

Laura King
LAc, RDN, LDN



Laura King recently became a licensed acupuncturist in the state of Maryland. Originally from Lancaster, PA, she has been a registered and licensed dietitian for 20 years. In May 2023, she will complete the Doctor of Acupuncture program at Maryland University of Integrative Health (MUIH). She is passionate about whole-person and whole-life health and truly loves what she now does for a living. When she is not working or studying, you can find Laura mountain biking with her husband and friends in the beautiful state parks and watersheds of Maryland.

Erin Langley



Erin Langley is a doctoral student (DACHM candidate) at

Acupuncture and Traditional Chinese Medicine (TCM) for Chronic Insomnia: A Case Report

By Laura King, LAc, RDN, LDN,
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Abstract

Approximately one-third of the US population suffers from chronic insomnia, which is associated with a variety of adverse health outcomes. This case reports on a 54-year-old female patient with chronic insomnia treated with acupuncture. This intervention included five points delivered at each treatment with the addition of other acupuncture points. After eight treatments, her sleep was more restful, and she reported fewer awake hours. She recorded her sleep data using the Pittsburgh Sleep Quality Index (PSQI), a validated patient-reported outcome (PRO) survey. She reported a 36 percent improvement in her overall sleep without adverse events.

Keywords: insomnia, traditional Chinese medicine (TCM), acupuncture, case report

Introduction

Chronic insomnia is a persistent public health concern with largely unknown pathophysiology (Morin et al., 2020). One-third of the U.S. population is affected by insomnia, particularly in aging adults (Bollu and Kaur, 2019). Insomnia symptoms encompass difficulty initiating sleep, challenges staying asleep, and early morning waking, all of which may cause stress and difficulty completing daily activities. Insomnia is also associated with other health problems, such as depression, hypertension, and reduced life expectancy (Morin et al., 2020).

Common treatments for chronic insomnia include cognitive behavioral therapy (CBT), improved sleep hygiene, relaxation, and medications. Traditional Chinese Medicine (TCM) is widely used in East Asia to treat insomnia, with limited use and correspondingly limited research in the US

MUIH. She plans to practice acupuncture and herbal medicine in and around Washington, DC. In addition to her graduate studies, Erin works in global marketing and brand communications for a women's health company.

Benjamin Caulfield Monti



Benjamin Caulfield Monti (Veteran, United States Navy) is a third-year student of acupuncture at MUIH. This case report is Benjamin's first contribution to a publication. Benjamin plans on pursuing a lifelong career in the field of acupuncture, where he will focus on sports medicine and related health. Benjamin is married to the most wonderful woman in the world and is the proud father of two brilliant, beautiful, and confident daughters.

OPEN ACCESS

Citation: King, L. Langley, E., Monti, B.(2023). Acupuncture and Traditional Chinese Medicine (TCM) for Chronic Insomnia: A Case Report. *Convergent Points*, 2(1). www.convergentpoints.com

Editor: Kathleen Lumiere, Bastyr University, UNITED STATES

(Castaneda, 2022). In this case report on a 54-year-old female patient, we used a TCM acupuncture intervention backed by research (Yang et al., 2017; Liu et al., 2020), with the results documented by the Pittsburgh Sleep Quality Index (PSQI). The PSQI, a validated and widely used patient-reported outcome (PRO) survey, was used to measure sleep duration, sleep onset latency, sleep disturbance, sleep efficiency, need for sleep medications, daytime disturbances due to sleep dysfunction, and the overall quality of sleep. PSQI scores range from 0 to 21, and a score higher than 5 indicates poor sleep quality (Wang et al., 2021).

Case Description

A 54-year-old Japanese American female was a walk-in patient at the Maryland University of Integrative Health (MUIH) acupuncture clinic with a chief complaint of chronic insomnia (over 10 years). She worked as a yoga instructor and was a graduate student. Her chronic insomnia appeared to coincide with her early morning workout routine. She meditated at 4 am, practiced yoga, then attended a 6 am Cross-Fit class. She exercised at least five days a week and went to bed nightly around 8 pm, usually waking around 1:30 – 2:00 am. She would toss and turn until she fell back asleep, or she would get up to begin her day; as a result, she did not feel rested in the morning. The patient's surgical history included a Cesarean section with the live birth of her son in 2000 and an anterior cruciate ligament repair. Additionally, she had arthritis. Her last menstrual period was in January 2009, with the onset of menopause in 2008. Her paternal medical history was positive for cardiovascular disease and hypertension.

Clinical Findings

The patient was 5'5", weighed 128 pounds, and reported eating a healthy diet consisting of traditional Japanese foods, soups, cooked vegetables, fruits, and fish (tuna, mackerel, and herring). Many of the foods she consumed helped support her yin. Her blood pressure, resting heart rate, and O₂ saturation were within normal limits.

As mentioned, the PSQI was used as a self-assessment sleep survey for this patient. Her initial PSQI score was 11, indicating poor sleep quality. The patient chose TCM to treat her chronic insomnia and took dietary supplements daily, listed in Table 1. Dosages were reviewed with the patient as well as any relevant side effects.

Received: December 9, 2022

Accepted: February 1, 2023

Published: February 15, 2023

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Data Availability Statement: All relevant data are within the paper and its supporting information files.

Funding: This article received no funding of any type.

Competing interests: The authors have declared that no competing interests exist.

Creatine Monohydrate	5g
Vitamin B-complex (Thorne B-Complex #12)	Per Serving Size recommendations
Vitamin D3	125 mcg
Vitamin K2	90 mcg
Magnesium Glycinate Chelate	300 mcg
Zinc	30 mg
Ashwagandha	2000 mg

Table 1.

The physical exam of the patient was unremarkable. Initial pulse and tongue findings are below.

Pulse findings

SI/HT – unremarkable	LU/LI - unremarkable
GB/LR – tense and thin	SP/ST – thin
BL/KI – weak, empty	PC/TE – weak, empty

Tongue findings

Color	Pinkish-red, trending towards purple
Shape	Constricted
Coat	Peeled in LR/GB area
Moisture	Dry
Sublingual	Distended purple sublingual veins

Table 2.

Diagnosis

In addition to this patient's biomedical diagnosis of chronic insomnia, her TCM diagnoses were Liver yin and Blood deficiency. In TCM, chronic insomnia is related to yin deficiency, which can lead to Heart Fire and imbalance in the healthy interaction of the Heart and Kidney. In TCM, Blood deficiency may also be present alongside yin deficiency, as seen in this patient.

Treatment and Outcomes

Every 7 to 21 days, for a total of six treatments over nine weeks, a TCM sleep intervention was provided, including acupuncture at a consistent set of points, GV20 (*Bai Hu*), *An Mian*, *Yin Tang*, HT7 (*Shen Men*), and SP6 (*San Yin Jiao*), with additional points as indicated at each visit. One visit was conducted via telehealth due to patient travel and did not include acupuncture.

The practitioner was a recently licensed acupuncturist (LAc) on a supervised doctoral rotation in the MUIH clinic.

At each treatment, DBC Spring Ten 0.20 x 30 or 0.15 x 0.18 acupuncture needles were inserted to the prescribed depth for each point, and the practitioner confirmed de qi by a sensation of tension or grasp. A tonification technique was applied to most of the needles, which were retained for approximately 20 minutes. Points were added or removed based on the patient's presentation on that day, including pulse, tongue, and other diagnostically relevant information. All diagnoses, treatment strategies, treatments, and changes are listed in the table below.

Tx # and date	Patient presentation and tx strategy	Points	Additional points
Treatment #1 Fall 2022	Pulse: thin in the LR/GB, SP/ST, empty and weak Tongue: purple, constricted, and peeled in LR/GB Tx strategy: sleep protocol to calm spirit, tonify yin, move and tonify qi and Blood	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + SP10 (<i>Xue Hai</i>), GB41 (<i>Zu Ling Qi</i>), LR3 (<i>Tai Chong</i>)	Added SP10 (<i>Xue Hai</i>), GB41 (<i>Zu Ling Qi</i>) and LR3 (<i>Tai Chong</i>) to help move Blood and LR qi
#2 21 days later	Pulse: slippery wei level, weak, empty at depth Tongue: pink/purple, small tip, swollen middle, dry Tx strategy: calm shen, mobilize fluids to support moving dampness at the wei level	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + ST42 (<i>Chong Yang</i>)	ST42 (<i>Chong Yang</i>) d/t dry tongue (recommendation from supervisor)
#3 16 days later (telehealth visit)	Pulse: none taken d/t telehealth Tongue: red/purple, slightly swollen, dry, peeled in LR/GB, red tip, distended SLV (sublingual veins) Tx strategy: calm shen, relax and open chest	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + CV17 (<i>Tan Zhong</i>), PC6 (<i>Nei Guan</i>), SP4 (<i>Gong Sun</i>)	CV17 (<i>Tan Zhong</i>), PC6 (<i>Nei Guan</i>), and SP4 (<i>Gong Sun</i>) added d/t anxiety about traveling
#4 10 days later	Pulse: excess superficial, deficient at depth (HT/SI, LU/LI); LR/GB tense and thin; SP/ST slippery; KI yin and yang thin and empty Tongue: red/pink, sl. swollen, dry, peeled (back R lower jiao), reddish tip, distended SLV, white/yellow coat Tx strategy: calm shen, tonify yin, drain Damp, move qi	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + BL2 (<i>Chuan Zhu</i>), Bi Tong, SP9 (<i>Yin Ling Quan</i>), ST40 (<i>Feng Long</i>), LR3 (<i>Tai Chong</i>)	BL2 (<i>Chuan Zhu</i>) and Bi Tong added d/t nasal congestion; SP9 (<i>Yin Ling Quan</i>) and ST40 (<i>Feng Long</i>) d/t slippery pulses and tongue coat
#5 7 days later	Pulse: empty at depth (HT/SI, LU/LI, KI yin and yang), thin in LR/GB and empty at depth, SP/ST slippery Tongue: pin/ red, swollen, scalloped, yellowish coat, dry, dips in LU, peeled R lower jiao, cold sore on lip Tx strategy: calm shen, tonify yin, drain Damp, move qi	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + ST25 (<i>Tian Shu</i>), ST36 (<i>Zu San Li</i>), ST40 (<i>Feng Long</i>), LR3 (<i>Tai Chong</i>)	ST25 (<i>Tian Shu</i>) added to support LI and relieve constipation, ST36 (<i>Zu San Li</i>) to support bowels, ST40 (<i>Feng Long</i>) for slippery pulses
#6 14 days later	Pulse: HT/SI, LR/GB thin and empty at depth, KI/BL fine and empty at depth, LU/LI wiry, SP/ST sl. slippery, and KI yang thin and empty at depth Tongue: pink, slightly red, swollen; cracks in the MJ (middle jiao); dry, white/yellow coat, purple SLV Tx strategy: calm shen, tonify yin, tonify and move qi	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + KI3 (<i>Tai Xi</i>), LR3 (<i>Tai Chong</i>), ST36 (<i>Zu San Li</i>)	KI3 (<i>Tai Xi</i>) added due to deficient KI pulses, ST36 (<i>Zu San Li</i>) added to support qi
#7 14 days later	Pulse: all excess superficially, empty and thin at depth, LR/GB tense and thin, SP/ST slippery; LI/LU superficial Tongue: pinkish red, swollen, toothmarked, peeled in LR/GB, whitish coat, slightly dry Tx strategy: calm shen, tonify yin, tonify and move qi	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + ST36 (<i>Zu San Li</i>), LR3 (<i>Tai Chong</i>), ST25 (<i>Tian Shu</i>)	Added ST36 (<i>Zu San Li</i>) and ST25 (<i>Tian Shu</i>) to support transformation and transportation functions
#8 14 days later	Pulse: sl. excess superficially; all moderate at depth except LR, ST/SP sl. slippery Tongue: sl. purple with reddish tip, swollen, thin white coat, peeled in the back R area; purple SLV Tx strategy: tonify LR yin and calm shen	GV20 (<i>Bai Hu</i>), An Mian, Yin Tang, HT7 (<i>Shen Men</i>), SP6 (<i>San Yin Jiao</i>) + LR8 (<i>Qu Quan</i>)	Added LR8 (<i>Qu Quan</i>) to tonify LR yin based on tongue and pulses

Table 3.

No adverse events were reported during or following treatments.

The PSQI was given to the patient at each treatment, and she returned the completed survey promptly. This short survey tracks qualitative and quantitative sleep measures distilling them into a single score (Wang et al., 2021). The patient's PSQI score varied from treatment to treatment but showed an overall improvement of 36% over the six acupuncture sessions.

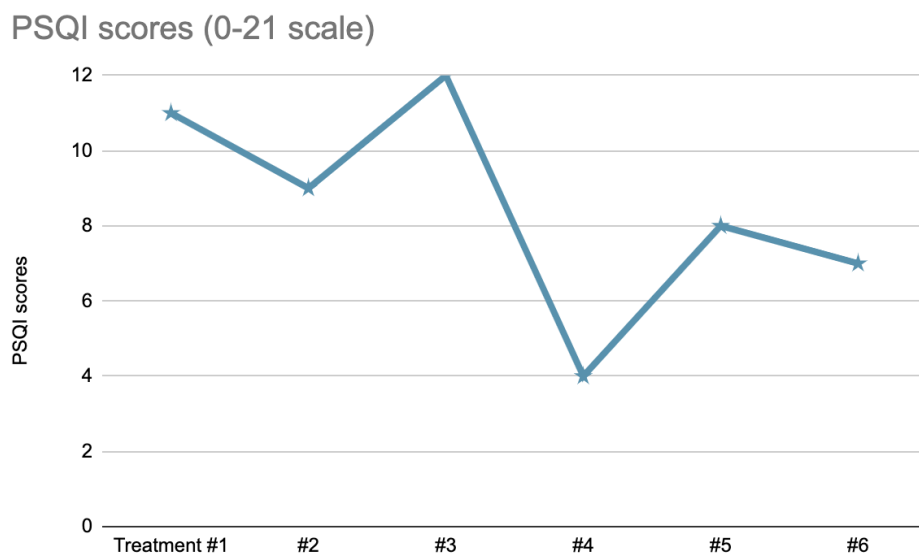


Figure 1.

Patient Perspective

"I truly enjoyed the series of sessions to improve my sleep quality. Every session we met, the practitioner welcomed me with uplifting energy and created a healing space where I could share everything happening inside of myself physically, mentally, and energetically. This insomnia has been a part of my life for over a decade, and I tried to educate myself about sleep hygiene as a yoga therapist as well. However, I have learned so much from the series of treatments. What's the most helpful thing overall is the consistency. We met at least twice a month, the same sleep protocol of acupuncture points was always included, and other vital function measurements were also repeated, which I found helpful to raise awareness of how I am doing. Other than this consistency, the practitioner has never missed the following up of the day after the treatment so that I can report how I felt several hours after the treatment (before I forget), not only the feeling immediately after the treatment. Insomnia can be frustrating and affect our quality of life. With consistent acupuncture treatment, the practitioner's healing presence, and emotional support, I feel for the first time that my insomnia is manageable, and my sleep quality is shifting toward better directions."

Discussion

Clinical trials have associated TCM acupuncture with beneficial effects on insomnia (Cao et al., 2009). Yin et al. (2017) investigated the safety and efficacy of acupuncture for primary insomnia by comparing verum (actual) to sham acupuncture. They concluded that verum acupuncture was safe, improved patients' insomnia, and was more effective than sham acupuncture. Liu et al. (2020) assessed whether the effect of acupuncture on insomnia was due to its placebo effect and concluded that verum acupuncture was more effective than sham acupuncture. The authors noted that even though acupuncture may have effects unrelated to needle placement, that alone did not explain the differences observed in effectiveness (Liu et al., 2020). In 2021, Wang et al. evaluated the effect of acupuncture on insomnia using two acupuncture points and found that acupuncture was safe and effective in supporting patients with insomnia. The patient and subject of this case report received treatments derived from interventions used in the clinical trials listed in Table 4, a summary of clinical trial research on insomnia.

Paper	Participants	Intervention	Outcome
Yin et al. (2017)	Treatment group: # = 36, mean age = 39.7; male = 17, female = 19 Control group: # = 36, mean age = 37.3, male = 15, female = 21	Both: received tx 3x/week for 4 weeks Tx: Acupuncture – GV 20, GV 24, GV 29, Anmian, HT 7, SP 6 C: Sham acupuncture – tube tapped against skin to give sensation of real needle at acu points	Patients receiving acupuncture had a significant improvement in their Insomnia Severity Index score
Liu et al. (2020)	13 RCTs with 1,061 patients >18 years of age	Tx: Acupuncture C: Sham Points utilized were unspecified	10 trials favored acupuncture, 3 were not specified. Acupuncture for insomnia is efficacious
Wang et al. (2021)	Treatment group: # = 41, mean age = 57; male = 13; female = 28 Control group: # = 41; mean age = 58; male = 10; female = 31	Both: received tx 3x/week for total of 10 treatments; treatment phase was 3.5 weeks total, follow-up phase was 8 weeks total Tx: Acupuncture – HT 7, KI 7 C: Sham acupuncture at HT 7 and sham KI 7	Acupuncture at HT 7 and KI 7 was safe, well tolerated, and efficacious non-drug intervention for patients with insomnia

Table 4.

In TCM, chronic insomnia is related to yin deficiency, leading to Heart Fire and a resulting imbalance in the healthy interaction of the Heart and Kidney. Acupuncture point HT 7 is believed to nourish yin, especially Liver and Kidney yin, decrease Heart Fire, calm the mind, and regulate mental activity (Wang et

al., 2021). Other points consistently used in this case—GV20 (*Bai Hu*), *An Mian*, *Yin Tang*, HT7 (*Shen Men*), SP6 (*San Yin Jiao*)—are also believed to calm the spirit, nourish the mind, soothe the Liver, tonify the Kidneys, and invigorate Blood (Deadman et al., 2022).

The data in this case report are confounded by the fact that additional acupuncture points were added to the standard protocol at the practitioner's discretion. This may limit the ability to generalize from the treatment used with a specific patient to a population of patients. Wang (2021) published clinical research using just two acupuncture points consistently. Dosing of acupuncture—meaning the number of visits, consistency and frequency of visits, techniques, and points selected—may have affected the benefits of treatment, including those measured by the PSQI score.

An important consideration is to determine how many treatments are required to achieve a minimal therapeutic effect (Bauer et al., 2020). The clinical trials referenced to inform the TCM protocol used in this case report varied in their treatment dose. The interventions used by Yin et al. (2017) consisted of treatments provided three times per week for four weeks, for a total of 12 treatments. Wang et al. (2021) employed intervention parameters consisting of treatments delivered three times per week for ten treatments. While this treatment frequency was not possible for this patient or practitioner due to the nature of providing treatments in a supervised academic clinic, the patient's travel schedule, and the practitioner's schedule, an improvement in the patient's PSQI score was achieved over six visits.

The strengths of this case include the patient's willingness to be treated in the MUIH student acupuncture clinic, her timely completion of repeated PSQI patient-reported outcome measures, and her openness in sharing her medical history so accurate TCM diagnoses could be made. Additionally, the protocol chosen represented points that supported this patient's insomnia based on her root TCM diagnosis of yin deficiency. More rigorous investigation is needed in order to confirm the efficacy of acupuncture in the treatment of insomnia.

Conclusion

TCM acupuncture was a safe and effective treatment for the chronic insomnia of this patient and may benefit others as well.

Acknowledgments

Laura King, Erin Langley, and Ben Monti are doctoral candidates studying acupuncture and Chinese medicine at MUIH in Laurel, Maryland. No financial support was received for writing this case report, and the authors declare that they have no competing interests.

This case report was prepared following the CARE guidelines (Riley et al., 2017)

Disclosure Statement

The authors report no conflicts of interest.

Informed Consent

Written informed consent was obtained from the patient for publication of this case report, and a copy of the written consent is on file with the corresponding author.

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