Challenging Case in Clinical Practice: Five Element Chinese Medicine Approach to Sleep Maintenance Insomnia

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Introduction

The prevalence of insomnia in the United States is estimated at upwards of 40%, with up to 15% of those cases being chronic.[1] Both alternative and Western approaches to insomnia agree that sleep disturbance has multiple etiologies. In fact, the revised edition of the International Classification of Sleep Disorders lists more than 100 differential diagnoses of insomnia.[2] Traditional Chinese Medicine (TCM) acupuncture treatment for sleep disorders usually addresses excess-type disturbances of the heart, along with variable excesses or deficiencies of any of the other organ systems.[3] The most common points used include Heart (Ht) 7, Spleen (Sp) 6, and Governing Vessel (GV) 20.[3,4]

The current standard of care for chronic insomnia includes sedative-hypnotic medications, in particular benzodiazepine receptor agonists, or cognitive–behavioral therapy (CBT). Newer agents have also been developed such as orexin receptor inhibitors, which act by selectively binding to orexin-1 and -2 receptors, which in turn inactivate wakefulness.[5] A recent meta-analysis showed that eszopiclone, zolpidem, and suvorexant versus placebo showed small but significant improvements in several sleep parameters, for example total sleep time increased anywhere between 16 and 48.1 minutes, reduction in sleep onset latency between 3 and 15 minutes, and improvement in insomnia severity indexes (ISI) between -1.2 to -4.6.[6] Similar results have been shown with CBT, with a total sleep time increase of 43.54 minutes, reduction in sleep onset of 11.63 minutes, and ISI of -4.78.[6] The comparative and long-term efficacy of pharmacotherapies for insomnia are not known. All pharmacotherapies, per Food and Drug Administration documents, had risks for cognitive and behavioral changes, including driving impairment, while observational studies reveal an association between hypnotics and dementia, fractures, and major injury.[6] Damage of memory, drug resistance, dependency, and addiction are additional concerns.[1] Safer and more efficacious treatments for insomnia are clearly needed.

One common type of insomnia is defined by the tendency to wake at the same time every night followed by difficulty returning to sleep, also known as sleep maintenance insomnia. Insomnia in general can lead to significant morbidity, such as daytime lethargy, impairment of daytime activities, nervousness, poor concentration, and a diminished quality of life.[7] However, maintenance insomnia is particularly burdensome.[8] Furthermore, there is evidence that there is a difference in the sleep onset period between onset insomnia and maintenance insomnia as shown on spectral analysis electroencephalogram.[9] Therefore, it would be clinically useful to have a unique and preferably simple acupuncture treatment tailored specifically for patients suffering from maintenance sleep disorders.

According to Chinese medicine, each organ system in the human body has a two-hour time of day in which the energy circulates optimally and contributes maximally to the bolus of nourishing *qi*.[10] To live in balance with the circadian rhythm, the sleep cycle should begin between the hours of 9PM and 11PM at the time of the *San Jiao*, or triple burner organ network. Circulation is at its peak in the gallbladder from 11PM to 1AM, the Liver from 1AM to 3AM, the Lung from 3AM to 5AM, and the large intestine from 5AM to 7AM.[10] A disruption in any of these organ networks may result in disturbed sleep or insomnia.

Maintenance insomnia may represent a disruption or blockage of *qi* between two such sequential acupuncture meridians. Such a blockage can often be detected using pulse diagnosis. For instance, if a patient wakes repeatedly at 3AM, one could reasonably expect a block may be detected at the superficial or *wei* layer between the Liver and Lung meridians, since 3AM is where peak energy moves from the Liver to the Lung meridians. This would be palpable as an excess of energy in the Liver pulse and a deficiency in the Lung pulse using the Five

Element method of pulse diagnosis. In the Five Element tradition, this is called an exit/entry block, and the appropriate treatment is to tonify the exit point of the Liver bilaterally at Liver 14/LR14 (i.e., the final point on the Liver meridian) followed by tonification of the entry point for the Lung channel at Lung 1/LU 1 (the first point on the Lung meridian) by quick insertion and removal of the needle in the four points. The same principle can be applied if the patient wakes repeatedly at 1AM at the exit/entry for Gall Bladder and Liver meridians or at 5AM between the exit/entry for the Lung and Large Intestine. Clearing these blocks restores balance to the meridians, thereby promoting restful and continued sleep.

Case Presentation

A 34-year-old male presented to our integrative medicine practice with symptoms of chronic fatigue, maintenance insomnia, and neuropsychiatric symptoms, including Broca's aphasia. The fatigue and insomnia began at the age of 19 years when he was diagnosed with and treated for Epstein–Barr virus. His symptoms persisted over the course of a year and worsened to the point that he would wake every night at 3AM with severe anxiety and vivid dreams. He became unable to work and spent most of his days inside his house. He was treated by several psychiatrists for more than 10 years for a diagnosis of bipolar disorder and was given numerous psychotropic medications, including onlanzapine, venlafaxine, lamotrigine, quetiapine, oxacarbazepine, sertraline, escitalopram, paroxetine, buproprion, aripiprazole, donepezil, citalopram, modafinil, and ziprasidone, with little to no improvement in his anxiety. None of these medications, all of which were prescribed by other practices, helped with the sleep issue.

During the medication trial, his symptoms progressed, and he developed extreme difficulty with forming words, as well as very poor concentration, and at one point, he became catatonic. Naproxen sodium was the only medication that proved beneficial when he would become agitated. He was later diagnosed by several practitioners outside of our practice with Lyme and reactivated Epstein–Barr, and subsequently treated with antibiotics, intravenous (i.v.) nutrients, and natural supplements. At that point, his speech became more coherent, and he was able to titrate medications successfully.

At our first visit, he was evaluated and placed on an anti-inflammatory and antimicrobial herbal supplement mixture of 20 drops twice per day taken 30 minutes before meals. This herbal mixture contained a proprietary blend of herbs including cat's claw (*Uncaria tomentosa*), licorice (*Glycyrrhiza glabra*), turmeric (*Curcuma longa*), devil's claw (*Harpagophytum procumbens*), Asian ginseng (*panax ginseng*), guduchi (*Tinospora cordifolia*), eleuthero (*Eleutherococcus senticosus*), milk thistle (*Silybum marianum*) and ashwagandha (*Withania somnifera*). He was also given a proprietary blend of amylase, protease, lipase, cellulase, invertase, diastase, and lactase, two capsules with meals, to aid digestion and absorption. In addition, he was given a proprietary probiotic formula of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, and *Bifidobacterium animalis* subsp. *lactis*, two capsules per day. Finally, a proprietary colon program was added to support effective and regular bowel movements, containing a blend of ingredients including psyllium (*Plantago psyllium*), fennel (*Foeniculum vulgare*), buckthorn (*Rhamnus cathartica*), licorice (*Glycyrrhiza glabra*), cascara sagrada (*Rhamnus purshiana*), rhubarb (*Rheum rhabarbarum*), ginger (*Zingiber officinale*), and goldenseal (*Hydrastis canadensis*).

To address his chronic Lyme and Epstein–barr virus infection, he was given i.v. vitamin C 25 g in addition to ozone administration followed by ultraviolet blood irradiation. Ozone therapy was administered according to the technique known as major autohemotherapy outlined by the American Academy of Ozonotherapy whereby 60 cc of blood was drawn from the patient followed by mixing it with 60 cc of medicinal grade ozone at 48 μg/mL.[11,12] After mixing the blood with ozone, it was then passed through a cuvette that had been placed in a Champion 4000 Blood irradiation device, thereby exposing the blood to ultraviolet light to combat chronic infection further.[13] The blood was then allowed to pass back into the patient via gravity.

To address the maintenance insomnia occuring at 3AM, he was treated with acupuncture for an exit/entry block between the Liver and Lung meridians, that is, LR 14, the exit point of the Liver meridian, and LU 1, the entry point of the Lung meridian. In acupuncture five phase dynamics, the Liver meridian has its maximum energy influence between the hours of 1AM and 3AM. Therefore, the final point of the Liver meridian (the exit point LV 14) was chosen. The Lung meridian has maximum activity during the hours of 3AM and 5AM, thereby justifying the choice of the first point (entry point) of that meridian (LU 1). That night, he was able to sleep soundly through the entire night. He slept well until the following week when he began to wake at 1AM. At this time, the treatment was performed to clear the exit/entry block between the Gall Bladder and Liver meridians, using GB 41 (exit point of the gallbladder meridian) and LR 1 (entry point of the Liver meridian). Once again, the points chosen were based on time of maximum activity, which for Gallbladder is 11PM–1AM and for Liver is 1–3AM. After this treatment, he was able to sleep without any symptoms of maintenance insomnia. His mood improved significantly, and his mind became clearer. The patient became more independent and communicative as a result of the holistic protocol, and better able to manage tasks and drive himself to his appointments.

Discussion

Clearly, this patient's insomnia was one of many concomitant psychiatric and physical ailments. The complexity of his illness makes it difficult to determine if his insomnia was subsequent to these other conditions or vice versa. However, there is a precedent in the literature that primary insomnia

strongly correlates with subsequent mental illness. In fact, Baglioni et al. demonstrated that non-depressed people with insomnia have a twofold risk of developing depression compared to those with no sleep difficulties.[14] The entry/exit concepts that were utilized for the patient's insomnia, although not traditionally used to treat mental illness, correlated with the improved psychiatric aspects of his condition in addition to his sleep disorder. Nevertheless, we must consider the possibility that the i.v. therapies and herbal antimicrobials may have been responsible for the patient's improvement. This case is representative of a multifactorial approach that is typical in many integrative medicine practices, in which several interventions are employed within the same visit to bring about improvement for multiple chronic conditions. It would benefit the integrative medical community, as well as the medical community at large, to investigate further ways of conducting research on multiple simultaneous interventions. Not only is this the treatment paradigm that is generally used in many "real world" healthcare settings, but it is also the approach of many practitioners who claim high success rates in the treatment of chronic diseases, as illustrated by this particular case. ■

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