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## CASE REPORT

# MASSAGE THERAPY INTEGRATED WITH UNANI CEPHALIC NATŪL THERAPY (IRRIGATION OF HEAD BY OIL) FOR UNRESOLVED CHRONIC INSOMNIA: A CASE REPORT

Uzair Yousef Mir<sup>1</sup>, Hamid Ali<sup>2</sup> and Shaik Adeena Parveen<sup>3</sup>

From PG Scholar<sup>1</sup>, Department of Ilaj Bit Tadbeer, NIUM, Bengaluru, Karnataka, India  
Associate professor<sup>2</sup>, PG Scholar<sup>3</sup>, Department of Ilaj Bit Tadbeer, NIUM, Bengaluru, Karnataka, India  
PG Scholar<sup>3</sup>, Department of Ilaj Bit Tadbeer, NIUM, Bengaluru, Karnataka, India

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### ABSTRACT

Chronic Insomnia is a serious public health concern and is described as a subjective experience of difficulty with sleep initiation, duration, consolidation, or quality that persists despite having enough opportunities for sleep and impairs one's ability to function during the day. In terms of duration, insomnia can be acute (inability to consistently sleep well for a period of one to four weeks or less than a month), transient (symptoms last for less than a week), or chronic (symptoms remain for at least three nights per week for at least one month and are not associated with other sleep, medical, or mental disorders). Chronic insomnia is a prevalent sleeping problem that presents major treatment challenges. We present the case of a 37-year-old male patient with persistent insomnia who was treated with multiple hypnotic and psychotropic medications for 3 years with no noticeable improvement. The patient underwent treatment with integrative regimens in the form of *Natūl* (irrigation therapy) and Massage therapy using *Roghan e Kahu* (*Lactuca sativa* oil). Following the intervention, the patient reported increased sleep quality and stress reduction. PSQI (Pittsburgh Sleep Quality Index) showed improvement in overall sleep quality during integrated therapy sessions and thereafter. The study found that combining *Natūl* therapy with massage therapy can be an effective non-pharmacological treatment for chronic insomnia.

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### INTRODUCTION

Chronic insomnia is defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as subjective sleep disturbance lasting at least three nights per week for more than three months, together with daytime impairment (American Psychiatric Association, 2013)<sup>1</sup>. Chronic insomnia is often a waxing and waning disorder, with spontaneous or stress-induced exacerbations<sup>2</sup>. Patients with chronic insomnia frequently have daily impairment of cognition, mood, or performance, which affects not only the patient and family, but also friends, coworkers, and carers. There is also a higher risk of depression, anxiety, substance use, suicide, and immunological dysfunction<sup>3</sup>. Chronic insomnia affects approximately 10% to 20% of the population and is more common in women, older persons, and people with lower socioeconomic position<sup>4</sup>. Approximately 85% of chronic insomniacs go untreated, and two-thirds have a limited understanding of alternative treatment choices. Approximately 20% of these people use untested cures or alcohol to improve their sleep<sup>5</sup>. As far as the management of chronic insomnia is concerned, it is managed either with non-pharmacological

interventions such as cognitive behavioral therapy (CBT-I), which requires prolonged in-person sessions with therapy providers, or with pharmacological intervention, which employs the use of hypnotic drugs that suppress GABA-A receptors in the brain. Residual daytime effects, dependency, and withdrawal symptoms from hypnotic medications are a significant public health concern<sup>6</sup>. Furthermore, therapy for non-responsive insomnia is frequently overlooked (Akinnusi and El-Solh, 2021)<sup>7</sup>. As a result, there is a need for an alternate and integrative method for managing chronic insomnia. In the Unani system of medicine, insomnia is known as *sahar*. Keeping etiology in mind, unani physicians have successfully managed chronic insomnia (*Sahar*) using the principles of *Izala-e Sabab* (removal of cause) and *Tadeele Mizaj* (correction of temperament) with various drugs and regimens such as *Natūl* (Irrigation), *Dalk* (Massage), *Tadheen* (Fumigation), *Zamad* (Paste), *Riyazat* (Exercise), *Hammam*, and others<sup>8,9</sup>. Unani (Greek system of medicine) physicians commonly use *Natūl* (irrigation), a non-invasive oil flow therapy, and *Dalk* (massage therapy) to treat psychological illnesses such as insomnia, anxiety, and stress<sup>8</sup>. We present a case of chronic insomnia with a poor response to numerous hypnotic and psychotropic

\*Corresponding author: Uzair Yousef Mir

From PG Scholar, Department of Ilaj Bit Tadbeer, NIUM, Bengaluru, Karnataka, India

medicines. We combined *Natūl* therapy with massage therapy to provide a safe and effective early treatment option

**CASE REPORT**

A 37-year-old married, self-employed male was admitted to the department of regimenal therapies (Ilaj bit tadbeer) at the National Institute of Unani Medicine, Bengaluru, with complaints of reduced energy and difficulty falling and maintaining sleep, early morning awakening, and feeling tired and anxious during the day. As per patient, he experienced this problem after some stress owing to the difficult schedule of his job. Since then, his insomnia has persisted with mild impairment in mood, with an average of 3–4 hours of non-refreshing sleep per night. As the condition progressed to a severe state wherein his daily activities were affected, he took medical consultation and he was prescribed selective serotonin reuptake inhibitors and benzodiazepines, with further addition of antipsychotics, sedatives, and tricyclic antidepressants and beta-blocker medications over a period of 3 years. Despite initial improvement, his sleep quality was again reduced to 3–4 h/night, associated with low mood and fatigue in 2020, of which low mood and fatigue improved with medications, however, he continued to remain symptomatic with insomnia. The patient had no history of any chronic illness except depression. On the PSQI, the patient has poor overall sleep quality. The patient was diagnosed with chronic insomnia. After obtaining informed consent, the patient underwent a clinical sleep assessment with the Pittsburgh sleep quality index (PSQI) (Buysse et al., 1989). The assessment was done at baseline ( $V_0$ ) and after completion of integrative therapy ( $V_1$ ), i.e., on the 28<sup>th</sup> day.

**Table 1 PSQI Scale Scoring at  $V_0$**

S No	Quality of Sleep	0 <sup>th</sup> Day
1	Duration	03
2	Disturbance in Sleep	01
3	Latency	03
4	Day Dysfunction	03
5	Sleep Efficiency	03
6	Over all Sleep Quality	03
7	Need Medicine to sleep	03
8	Total	19

**Method of preparation of oil used for integrative therapy:**

*Lactuluca sativa* oil (*Roghn e kahu*) was prepared as per guidelines of NFUM (National Formulary of Unani Medicine). Crude fresh *Lactuluca sativa* seeds were collected from the local market and crushed to obtain juice (*sheera kahu*), later it was mixed with sesame oil (*Roghan e kunjad*) in the ratio of 2:1 and boiled till the watery content from the oil was evaporated<sup>10</sup>.

**Dosage and mode of administration of oil:**

**For Massage:** 15-20 ml of oil was used.

**For Irrigation (*Natūl*):** 2 litres of oil were used.

**PROCEDURE OF INTEGRATIVE THERAPY (MASSAGE AND NATŪL):**

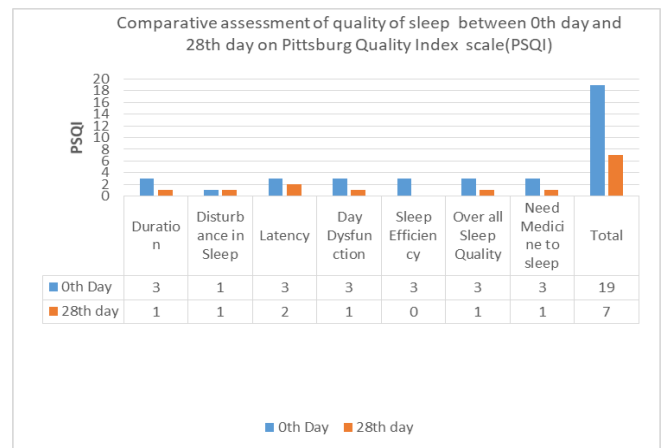
After a detailed assessment, the patient was given the first session of massage with lukewarm *Lactuluca sativa* oil over the head (forehead, mastoid process, occipit and whole scalp) for about 20 minutes. After massage, with the aid of an automatic electrical *Natūl* machine, *Natūl* therapy with the same type of oil was done over the forehead for another 20

minutes perpetually, wherein the lukewarm LS oil was allowed to pour over the forehead in a streamline manner early morning with a frequency of three sessions per week on alternate days for two weeks, followed by twice weekly for the next two weeks. The temperature of the oil was maintained at 45 °C, and oil was poured at a rate of 300 ml/min. Total Ten sessions were given in four weeks. *Lactuluca sativa* oil was prepared as per the guidelines of the NFUM from crude *Lactuluca sativa* seeds and sesame oil in a ratio of 2:1 in the pharmacy of the NIUM. Unani physicians have employed this oil for centuries in the management of insomnia and other mental disorders. Before and after the completion of each session, vital parameters such as blood pressure, pulse, and respiratory rate were recorded. After completion of ten sessions, post-intervention improvement in scores of PSQSI indicated that the severity of insomnia reduced from severe to moderate. Changes in the parameters of PSQI are described in Table 2

**Table 2 PSQI Scale Scoring at  $V_1$**

S No	Quality of Sleep	28 <sup>th</sup> Day
1	Duration	01
2	Disturbance in Sleep	01
3	Latency	02
4	Day Dysfunction	01
5	Sleep Efficiency	0
6	Over all Sleep Quality	01
7	Need Medicine to sleep	01
8	Total	07

**Comparative assessment of quality of sleep prior to treatment and post treatment on Pittsburgh Sleep Quality Index Scale (PSQI).**



**DISCUSSION**

This study is the first documented case to show the impact of integrative regimenal therapies like *Natūl* and massage on chronic insomnia, utilizing validated clinical insomnia evaluation tools. At the time of recruitment, the patient was a poor sleeper, anxious, and stressed. After evaluation, it was discovered that the patient's predisposing and precipitating factors for insomnia included work-related stress and continual sleep concern. The patient reported improved sleep quality after receiving an integrated intervention including massage and *Natūl*. He experienced progressive calmness after each session. The PSQI indicated a considerable improvement in sleep quality, as seen in Table 2.

The case study results indicate that integrative regimenal therapy (*Natūl* and massage) with *Lactuluca sativa* oil has

potential anti-stress, anxiolytic, and sleep-inducing benefits. Previous EEG investigations of Natūl indicate an increase in alpha rhythm and decreased beta activity, akin to profound meditation (Dhuri et al., 2013)<sup>11</sup>. The soothing effect offered by Natūl may be attributed to the continuous flow of *Lactuluca sativa* oil over the forehead, which sends afferent signals to the cerebral cortex, resulting in a changed state of awareness and anxiolysis<sup>12,13</sup>(Uebaba et al., 2005; Meenraj et al., 2018). Massage therapy (*Dalk*) with the same oil prior to the procedure amplified the hypnotic effect further. Sleep is affected by various factors, including circadian, homeostatic, psychological, behavioral, and cognitive elements. Massage and *Natūl* therapies may improve sleep quality and efficiency through their soothing, contemplative, and sympatholytic effects. This case report shows that an integrative approach involving massage and *Natūl* can improve sleep quality and efficiency in chronic insomnia.

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#### DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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