⁴ or handing him the *shinkan* during a heightened religious state and then directing him to return to Edo for additional training.¹⁷ In others, Benten is not even mentioned.¹⁸

And what of the *shinkan* itself? Again, the exact details vary although to a much lesser degree than other aspects of Sugiyama's experiences on Enoshima. The description most commonly provided is that the *shinkan* consisted of a pine needle sticking out from a hollow tube of bamboo and that it inspired Sugiyama to create his own version of the object for use in acupuncture.^{21,22,25,26} According to some accounts, however, the needle was wrapped in a leaf or stuck in a piece of straw instead of bamboo; in other accounts, the hollow piece of bamboo contained not one needle but several.^{24,27,28}

too deeply, making it extremely safe for practitioners to use. Finally, the *shinkan* allowed for the use of finer and thinner needles, which further reduced the amount of pain involved during insertion and helped produce a gentler *de qi* sensation in patients.^{9,30}

Sugiyama's contributions to Japanese acupuncture go beyond the invention of the *shinkan*. One of his underappreciated skills was his ability to refine centuries of Chinese theory on acupuncture into simple, easily understandable concepts.¹⁶ Because Sugiyama could not read, and because reading systems for the blind such as Braille had not yet been invented, Sugiyama had to rely on his own intellect to separate important information from trivial knowledge and to store that information for later use.

Through careful study and thought, Sugiyama was able to simplify the vast and complex system associated with Chinese acupuncture into a series of smaller, practical ideas for Japanese use and to clarify its therapeutic aspects for his students.¹⁶ Sugiyama wrote one text, *Sugiyama Ryu Sanbusho* (Sugiyama's Style of Treatment in Three Parts), which explained his techniques and his use of the *shinkan*. First published in 1682, the book became highly revered and was used to teach sighted and non-sighted students alike.²³ (A second book, *Sugiyama Shinden Ryu*, was compiled by Sugiyama's successors and published after his death and will be discussed later in this article.)

The *Ryu Sanbusho* showcased another of Sugiyama's skills. As a result of his blindness, Sugiyama developed extraordinary abilities with his hands in the areas of palpation and abdominal diagnosis. Sugiyama's method of abdominal diagnosis replaced the observational component of traditional Chinese medicine, in which practitioners note the appearance of the patient's tongue, eyes, complexion, skin, posture, and other body parts to determine health and diagnose possible disease states. Relying on passages in the *Nan Jing* (Classic of Difficulties) for guidance, Sugiyama developed new diagnostic techniques, and advanced palpation from a relatively minor diagnostic tool into a distinct healing art.

Sugiyama studied the *Nan Jing* by having it read to him.³² He based his abdominal diagnosis on two sections in the *Nan Jing* that described movements of *qi* in the abdomen that correspond to, or were caused by, an affliction of the heart, liver, spleen, lungs, or kidneys. Sugiyama surmised that by lightly touching the abdomen, he could detect whether *qi* was moving or blocked, and whether a disease was in its early stages of development or already present.

Based on his interpretations of the *Nan Jing*, Sugiyama developed a five-phase abdominal pattern for detecting imbalances of *qi*. Under this method, each phase was evaluated at a different location. The upper part of the abdomen, for example, was used to evaluate the Fire phase, while the Water phase was evaluated at the lower part. Wood and Metal were evaluated at the left and right parts of the abdomen respectively, and Earth was evaluated at the center.³²

Sugiyama also published a series of eight principles of abdominal diagnosis. He emphasized that practitioners should press below a patient's rib cage, feel below and around the navel, and touch points along the Spleen, Gallbladder, Liver, and Conception Vessel channels to determine a patient's condition and diagnose illness.³³

To diagnose a patient, Sugiyama used the palm and fingertips of his left hand to touch and palpate the skin, using only light pressure. He would start in the center of the patient's abdomen and proceed first to the left, then to the right, and then from the top of the abdomen to the bottom. During the procedure, he would note variations in temperature, the elasticity of the skin, muscle tension, feelings of pain or tension when applying pressure, movements of bodily fluids, and the presence of any lumps or swellings in the abdominal region.³²

Over time, Sugiyama overcame his blindness and established himself as an extremely proficient and sensitive healer. After several years of personal study and experimentation, he returned to Edo. Along with writing the *Ryu Sanbusho*, Sugiyama continued to refine his techniques, and began teaching the *shinkan* method, as well as abdominal diagnosis, anma, and other therapies, to students throughout the area. These techniques collectively came to

be known as the Sugiyama school.³⁴ He also continued to improve his needle insertion skills and gained a favorable reputation in Edo and elsewhere.

Schools for the Blind

Sugiyama's big break occurred late in life, when in 1685 he was summoned to care for Lord Tsunayoshi, the fifth shogun of the Tokugawa Era. Tsunayoshi was suffering from a severe abdominal illness, which none of the court physicians could treat. Fortunately, Sugiyama was able to cure the shogun and return him to good health.¹⁷

According to historian Willis Norton Whitney, the shogun was so pleased with his treatment that he asked Sugiyama how he would like to be rewarded. "If it may please your highness," Sugiyama reportedly said, "I should like to have one eye." The shogun laughed and replied that while he could not give Sugiyama an eye, he would give him an estate on Hitotsu Me Cho, or "One Eye Street," in the Honjo neighborhood.^{19,20}

As a further expression of gratitude, Tsunayoshi also gave Sugiyama an annual pension of 500 *koku* of rice, promoted him to the rank of "superintendent of the blind" for Edo and the surrounding provinces, and bestowed upon him the honorary title of *Kengyo*, or master.²⁰ He would be known as Kengyo Sugiyama for the rest of his life. Later, Tsunayoshi retained Sugiyama's services as a court physician and personal acupuncturist.³⁵

Tsunayoshi also rewarded Sugiyama with a plot of land, upon which Sugiyama established the Shinji Gakumonsho, a school to train the blind in acupuncture.³⁶ The school opened in 1685 and was the world's first organized vocational school for the visually impaired.²⁰ Because the school had the official support of the shogun, the Shinji Gakumonsho quickly became the most well-known school of acupuncture in Japan, drawing students from all over the country to learn Sugiyama's techniques.

At the school, students received direct instruction from Sugiyama and listened to passages recited from the *Ryu Sanbusho*, with each passage being repeated several times so students could memorize them.³⁶ With Tsunayoshi's assistance, Sugiyama eventually opened 45 acupuncture schools for the blind throughout Japan, with his most outstanding students being retained to teach acupuncture, moxibustion, and massage.

Death and Legacy

Waichi Sugiyama died in Edo in 1694 at the age of 84. At the time of his death, Sugiyama had only been able to personally instruct approximately 20 students.³⁶ However, each of those students


taught others throughout Japan, and this kept Sugiyama's techniques alive, significantly increasing the number of blind acupuncturists.

Sugiyama also left behind a vast wealth of knowledge, ranging from his use of the *shinkan* to his methods of abdominal diagnosis. Fortunately one of Sugiyama's best pupils, Wadaichi Shimaura, was able to compile and edit this knowledge into a second book, the *Sugiyama Shinden Ryu* (Essential Teachings of the Sugiyama School). This was a collection of writings that contained Sugiyama's interpretations of Irie's oral instructions and combined Sugiyama's oral teachings with those of another student/kengyo, Yasuichi Mishima.³⁴ The *Shinden Ryu* was published in the early 18th century and used along with the *Ryu Sanbusho* to further instruct students.

The *Shinden Ryu* was divided into several volumes. One contained introductory information on pulse diagnosis, abdominal diagnosis, treatment methods, beginning acupuncture techniques, and the principal Sugiyama-style techniques that students would learn to become an acupuncturist.³⁷ Another one contained more advanced techniques along with descriptions of clinical

applications and copies of oral instructions. This volume included detailed information on 96 separate techniques devised by Sugiyama using the *shinkan*; clinical applications of those techniques based on Mishima's case studies; another review of clinical applications based on Shimaura's case studies; a collection of oral teachings from Sugiyama, Irie, and Mishima; and a chapter on precautions and the treatment of difficult cases.³⁷ Additional volumes contained descriptions of extraordinary acupuncture points, an extensive review of Sugiyama's methods of abdominal diagnosis, historical notes on other acupuncturists who practiced in Japan from ancient times up through the late sixteenth century, and related writings.

Sugiyama's effect on the profession of acupuncture in Japan is still evident more than 300 years after his death. He was instrumental in making more jobs available to the blind and visually impaired. Because of his efforts, acupuncture, moxibustion, and massage became highly respected occupations for the blind in Japan. This rather unique tradition continues in Japan in the 21st century as visually impaired individuals are allowed—and frequently encouraged—to study and practice acupuncture, massage, and related therapies.³⁸




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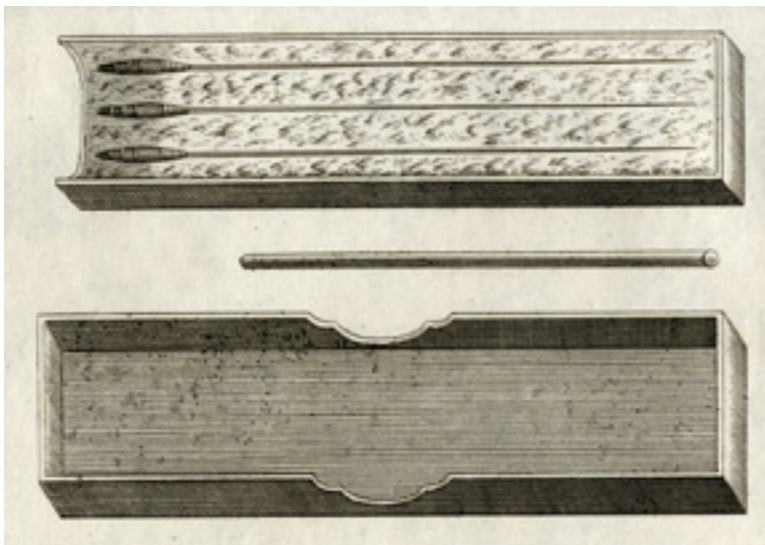


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“Although none of the 45 acupuncture schools Sugiyama founded still exist, the *shinkan* he invented is now a standard piece of equipment for sighted and visually impaired acupuncturists alike. Students at many acupuncture schools learn how to use the *shinkan* as a primary technique as part of their training.”

Sugiyama-style guiding tube (*shinkan*) and needles in Engelbert Kaempfer “The History of Japan” (London, 1727). Photo courtesy Wikipedia.

Today, blind acupuncture is a nationally recognized health practice in Japan. Of the approximately 90,000 acupuncturists currently practicing in Japan, it is estimated that as many as one third are blind.³⁹⁻⁴² These practitioners sometimes operate their own businesses but also work among their sighted colleagues in acupuncture clinics and other facilities. They hold the same licenses, earn similar pay, charge similar fees, provide similar services, and experience the same level of professional status and prestige as sighted acupuncturists.^{30,39} There is even a national association in Japan, the *Zenshin Shikai*, created specifically for blind acupuncturists.³²

Sugiyama also retains a strong influence on the practice of acupuncture in Japan. Although none of the 45 acupuncture schools Sugiyama founded still exist, the *shinkan* he invented is now a standard piece of equipment for sighted and visually impaired acupuncturists alike. Students at many acupuncture schools learn how to use the *shinkan* as a primary technique as part of their training.

The guide tube is still widely used not in only Japan but also the United States, China, and various European countries. By some estimates, more than 90% of acupuncturists currently practicing in Japan insert needles using a *shinkan*, while in the United States, more than 30% of acupuncturists practice Japanese-style acupuncture.^{43,44} Meanwhile, versions of Sugiyama’s abdominal diagnosis and palpation techniques are still taught at many schools in Japan and elsewhere.

Enoshima, where Sugiyama reputedly was inspired to invent the *shinkan*, remains a popular spot for acupuncture students and practitioners and is visited by thousands of people every year. The large stone over which Sugiyama tripped when leaving

the cave is now known as the “stone of good luck.” The statue of Benten to which Sugiyama prayed was damaged during the Meiji Restoration but has since been restored and is available for viewing (although it is now on display as a museum piece rather than an object of worship).³² Near the shrine and the stone lies Sugiyama’s grave, as he requested that he be buried at Enoshima.¹⁵

Finally, Sugiyama’s legacy is preserved at the Ejima Sugiyama Shrine, located on a small plot of land in Chitose, in the Sumida ward of Tokyo, in the same place where the Shinji Gakumonsho originally stood.¹⁵ It is said that even in old age, Sugiyama continued to pay his respects to Benten by making regular pilgrimages to Enoshima.³²

To make Sugiyama’s life easier, Tsunayoshi built a miniature temple dedicated to Benten and installed it on Sugiyama’s estate so that he could worship the goddess without having to make such an arduous journey.³² Today, the shrine has been rededicated to honor Sugiyama, whom local citizens consider “the god of acupuncture” and whom the rest of the world considers the father of Japanese acupuncture.^{15,35}

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Health Knowledge Related to Non-Use of Acupuncture and Other Complementary Therapies

By Adam Burke, PhD, MPH, LAc and Elizabeth Sommers, PhD, MPH, LAc

Education is the most powerful weapon which you can use to change the world.

—Nelson Mandela

Use of complementary/integrative therapies is an important element of self-care and health care in the United States. Although many studies have looked at reasons for use, including medical need, cultural factors, and wellness orientation, very few studies have considered why people *do not* use these methods.

To examine this issue, a recent study analyzed data from the *Complementary and Alternative Medicine* supplement of the 2007 National Health Interview Survey (NHIS). Unique to the 2007 NHIS were a list of ten reasons for non-use, which were named by respondents who did not use several common complementary methods, including acupuncture, chiropractic, and yoga. One of those reasons was “lack of knowledge” about these methods.

Health knowledge is an important aspect of health literacy, including knowledge of services and treatment options. Previous studies have shown that limited health knowledge/literacy has a negative impact on use of conventional healthcare services, disease management, disease outcomes, preventive health practices, and overall healthcare expenditures. Limited health knowledge is related to lower health literacy, educational attainment, and income, among other factors. In other words, disparities in healthcare access and utilization fundamentally influence every aspect of wellbeing and health status.

In their analysis of the 2007 NHIS data, the authors hypothesized that limited health knowledge would be associated with lower levels of education and other socioeconomic factors. This was supported in the findings. The authors also conducted an analysis on a subsample of respondents who reported experiencing low back pain in the past three months. Back pain and other types of pain are the most common reasons for use of acupuncture, chiropractic, and related services. Individuals with back pain have been shown to seek additional information on their condition. Because of this tendency to seek information, it was hypothesized

that even among less educated individuals, those with back pain would be motivated to get information and would thus be less likely to report lack of knowledge of acupuncture. Surprisingly, this was not found to be the case.

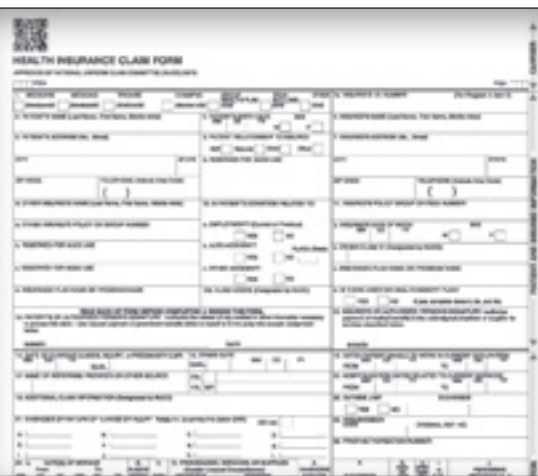
This suggests that lower educational attainment and related socioeconomic factors impact knowledge about many healthcare options, including complementary methods such as acupuncture. Given that acupuncture is included in the American College of Physicians’ current guidelines of best practice for non-pharmacological management of low back pain, patients need to be made aware of this treatment option. Educating consumers, patients, and other healthcare providers is critical to improve equity, fairness, and access to care for all Americans.

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Commentary: Ethics and Legalities of Medical Billing

By Marya Deda, LAc

Marya Deda is a licensed acupuncturist and licensed massage therapist. She specializes in traditional and five element acupuncture, Chinese herbs and Zen shiatsu. She received her Master's Degree in Acupuncture and Oriental Medicine from the Oregon College of Oriental Medicine in 2005 and is currently enrolled in the OCOM doctoral program. Her clinical practice, located in Portland, Oregon, focuses on treating anxiety/depression, stress overload, chronic and acute pain, and autoimmune illnesses. Marya can be reached at marya.acupuncture@gmail.com.

Introduction

Health insurance plans are multifaceted and highly complex. Charging copayment and/or coinsurance payments to patients at the time of service and the implications of waiving these copays presents several ethical and legal billing issues. Copayment or coinsurance payments are the patient's responsibility when receiving medical services, depending on their type of health insurance coverage. Copays are set amounts, whereas coinsurance is a percentage of the net charged. In-network providers have signed contracts with a particular insurance company, which requires them to collect copays per this contract.

This does not appear to be the case with out-of-network providers.¹ If a patient claims financial hardship, this can be documented and the patient signs a waiver agreement.² Some states have statutes concerning insurance billing and consider the practice of waiving copayments to be insurance fraud.³ It is unethical to waive copays with the intention of retaining patients—this can be interpreted as misrepresentation of practitioner charges. When billing Medicare, specifically, this misrepresentation is in violation of the Federal Social Security Act.⁴

Practitioners trying to earn a living usually do not waive the copayments, although some practitioners choose to waive copayments for patients with economically challenging situations. Dental practitioners who waive copayments can be subject to legal action because of such policies.⁵

Many insurance companies require a referral from a medical provider which covers payment for acupuncture and Chinese medicine. Often practitioners try to balance the bill to cover insurance's unpaid services by charging the patient what is not covered under his/her insurance plan. However, most insurance companies do not allow this practice per their contract.²

I recently treated a male patient who suffered from chronic neck pain due to whiplash that began with a car accident in 1987. Two years after this injury he underwent surgery to remove a portion of his femur to create a cervical spinal fusion. The patient reported he was diagnosed with arthritis in the cervical spine. He received a referral from his medical doctor under his HMO to receive 12 acupuncture visits within a 12 month period.

His insurance was a PPO that required him to seek treatment from an in-network Chinese medicine provider but only through a referral from a medical doctor. His copay, \$20 per visit, was required at the time of service. The provider's manual for this patient's PPO health insurance states that the "member cost share," or copay, is due to the provider and the provider is responsible for collecting this shared cost.⁶

When this patient initially asked for an acupuncture appointment, he requested both massage and acupuncture because he felt that the combination would be most effective for his condition. He requested that his insurance company only be billed for the acupuncture because his policy did not cover massage.

This patient did voice concern about extra charges for massage and demanded that he not be charged for anything other than his co-pays for each treatment. As an in-network practitioner and subject to his insurance plan's fee schedule, I was not permitted to "balance bill" the patient. Practitioners are required to bill by treatment modality and time units regardless of what is covered under his plan. The patient filled out the intake paperwork but crossed out the section that explained there is a fee for less than 24 hours cancellation warning or no-show to acupuncture appointments.

The patient had four appointments with me and he reassured me he would be solely responsible for his copayment. But at each visit, he offered a new reason why he could not pay the copay amount. The first time he said he forgot his wallet. Next time he asked if his copayment could be waived. I explained that the copayments could not be waived because he was part of an HMO plan and, as the provider, I had to adhere to their contract. During this conversation, I received a phone call and the patient slipped out the front door, saying he would call to make another appointment.

During the third appointment, the patient again requested that the copay be waived because he was supporting his son who had student loans to pay. I told him the copayment is set by his plan and that if it was not affordable, then he should talk to his insurance carrier. Prior to his fourth treatment that included acupuncture and Chinese medicine, I asked him to provide payment for his now past due copayments.

As noted, he initially wanted to sign something to waive the copayments; he told me both an acupuncturist and a chiropractor had done this for him in the past. I told him he needs to pay the copayments if he wanted treatment from me, and that not paying is a breach of contract between the practitioner and the HMO insurance.

When I again requested that he pay the amount due, the patient was unable to provide a form of payment that was accepted by this practice. He explained that, "we should just go ahead and do the appointment since we are both here. Just send me a bill for

the copayments." I treated him and sent a bill for the outstanding copayments. Later, over the phone, the patient acknowledged receipt of the bill and said he intended to pay. No payment has been made to date.

Discussion

The patient initially requested that as his practitioner I should falsify the billing by not including the charges for massage when I billed the insurance company so he would not have to pay more than his copayment. While this sounds unethical and perhaps illegal, there are no actual legal or ethical measures mentioning legislation identified to validate this practice as such.

This patient felt that his copayment was unaffordable to him and because of this, he asked me, his practitioner, to reduce it. My position was, and is, that besides being a breach of contract between the HMO and the practitioner, lowering the cost to an affordable rate for him or others would lower the bar for all treatment, thereby affecting the average standard cost of acupuncture and other Oriental medicine practices.

If one practitioner waives the copayment, this practice can come to be expected in other clinics. Waiving copayments would drive down income and increase costs, particularly if practitioners have to pay to collect past due copays.

We all work with contracts that are legally binding documents between the provider and the insurance company. If patients are confused about their insurance plans, they should be told to call the insurance for the exact language that explains what their plan covers.

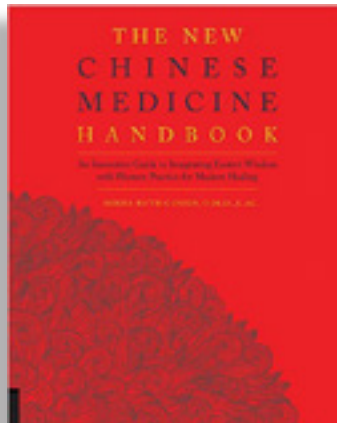
As practitioners of acupuncture and Oriental medicine, we know full well that financial obligations can affect a patient's ability to pay us. The increase of medical out of pocket costs can cause patients to limit necessary care or medication. For example, a 2008 Canadian study reports how patients with a full coverage policy were switched to a policy that required them to pay a percentage or a copay for medications. It was found that these patients were more likely to limit their use of medications, which in turn increased their visits to the emergency room.⁷

Conclusion

I believe this topic is a common concern for many practitioners. It can be extremely frustrating and overwhelming to simultaneously manage a practice, run a small business, and navigate the insurance world. More support needs to be set in place to educate patients on their specific insurance plans concerning

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BOOK REVIEW



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Loocie Brown, MEd, MAc, LAc, has been in private practice in Lexington, MA since 1993. She is a former assistant professor and serves on the Executive Board of the New England School of Acupuncture. She has been an educator for 30 years and currently resides in Cambridge, Massachusetts.

The New Chinese Medicine Handbook: An Innovative Guide to Integrating Eastern Wisdom with Western Practice for Modern Healing

By Misha Ruth Cohen, OMD, LAc

Book Review by Loocie Brown, LAc

The New Chinese Medicine Handbook: An Innovative Guide to Integrating Eastern Wisdom with Western Practice for Modern Healing is both a comprehensive clinical guide and a patient primer for understanding and introducing Chinese medicine theory and application. The book reinforces the role of the acupuncture provider as a health educator and creates a platform and context for understanding the focus of treatment. While technical in parts, this book gives a useful context for teaching patients more about that grand question: *What is Chinese medicine?*

The first section discusses Chinese medicine theory regarding both mind/body/spirit connections and dietary recommendations. It is here that Dr. Cohen introduces her original concept of "New Chinese Medicine." This "eclectic approach," as she calls it, promotes the concept of the integration of Chinese medicine with other forms of health care to provide a complete healing model. She focuses on self-care practices that encourage patients to take control of their lives and their healing processes.

The remainder of the section's chapters gives the reader a basic, concise introduction to Chinese medicine. The level of this information is extensive and perhaps a bit over-reaching for the average patient. Concepts discussed include the basics of diagnosis, organ reference, and *yin/yang* theory as well as concepts of the blood and *qi* disharmonies. Descriptions of Chinese medicine organ function, influences, and balance properties are followed by a discussion of channel theory and the Extraordinary Vessels.

With that groundwork established, the author defines the roots of disharmony according to the Six Pernicious Influences and their effects on the 12 organ systems by specific diagnoses. Completing the chapter is a discussion of disharmonies as they relate to the Extraordinary Organs and pathologies of the 12 Channels, the Eight Extraordinary Channels, and the Fifteen Collaterals. Dr. Cohen provides enough description of these complex concepts without being overly detailed so as to confuse the non-acupuncturist reader. I applaud her attempts to give the public a solid understanding of Chinese medicine basics; however, some information is presented that may need formal training to thoroughly understand.

In the next section, "The Healing Process," Dr. Cohen postulates that the term "wholeness" involves use of dietary guidelines, herbs, acupuncture, and *qi gong*. This comprehensive section gives readers a realistic expectation about the varied aspects of treatment. She lays out specific guidelines for each subject such that patients can learn how their practitioner might diagnose and view their own specific case.

To help a patient choose a practitioner, Dr. Cohen discusses what questions to ask and what to expect when receiving an initial diagnosis and treatment. The basics of Chinese medicine's classic four examinations, ten questions, and tongue and pulse are explained in general terms. A reference in this section refers to Chinese medicine providers as primary care doctors. This definition is not universal within the profession and perhaps confusing for a patient seeking guidance. A note of clarification would be helpful.

The next chapter on dietary strategies discusses which foods promote health and wellness as well as which foods to avoid. An easy-to-read chart explains food flavors, energetics, and temperatures and gives a concrete, specific appraisal of different food types and their varied properties. I liked this section for its ease of use and simple explanations, including how to achieve the spirit of a balanced diet. There are also useful guidelines and recipes on grains and legumes. The section about tea gives a brief explanation regarding the benefits of different types of tea and their medicinal uses.

"The book reinforces the role of the acupuncture provider as a health educator and creates a platform and context for understanding the focus of treatment."

In the chapter "Treating Disharmony with Chinese Medicine Dietary Theory," the author clearly describes a specific dietary program complete with guidelines, phases, and recipes to tonify the *qi* and blood, regain strength, and aid digestion. This is by far the strongest chapter of the book and is quite useful as a guide and reference for both patient and practitioner. The one concern I have, however, is presenting treatment by diagnostic category. If the patient is self-diagnosing based on the list of symptoms, this presents the possibility of improper diagnosis, which in turn could lead to more health issues. For this reason, I think this section can be best used as a reference guide by practitioners when designing treatment plans or educating patients.

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Dr. Cohen explains how herbal preparations are concocted and she answers some “how to” questions. The herbal sampler of commonly used herbs that are part of the Chinese medicine pharmacopeia helps patients better understand their properties and why they are potentially therapeutic. This section’s chart is a good synopsis of this material.

The next chapter is an introduction to the various types of acupuncture, including traditional Chinese medicine, Japanese, Five Element, and Korean styles. A brief description of each is followed by short overviews on the science of acupuncture as well as neuroimaging, mechanism research, physiological research, and clinical research. A few prominent researchers are mentioned, but their work is not referenced by study title or notation. The Society of Acupuncture Research is noted as a good resource that provides a library of evidence-based assessments. This chapter also includes discussion about warming therapies and typical uses of moxibustion.

As part of Dr. Cohen’s plan for patient wellness, she includes a chapter about *qi gong*. Guest author Larry Wong provides a thorough, well-written description of this Chinese concept of exercise/meditation that includes step by step instructions. The *qi gong* massage discussion includes exercises to increase *qi*, blood, and balance, ranging from musculo-skeletal application to reflexology for the hands and feet.

The final section of this book “is a guide for self-directed healing.” It focuses on bringing together Chinese medicine therapies with other previously described adjunct treatments, including dietary, including dietary recommendations, cleansing, exercise and meditation, self-massage, soaks, and nutritional supplements. A table of basic Chinese medicinals indicates which ones a licensed a licensed provider would have to obtain for the patient. Also included is narrative on assembling a healing team comprised of both a western medical doctor and a Chinese medicine provider. This section includes an outline of baseline western tests and a diagnostic synopsis for four herbal formulas designed by Dr. Cohen.

Some parts of this final section could benefit by further explanation. Instead of providing charts with treatment protocols, it would be best if a licensed practitioner (western, Chinese or otherwise) could give a solid context to the patient before starting such a self-directed program. My concern is use of the charts by those who want to self-treat rather than consult with a qualified provider who would recommend a safe, beneficial plan to follow.

“The final section of this book ‘is a guide for self-directed healing.’ It focuses on bringing together Chinese medicine therapies with other previously described adjunct treatments, including dietary, including dietary recommendations, cleansing, exercise and meditation, self-massage, soaks, and nutritional supplements. A table of basic Chinese medicinals indicates which ones a licensed a licensed provider would have to obtain for the patient. Also included is narrative on assembling a healing team comprised of both a western medical doctor and a Chinese medicine provider. ”

To the author’s credit, in chapters that reference specific health subjects, e.g., gynecology, digestion, liver disease, and cancer, Dr. Cohen lays groundwork on how to comprehensively focus a treatment. Patients are encouraged to find a treatment team that can develop the best plan to achieve better health. A glossary of terms at the end of the book as well as an appendix of references covering licensure, books, organizations and websites are helpful.

Practitioners can use the many clinical references in this practical, well-intentioned book for patient education. However, I find that the book’s intended audience is somewhat unclear, as the information provided explores complex concepts perhaps better studied in acupuncture school than for use as a lay guide to healing.

I congratulate Dr. Cohen’s use of her extensive experience to shape her well-grounded suggestions, all aimed at educating her patients. Whether used as a guide for practitioners or for patients themselves to reference, this book contains many gems that, when taken in context, can help to improve overall patient health and education.

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what is covered and how much they will be expected to pay out of pocket for copayments, coinsurance, and deductibles. Insurance companies should be held responsible to offer this information in plain language to their consumers.

A related topic, discussed in a report in the *Journal of Managed Care Pharmacy*, presents a physicians' survey that indicates it is important to prescribe affordable pharmaceuticals that are covered by the patients' insurance plans. The survey showed that, unfortunately, the doctors surveyed were unaware of which medications were covered by the insurance plan as well as what the copay amount was for the patient.⁸

Insurance companies have made the practice of medicine more and more complex, such that it is increasingly difficult for practitioners, much less patients, to follow their guidelines. It is time for practitioners to organize and work to develop resources that can easily be accessed when dealing with insurance companies, payments, patient follow through, and the ethical issues that all of this raises for each of us.

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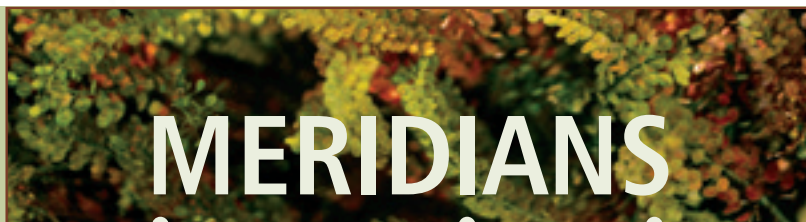
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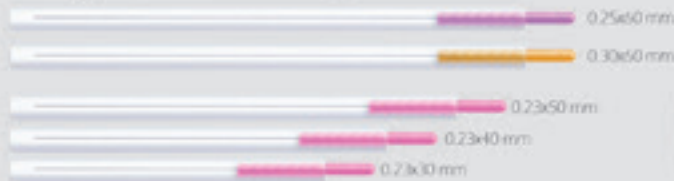
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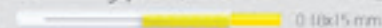
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