

## Case Report

# Effectiveness of Acupuncture Point ANMIAN in the Treatment of Insomnia: A Case Series

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### ABSTRACT

Insomnia is a prevalent sleep disorder that affects energy, mood, health, and overall quality of life. The intricate relationship between sleep and metabolism can lead to significant health issues when disrupted. Chronic insomnia and short sleep duration are linked to increased risks of various chronic conditions and higher mortality rates. This study reports on five patients presenting with insomnia at the Outpatient department, of the International Institute of Yoga and Naturopathy Medical Sciences, Chengalpattu. Each patient received acupuncture targeting the anmian points, with each 30-minute session administered five days a week for two weeks. Patients included are a 26-year-old male, a 68-year-old female, an 18-year-old female, a 47-year-old male, and a 65-year-old male, all experiencing severe insomnia with varying comorbidities. Results: Post-treatment, all patients reported significant improvements in sleep duration and quality, extending to nearly seven hours per night and reducing nighttime awakenings. Pittsburgh Sleep Quality Index (PSQI) scores showed substantial reductions, indicating mild insomnia. Improvements in daytime functioning were also noted. We meticulously monitor the patient for one month to ensure sustained effects. Acupuncture targeting the anmian points effectively improved sleep duration and quality in patients with severe insomnia, demonstrating its potential as a viable treatment for enhancing sleep and overall well-being.

**Key words:** Insomnia, Anmian, PSQI, Acupuncture, Case Report.

Insomnia is a common sleep disorder causing difficulty falling or staying asleep, early awakening, and tiredness upon waking. It can drain energy, impact mood, and negatively affect health, work performance, and quality of life [1,2]. Sleep and metabolism are essential for all living organisms. Their balance-seeking nature makes their connection intricate and mutually influential. Inadequate sleep can disrupt metabolism, and metabolic irregularities can negatively impact sleep patterns[3]. The prevalence rates for Insomnia, Obstructive Sleep Apnea (OSA), and Restless Legs Syndrome (RLS) were 25.7%, 37.4%, and 10.6%, respectively. These sleep disorders were more common among individuals with diabetes, heart disease, and even in the healthy population[4]. Recently, chronic insomnia and short sleep duration have increased among adults. Research shows that insomnia patients with short sleep are at higher risk for chronic conditions like obesity, diabetes, cardiovascular disease, chronic kidney disease, and hypertension. Additionally, these individuals may experience inadequate hydration. Health outcomes are significantly worse for

insomnia patients with short sleep duration. Studies show their mortality rate is three times higher than those without insomnia. The combination of insomnia and short sleep duration exacerbates health problems and increases mortality rates even further [5]. Anmian - also called a Peaceful Sleep point located at the back of the head on the mastoid process will help induce quality sleep[6–8].

Acupuncture stimulation at specific acupoints is believed to locally influence neural pathways by releasing neurotransmitters such as endorphins and serotonin, which help regulate sleep and wakefulness. Systemically, acupuncture may affect neuroendocrine pathways, immune responses, and autonomic nervous system activity, resulting in enhanced physiological functioning[9]. Serotonin levels in blood plasma platelets were assessed due to their role in regulating sleep and wakefulness. Low serotonin levels are linked to conditions like insomnia[10]. When serotonin levels are restored to normal, sleep patterns tend to improve. The PSQI and Insomnia Severity Index (ISI) are commonly utilized Subjective measures of sleep quality, demonstrating

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strong internal reliability and validity in their reported findings[11]. Acupuncture may help regulate neural pathways and neurotransmitter release, including serotonin and endorphins, essential for sleep regulation. This holistic approach can potentially manage insomnia by improving sleep quality and overall well-being.

## CASE REPORT

### Case No. 1

The 26-year-old male presented at the outpatient department of the International Institute of Yoga and Naturopathy Medical Sciences in Chengalpattu with chronic insomnia persisting for three months. He struggled to initiate and maintain sleep, averaging less than four hours nightly, leading to daytime fatigue, irritability, and reduced concentration. Without significant stressors, routine changes, recent travel, and initial over-the-counter sleep aids provided minimal relief. Opting for acupuncture, he underwent treatments five days weekly over two weeks, resulting in improved sleep duration, fewer awakenings, and a PSQI score improvement from 16 to 5 [Table – 1], indicating mild insomnia. Anmian acupoint therapy notably alleviated his symptoms and enhanced daytime functionality.

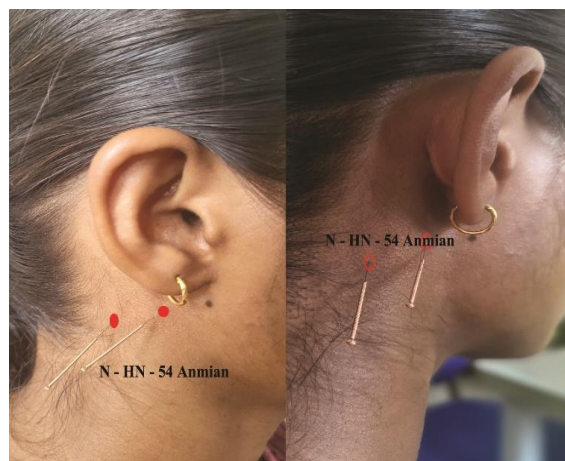
### Case No. 2

On May 19, 2024, a 68-year-old female sought treatment at the outpatient department of the International Institute of Yoga and Naturopathy Medical Sciences in Chengalpattu for insomnia persisting three months after her husband's death. She struggled to fall and stay asleep, averaging less than four hours nightly, resulting in daytime fatigue and irritability. Despite Type 2 diabetes mellitus, without hypertension, over-the-counter sleep aids provided minimal relief. Following treatment, she achieved significant improvement, sleeping seven hours with fewer awakenings. Her PSQI score improved from 12 to 5 [Table – 1], indicating mild insomnia, benefiting from anmian acupoint therapy's efficacy in enhancing sleep and daytime functioning.

### Case No. 3

This 18-year-old female presented at the outpatient department of the International Institute of Yoga and Naturopathy Medical Sciences in Chengalpattu on May 22, 2024, with severe insomnia persisting for a year. Initially averaging less than four hours of sleep nightly, she experienced daytime fatigue, irritability, and concentration difficulties, alongside a history of hemorrhoids and weight loss. Post-treatment, she achieved an average of seven hours of sleep per night with fewer awakenings. Her PSQI score improved from 17 to 7 [Table – 1], indicating minor

insomnia. Anmian acupoint therapy effectively enhanced her sleep quality and daytime functionality.



**Figure 1: Anmian points (N – HN – 54, according to A Manual of Acupuncture Text).**

### Case No. 4

On May 22, 2024, a 47-year-old male sought treatment at the outpatient department of the International Institute of Yoga and Naturopathy Medical Sciences in Chengalpattu for severe insomnia lasting a year, averaging less than three hours of sleep per night. Post-treatment, he experienced significant improvement, achieving nearly seven hours of sleep with fewer awakenings. His PSQI score improved from 12 to 6 [Table- 1], reflecting mild insomnia. Anmian acupoint therapy effectively alleviated symptoms and notably enhanced his daytime functioning.

### Case No. 5

On May 20, 2024, a 65-year-old male sought treatment at the outpatient department of the International Institute of Yoga and Naturopathy Medical Sciences in Chengalpattu for severe insomnia that persisted for a year, where he averaged less than four hours of sleep per night. This condition caused daytime fatigue and irritability, compounded by a five-year history of Type II diabetes mellitus. Following treatment, his sleep duration improved significantly to nearly seven hours nightly, with reduced nighttime awakenings. His Pittsburgh Sleep Quality Index (PSQI) score improved from 15 to 6 [Table – 1], indicating mild insomnia. Anmian acupoint therapy effectively alleviated his insomnia and enhanced daytime functioning.

In all cases, acupuncture needles were bilaterally inserted at the anmian acupoint, located [Figure – 1] behind the ear between Yin Feng (SJ17) and Fengchi (GB20), slightly posterosuperior to Wangu (GB12). Each session lasted 30 minutes, administered five days a week over two weeks, with needling depth ranging from 0.5 to 0.8 cun perpendicular to the skin.

Table 1. Scoring the PSQI#

Case No.	Pre/Post	*Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	**GPSQI
Case No: 1	Pre	3	3	3	2	2	0	3	16
	Post	0	1	1	1	1	0	1	5
Case No: 2	Pre	1	3	3	2	2	0	1	12
	Post	0	1	1	1	1	0	1	5
Case No: 3	Pre	3	3	3	3	2	0	3	17
	Post	2	1	0	1	1	0	2	07
Case No: 4	Pre	2	1	3	2	2	0	2	12
	Post	1	1	1	1	1	0	1	6
Case No: 5	Pre	2	3	3	2	2	0	3	15
	Post	1	1	1	1	1	0	1	6

\*Comp – Component, \*\*GPSQI – Global Pittsburgh Sleep Quality Index.

#PSQI – Pittsburgh Sleep Quality Index.

## DISCUSSION

Insomnia, impacting sleep quality, health, mood, and daily function, was addressed in this study through acupuncture at anmian points. Results showed significant improvements in sleep duration and quality across various patient demographics and comorbidities. Nightly sleep duration increased, nighttime awakenings decreased, and Pittsburgh Sleep Quality Index (PSQI) scores improved from moderate to mild insomnia in most cases. Acupuncture at anmian points offers a promising non-pharmacological option for severe insomnia, particularly beneficial for patients resistant to conventional treatments or preferring alternative therapies.

Acupuncture's efficacy in treating insomnia is thought to be mediated through several mechanisms. Stimulation of specific acupoints, such as anmian points, is believed to modulate the release of neurotransmitters like serotonin, Orexin, and endorphins, which play crucial roles in regulating sleep-wake cycles and mood[10,12–15]. Acupuncture may also influence the autonomic nervous system, improve neuroendocrine functions, and enhance immune responses, thereby promoting an overall physiological balance conducive to better sleep.

The study's promising results highlight acupuncture's potential as a complementary or alternative treatment for insomnia. Its non-invasive nature and minimal side effects make it appealing, especially for patients with chronic insomnia or conditions like diabetes and chronic pain. Future research should involve larger, controlled clinical trials to validate these findings and examine acupuncture's long-term effects on sleep patterns and overall well-being. Additionally, exploring optimal session frequency, and duration, and comparing acupuncture with other therapies will provide valuable insights. Factors contributing to participants' levels of insomnia include stress, medical conditions like diabetes or

heart disease, lifestyle factors such as irregular sleep schedules, and psychological factors such as anxiety or depression. Limitations of this study include the small sample size, lack of long-term follow-up data, and potential for placebo effects with acupuncture. Future research should focus on larger, randomized controlled trials to confirm findings across diverse populations and explore optimal acupuncture protocols, duration of treatment effects, and comparative effectiveness with other therapies. Additionally, investigating the underlying mechanisms through biomarkers and neuroimaging could provide deeper insights into acupuncture's therapeutic effects on insomnia.

## CONCLUSION

Acupuncture targeting the anmian points shows promise in managing severe insomnia. The observed improvements in sleep quality and daytime functioning across diverse patient profiles underscore its clinical utility. As research progresses, acupuncture may become integral to comprehensive insomnia treatment plans, offering a holistic and effective approach to enhancing sleep and quality of life.

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