In recent years, acupuncture has risen in popularity as a form of alternative or supplemental medicine for the treatment of many different types of disorders. Although most notable for the efficacy of pain reduction, lesser known targets of treatment include issues such as insomnia.

Insomnia is defined by the DSM-5 as either the inability to fall asleep, or being easily woken from sleep, and once woken in the early morning, with an inability to fall back asleep, with or without restlessness, and the lack of rest affecting the patient’s ability to function optimally in their everyday life due to feeling tired.¹

It is generally accepted that the quality and length of sleep is determined to be either good or bad depending on whether or not the patient feels well rested after waking up. According to the American Academy of Sleep Medicine (AASM), the incidence of insomnia among adults is as follows: 30-35 percent will experience brief episodes of insomnia, 15-20 percent will have insomnia that lasts for less than three months, and about 10 percent will experience insomnia that lasts for more than three months.² The AASM cites an estimated $63 billion dollars are lost each year in lost work performance,³ a number which has great impact upon our economy.

Danger Ahead

The dangers of insomnia are also well documented in research literature, showing that sleep disorders⁴ can be responsible for a wide array of accidents either on the job or other activities that require alertness and attention, such as driving. A June 2010 publication by the National Highway Safety Administration estimated 56,000 traffic incidences in the year 2008 were due to inadequate sleep.⁵
Therefore, insomnia could be considered an epidemic with fatal conclusions if left unchecked. The causes of insomnia are complicated, with multiple reasons for why the symptoms of insomnia occur, and insomnia is often a symptom of another medical condition, hormonal imbalances\(^6\), psychiatric issues\(^7\), or due to side effects from medications.

**A Western Band-Aid**

In Western medicine, patients are often prescribed sleep aids such as Ambien or Tylenol PM, which, though forcing them to fall asleep, they become either dependent or find the side effects too negative to continue. About four percent of adults report having taken a sleep aid within the last 30 days in a survey between the year 2005-2010.\(^8\)

Daytime drowsiness, gastrointestinal issues, and poor memory are often associated with medicinal sleep aids. Some patients prefer a more natural solution and turn to supplements such as Melatonin. However, it has been shown that prolonged Melatonin use can worsen symptoms in patients who suffer from depression or mood disorders, and, on the rare occasion, cause depression in patients who are at risk for the disorder.

**The Eastern Answer**

However, a third option has seen success in treating insomnia with minimal to no side effects — the use of TCM, most notably, acupuncture. Although more research is necessary in determining the true efficacy of acupuncture in treating insomnia, practitioners have often seen good results for it in their clinical setting. With the use of fine, sterile needles, certain points are stimulated in the body that causes the release of hormones such as endorphins and activate the immune system and certain nerve routes, bringing forth a therapeutic effect.

Yu, translated as "constraint" in English, is the theory that many illnesses are the result of emotional issues that cause a stagnation in the body, and this can lead to issues such as insomnia. Therefore, focusing on releasing that underlying constraint can help relieve the symptoms that arise.

For the purpose of confidentiality, the patient discussed here will be referred to as DN.

**Insomnia & Western Medicine**
Insomnia is grouped into three main categories:

- Free Standing Primary Insomnia - Defined as insomnia that is not co-morbid with nor can it be attributed to another underlying medical condition, disturbances due to the environment, or psychiatric disorders.
- Primary Insomnia Comorbid (with one or more conditions) - Defined as insomnia present with another medical condition but is not caused by the condition.
- Secondary Insomnia - Defined as insomnia that is caused by another condition present (medical, environmental, psychiatric).

Insomnia is further divided by the length of time the symptoms last:

- Trandient Insomnia - insomnia lasting less than one week.
- Acute Insomnia - insomnia lasting less than one month, but more than one week.
- Chronic Insomnia - insomnia lasting for more than one month.

Symptoms for Diagnosis

The DSM-5 criteria for insomnia include the following:

Predominant complaint of dissatisfaction with sleep quantity or quality, associated with one (or more) of the following symptoms:

- Difficulty initiating sleep. (In children, this may manifest as difficulty initiating sleep without caregiver intervention.)
- Difficulty maintaining sleep, characterized by frequent awakenings or problems returning to sleep after awakenings. (In children, this may manifest as difficulty returning to sleep without caregiver intervention.)
- Early-morning awakening with inability to return to sleep.

In addition, the sleep disturbance causes clinically significant distress or impairment in social, occupational, educational, academic, behavioral, or other important areas of functioning.

- The sleep difficulty occurs at least three nights per week.
- The sleep difficulty is present for at least three months.
The sleep difficulty occurs despite adequate opportunity for sleep.

The insomnia is not better explained by and does not occur exclusively during the course of another sleep-wake disorder (e.g., narcolepsy, a breathing-related sleep disorder, a circadian rhythm sleep-wake disorder, a parasomnia).

The insomnia is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication).

Coexisting mental disorders and medical conditions do not adequately explain the predominant complaint of insomnia.

Conventional Treatments

Conventional treatments are broken down into pharmacological (drug-based) treatments, and non-pharmacological.

Pharmacological - Includes medication-based sleep aids and sedatives, as well as a broad range of other medications, such as benzodiazepines, Ramelteon, antihistamines and melatonin supplements.

Non-pharmacological - Includes relaxation therapies, cognitive therapies, hypnosis, and education in sleep hygiene.

Case Study of DN

Complaint & History

DN, a 53 year old female, reported difficulty falling asleep with restlessness the previous two to three weeks, and was sleeping on average five to six hours per night. She had a history of acid reflux and night regurgitation, which caused anxiety and insomnia. However, after previous acupuncture treatments at our clinic in 2015, her acid reflux subsided, at which point she stopped her treatments.

After a year hiatus, she returned and complained of insomnia (six to seven nights per week), but was not having any issues with acid reflux. She reported her anxiety as being under control, but she found her insomnia was due to anxious thoughts while she was falling asleep.

On average it took her an hour-and-a-half to fall asleep, all the while laying in bed waiting for sleep to come. She reported waking up feeling tired and fatigued. Her history of stress and anxiety was exacerbating her sleeping issue. However, she otherwise reported herself as generally healthy, although she had a
tendency to feel cold.

DN came to our teaching clinic at Farmingdale State College, run by the New York College of Traditional Chinese Medicine (NYCTCM) in January of 2016 to begin acupuncture treatment for her insomnia. She signed the informed consent to be treated by in-training student interns who were under the supervision of an acupuncturist licensed in the state of New York.

**DN’s Western Medicine Diagnosis**

DN had been previously diagnosed with anxiety and acid reflux by her family doctor. Her recent insomnia had not yet been diagnosed by an MD. The history of medication taken included Ramipril for elevated blood pressure, and Vytorin for elevated cholesterol.

**DN’s Assessment by TCM**

The diagnostic methods used by TCM required not only the main complaint as reported by the patient, but an overall assessment of the patient’s current condition and their constitution in order to reach a diagnostic conclusion. This included inquiry of present and past medical history; the current reported symptoms; observation; palpation; and pulse and tongue inspection.

The patient often felt cold and disliked the cold, and reported often having a sour taste in her mouth. She reported poor sleep due to restlessness and insomnia, and occasionally having heart palpitations. She also had a history of acid reflux which caused a burning sensation in her stomach and esophagus, and sometimes caused regurgitation in the middle of the night. This was treated by acupuncture in 2015 and the patient had reported no issues with acid reflux since then.

Her tongue was shown to be pink in color with a thin white coating and thin body with slight center crack and teeth marks. Her pulse was deep, wiry, and thready on both sides.

According to TCM diagnostic theory, the root cause for this case of insomnia is Liver Qi stagnation and deficiency, which has led to a blood and yin deficiency. When the patient has Liver Qi stagnation, the patient’s qi and blood circulation is impaired and manifests itself with stress and anxiety. Prolonged stagnation can lead heat, which in turn consumes the body fluid, leading to a deficiency of Qi, Blood, and Yin, which caused her insomnia.
Treatment Principle

According to her diagnosis and overall condition, we established a treatment principle based on resolving the stagnant Qi, smoothing the flow of blood and qi in the body, and tonifying the blood and yin. This required that we nourish the liver and the kidney, calm the shen, and unblock the channels.

For the last few treatments, we also added points based on the Yin Qiao and Yang Qiao meridian theory, which states that these are the channels that control the "opening of the eyes" and "closing of the eyes" in ancient literature.

The goal of the sessions were to reduce and eventually eliminate the instances of insomnia and have the patient wake up feeling well rested. A reduction in anxiety was also desired due to the fact that the patient’s anxiety and insomnia were linked.

Acupuncture Point Selection

The selection of the acupuncture points used were based on the principles of:

- Point specificity
- Empirical points
- Channel and Meridian Effect

The points used and selected were modified slightly during each successive treatment based on the patient’s constitution at the time of the follow-up consultations.

- Yintang, Hegu (LI4), Zusanli (ST36), Yanglingquan (GB34), Taiyuan (LU9), Neiguan (PC6), Shenmen (HT7), Yinlingquan (SP9), Taichong (LR3), Taixi (KI3)
- Shugu (UB65), Taichong (LR3), Hegu (LI4), Taixi (KI3), Sanyinjiao (SP6), Zusanli (ST36), Yanglingquan (GB34), Taiyuan (LU9), Neiguan (PC6), Shenmen (HT7)ef, Qihai (CV6), Zhongwan (CV12), Yintang
- Yanglingquan (GB34), Zhongzhu (SJ3), Sanyinjiao (SP6), Taichong (LR3), Hegu (LI4), Taiyuan (LU 9), Shugu (BL 65), Taixi (KI 3), Zhaohai (KI6), Zusanli (ST36), Yin tang.

Needling Technique
All points except for BL65 were manipulated using the even method. BL65 was manipulated using the reducing method. The needles were retained in the patient’s body for 25 minutes.

**Treatment Schedule**

The treatment schedule was once a week for six weeks. Each treatment session lasted 25 minutes, with 15-20 minutes for initial consultation, and another ten minutes for aftercare recommendations.

**Key Findings**

At each treatment the patient reported feeling better about her sleep. On her third treatment, she reported only having one instance of insomnia for the entire week, a decrease from six to seven nights a week at the start of her treatment. The patient said, as long as her work hours would allow, she would continue acupuncture beyond the resolution of her insomnia for general wellness.

DN’s progress and reduction of insomnia supports the "Constraint Theory" that her root cause is in the stagnation of her qi and blood which has caused a depletion of her blood and qi. Balancing her body and clearing out the stagnation allows her body to begin the healing process.

The issue of insomnia is written in the classic Chinese medical texts such as Jinkui Yaolue (Summary from the Golden Chest), which explains that anxiety or overwork and stress can lead to a deficiency which causes insomnia. "When a person lies down and cannot sleep, the Yin organs are injured, the Essence has no residence and is not quiet, and the person cannot sleep," as explained by Su Wen (Simple Questions), Chapter 46, giving a more in depth description of the interplay of the internal organs.

Further descriptions of the etiology of "Constraint" illnesses come from later texts, such as those of Ye Tianshi in Lingzhen Zhinan Yan (Guiding Cases In The Clinic) where he states, "If there is constraint, then qi stagnates, if qi stagnates for a long time, it turns into heat. If there is heat then the liquids are consumed and do not circulate and the ascending and descending movements of qi are not regulated."

As the liver and kidney are responsible for essence and blood, injuring them through stress, anxiety, or overwork will deplete the essence and the blood, and since the Heart is in control of the blood as well as houses the Shen, it will no longer be able to hold the Shen down as the person sleeps, giving rise to the symptoms of insomnia.
The last set of acupuncture points chosen were recommended by Dr. Wei Dong Yu for treating most types of insomnia. His theory behind these points were because most were from the eight extraordinary meridians which are responsible for the blood, and for their clinical indications. The extra point Yintang has the clinical indications of calming the spirit and is used for insomnia, anxiety, and stress.

**Explanation of Points**

PC 6 (Neiguan) is a master point of the Yin Linking Channel, and nourishes the blood of the heart. SJ3 (Zhong zhu) is internally and externally related with the Pericadium meridian, so in order to balance the yin and yang, PC6 and SJ 3 were used in conjunction. GB 34 (Yanglingquan) is clinically used to spread out liver and gallbladder qi and benefits the stasis.

The combination of LR3 (Taichong) and LI4 (Hegu), known as the "Four Gates" are most often combined to move the qi in the body and dispel stasis. SP6 (Sanyinjiao) harmonizes the three yin meridians of liver, spleen, and kidney, which are important for the nourishment of the blood.

KI3 (Taixi) is used to calm the mind, benefits the essence, and tonifies the Kidney Yin and Yang. KI6 (Zhaohai), clinically used for insomnia and anxiety, is also the master point of the Yinqiao meridian (and, as mentioned before, the Yinqiao meridian is responsible for closing the eyes.)

BL65 (shugu) is on the Yangqiao meridian responsible for the opening of the eyes, and because it has the clinical indication of draining the bladder channel — so any excess qi in the yang part of the body (the head) can be reduced. ST36 (Zusanli) is clinically indicated for anxiety and stress, as well as balancing the whole body.

**In the Coming Years**

Clinical studies for the efficacy of acupuncture in treating insomnia are still in their beginning stages — new research studies are being performed and explored every day. Preliminary studies have shown that acupuncture is statistically significant for the treatment of insomnia, over their medication choice (estazolam) and the sham acupuncture control group and is therefore worth pursuing for its low cost, effective, and long lasting therapeutic results.\(^\text{10}\)

The University of Maryland Medical Center also recognizes that acupuncture may be a worthwhile treatment to pursue in the treatment for insomnia, citing that studies in auricular acupuncture have
demonstrated effective results\textsuperscript{11}. Some research has indicated that it is possible the reason acupuncture is effective in treating insomnia is that it can increase endogenous melatonin secretion, which would be consistent with improved sleep quality as melatonin is at least partly responsible for sleep\textsuperscript{12}.

**Insomnia & TCM**

For our particular patient, there must be special attention paid to the fact that both the medications she is currently on, Ramipril and Vytorin for her blood pressure and cholesterol, respectively, have the noted side effects of sleep disturbances and insomnia. Therefore, acupuncture in this case may have been used to decrease the side effects of her medication.

Further consideration must then be given to her pre-existing conditions, high blood pressure and high cholesterol, and lifestyle changes and recommendations. Acupuncture treatment in those areas may also decrease or eliminate the need for the medications for which insomnia may have been a side effect.

A 2001 study in acupuncture and insomnia focused on a group of AIDs patients found good results for improving their sleep and resolving their insomnia.\textsuperscript{13} It is possible a combination of their medications and their disease brought on the symptoms of insomnia, and therefore acupuncture’s decrease of the negative side effects should be noted in cases like this.

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Dr. Yemeng Chen graduated from Shanghai University of Traditional Chinese Medicine in 1985. After that, he worked as an instructor in Shanghai Medical University and practiced as a physician in the affiliated Huashan Hospital, becoming the director of the acupuncture department in 1989. Dr. Chen has more than 30 research papers published in various medical journals in different countries and has also published 10
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