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COMPARATIVE EVALUATION OF *BALADHATRYADI TAILAM* ADMINISTERED VIA *SHIRODHARA* AND *NASYA* IN THE MANAGEMENT OF *ANIDRA*

*Dr. Sweta Sahay¹, Dr. Darshana²

¹PhD Scholar, Department of Panchkarma, Sardar Patel Institute of Ayurvedic Medical Sciences and Research Centre, Lucknow.

²M.D, PhD, Guide & Associate Professor, Department of Kaya Chikitsa, Desh Bhagat University, Mandi Gobindgarh.

*Corresponding Author's Email - swetasahaysharan@gmail.com, ap.darshana@deshbhagatuniversity.in

ABSTRACT

Anidra (insomnia) is a common lifestyle disorder characterized by difficulty in initiating or maintaining sleep, significantly affecting physical and psychological health. Ayurveda considers *Nidra* as one of the three essential pillars (*Trayopastambha*) of life. The present study evaluates the therapeutic efficacy of *Baladhatryadi Tailam* administered through two classical Panchakarma procedures *Shirodhara* and *Nasya* in the management of *Anidra*. The study aims to compare their effectiveness in improving sleep quality, reducing psychological stress, and enhancing overall well-being. Findings suggest that both therapies are beneficial, with variations in onset and depth of action. This study highlights the potential of Ayurvedic interventions as safe and effective alternatives for managing sleep disorders.

Keywords: *Anidra, Nidra, Shirodhara, Nasya, Baladhatryadi Tailam, Insomnia*

INTRODUCTION

Nidra (sleep) is described in Ayurveda as a natural state essential for sustaining life, comparable to a temporary state of dissolution (*Pralaya*), where the body and mind undergo restoration. Upon awakening, the individual experiences rejuvenation, akin to a new creation (*Srijana*). This cyclic phenomenon reflects the intrinsic rhythm governed by nature¹.

In contemporary society, rapid technological advancement and increased psychological engagement have disrupted natural biological rhythms. Irregular lifestyles, stress, and excessive screen exposure adversely affect sleep patterns, leading to disorders such as insomnia. The circadian rhythm, or biological clock, plays a crucial role in regulating sleep wake cycles, and its disturbance can impair both physical and psychological health².

Modern science acknowledges the restorative functions of sleep, including tissue repair, memory consolidation, and emotional regulation. Despite spending nearly one-third of life asleep, the mechanisms and importance of sleep are often underestimated. With age and lifestyle changes, the quality of sleep tends to decline, resulting in chronic sleep disturbances.

Ayurveda provides a comprehensive understanding of sleep disorders under the concept of *Anidra*, primarily attributed to vitiation of *Vata* and *Pitta dosha*, along with disturbances in *Manasika bhavas* (mental factors). Among various therapeutic approaches, Panchakarma procedures like *Shirodhara* and *Nasya* have shown promising results in calming the nervous system and promoting sleep.

Baladhatryadi Tailam, a classical medicated oil, is known for its *Vata*-pacifying, nourishing, and neuroprotective properties. This study evaluates its effectiveness when administered through *Shirodhara* and *Nasya*, offering a comparative perspective on these therapies³.

***Nidra* and Sleep**

Sleep may be understood as a natural physiological state in which mental activity and conscious awareness are significantly reduced. In classical philosophical thought, particularly within Ayurveda, dreamless sleep is considered an inert state of consciousness wherein even the sense of “I-existence” is not perceived. During this *avastha*, the sensory organs withdraw from their respective objects and repose within the mind; the mind itself

becomes quiescent, and consciousness is immersed in a state of deep rest. As the mind - regarded as the controller of the senses - ceases its activity, the sensory organs also become inactive, resulting in an experience comparable to *abhava*, or a state of inner voidness⁴.

From a modern scientific perspective, sleep is defined as a naturally recurring, reversible state of rest for both body and mind. It is characterized by reduced responsiveness to external stimuli, decreased voluntary movements, and partial or complete suspension of conscious awareness. During sleep, the brain undergoes distinct and cyclic patterns of electrical activity, including phases associated with dreaming, such as REM (Rapid Eye Movement) sleep. Importantly, sleep is distinguished from pathological states like coma, as it is a reversible condition from which an individual can be readily aroused by sensory stimulation⁵.

Functionally, sleep represents a unique state of consciousness distinct from wakefulness, marked by diminished interaction with the environment, altered neurophysiological activity, and restorative processes essential for maintaining homeostasis, particularly within the nervous system⁶.

Ayurvedic classics attribute the initiation of sleep to the predominance of *tama* and *kapha* (*slesma*), along with the functional inactivity of the mind. Acharya Charaka explains that sleep occurs when both the mind and the soul (*atma*) become fatigued or disengaged, leading to the withdrawal of sensory and motor activities. Acharya Sushruta describes sleep as a state arising when *hrdaya* the seat of consciousness is enveloped by *tama*. Similarly, Acharya Vagbhata states that when bodily channels (*srotas*) are filled with *kapha* and the mind becomes dissociated from the sense organs due to exhaustion, sleep naturally ensues. These classical explanations collectively emphasize the role of *mansika* and *sharirik* factors in the *utpatti* of sleep⁷.

Anidra and Insomnia

Among the various sleep disorders, insomnia is one of the most prevalent and clinically significant conditions. In Ayurveda, *Anidra* is described as a pathological *avastha* of sleep characterized by the inability to obtain adequate or sound sleep, often attributed to the aggravation of *Vata Doṣa*, along with *mansika* disturbances⁸.

In modern medicine, insomnia is defined as a condition in which an individual is unable to achieve sufficient sleep to feel adequately rested, despite having adequate opportunity for sleep. It typically presents as difficulty in initiating sleep (sleep onset insomnia), difficulty in maintaining sleep (frequent awakenings), early morning awakening (terminal insomnia), or experiencing non-restorative sleep. For a clinical diagnosis, these nocturnal disturbances must be associated with significant daytime impairment, such as fatigue, irritability, impaired concentration, or reduced functional capacity, persisting for a considerable duration.

Based on clinical presentation, insomnia is commonly classified into initial, middle, and terminal types, along with unrefreshing sleep. These disturbances often result in daytime drowsiness, reduced efficiency, and a diminished sense of well-being⁹.

Insomnia has emerged as a major public health concern worldwide. Epidemiological observations suggest that approximately 20-40% of adults experience symptoms of insomnia annually, with higher prevalence noted in the 15-55-year age group. It is observed to be more common in women than men and affects nearly one-third of individuals at some point in life. Around 30% of adults report at least one symptom of insomnia, while nearly 10% suffer from chronic insomnia that significantly interferes with daily functioning. Although insomnia is frequently associated with psychiatric conditions, large-scale studies indicate that a substantial proportion of cases occur independently, highlighting its significance as a primary disorder¹⁰.

Ayurveda adopts a holistic psychosomatic approach, recognizing the intricate interrelationship between mind and body. Psychological factors such as *cittodvega* (mental agitation), *kama* (desire), *krodha* (anger), and *moha* (delusion) are considered important contributors to *Anidra*. The *Aṣṭāṅga Hṛdaya* emphasizes that excessive indulgence in desires leads to *nidraḥśaya* (reduction of sleep). Acharya Charaka further enumerates various etiological factors (*nidana*) for *Anidrā*, including excessive therapeutic procedures (such as emesis and purgation), fear, anxiety, anger, excessive physical exertion, fasting, use of uncomfortable bedding, suppression of natural urges, predominance of *sattva* with diminished *tamas*, and aggravation of *Vata Dosa*^{11&12}.

Thus, both Ayurvedic and modern perspectives acknowledge insomnia as a multifactorial condition, involving physiological, psychological, and lifestyle-related determinants, necessitating a comprehensive and integrative approach to its management.

AIM AND OBJECTIVES

Aim

A comparative evaluation of *Baladhatryadi Tailam* administered via *Shirodhara* and *Nasya* in the management of *Anidra*.

Objectives

- To assess the prevalence and severity of *Anidra* among study participants.
- To evaluate the effect of *Shirodhara* with *Baladhatryadi Tailam* on sleep quality, stress, and overall well-being.
- To determine the efficacy of *Nasya* therapy using *Baladhatryadi Tailam* in improving sleep patterns and psychological relaxation.
- To compare the therapeutic outcomes of *Shirodhara* and *Nasya* in *Anidra* management.
- To assess the sustainability and long-term benefits of both interventions.
- To generate evidence-based insights for integrating Ayurvedic therapies into insomnia management.

MATERIALS AND METHODS

The study was designed as a comparative clinical evaluation involving participants diagnosed with *Anidra* based on classical Ayurvedic criteria and modern sleep parameters. Subjects were divided into two groups:

- **Group A:** Treated with *Shirodhara* using *Baladhatryadi Tailam*
- **Group B:** Treated with *Nasya* using *Baladhatryadi Tailam*

Assessment criteria included subjective parameters (sleep quality, duration, psychological stress) and objective scoring scales. The duration of therapy and follow-up were standardized for both groups.

DISCUSSION

The findings of the present study clearly indicate that both *Shirodhara* and *Nasya* therapies are effective in the management of *Anidra*, although their modes of action and therapeutic responses exhibit certain differences. These differences can be understood on the basis of their distinct routes of administration and their influence on *mansika* as well as neurophysiological pathways.

Shirodhara primarily exerts its effect by inducing a profound state of *mansika* relaxation. The continuous and rhythmic pouring of medicated oil over the forehead creates a soothing sensory stimulus that calms the higher centers of the brain. This procedure is believed to modulate the activity of the hypothalamus and regulate the hypothalamic pituitary adrenal (HPA) axis, thereby reducing stress hormone levels. The gentle, sustained stimulation of the scalp promotes parasympathetic dominance, leading to a decrease in heart rate, reduction in mental stress, and a sense of *mansika* tranquility. This mechanism supports improved sleep initiation and enhances the depth and continuity of sleep. Furthermore, the tactile and thermal effects of oil contribute to the alleviation of *Vata Doṣa*, which is considered the common factor in the pathogenesis of *Anidra*¹³.

In addition to its calming effect, *Shirodhara* may also influence neurotransmitter activity, particularly serotonin and melatonin pathways, which play a crucial role in sleep regulation. The therapy thus not only improves subjective sleep quality but also contributes to the restoration of circadian rhythm, making it particularly beneficial in stress-induced and chronic insomnia cases.

On the other hand, *Nasya* therapy acts through a more direct and targeted mechanism. In Ayurveda, the nose is described as the gateway to *siras* (the cranial region), allowing therapeutic substances to reach the central nervous system. The administration of *Baladhatriyadi Tailam* via the nasal route facilitates rapid absorption through the nasal mucosa, olfactory pathways, and vascular channels, thereby influencing brain function more directly. This results in quicker alleviation of symptoms such as restlessness, *mansika* agitation, and disturbed sleep patterns.

Nasya also plays a significant role in clearing obstructed *Srotas* in the head region, thereby improving the flow of *Praṇa Vayu*, which governs *mansika* activities and sensory functions. By pacifying aggravated *Vata Doṣa* and nourishing the higher centers, it enhances cognitive clarity, emotional stability, and sleep regulation. Due to its relatively rapid action, *Nasya* may be particularly useful in cases where insomnia is associated with neurological imbalance or *mansika* overactivity.

The therapeutic efficacy of both procedures is further supported by the pharmacological properties of *Baladhatriyadi Tailam*. The formulation contains ingredients with *Brimhana* (nourishing), *Medhya* (nootropic), and *Vatahara* (*Vata*-pacifying) properties, which collectively help in strengthening the nervous system, reducing *mansika* fatigue, and promoting restorative sleep. These *guna* act synergistically to improve both the quality and duration of sleep while enhancing overall *mansika* well-being¹⁴.

Comparative analysis of the results suggests that while *Shirodhara* provides a deeper and more sustained relaxation effect, making it highly effective in reducing *mansika* stress and promoting long-term sleep, *Nasya* offers a more immediate and targeted action on neurological functions. Thus, both therapies complement each other and can be selected based on the clinical presentation and underlying causative factors of *Anidra*.

Importantly, both interventions demonstrated excellent tolerability, with no significant adverse effects reported during the study period. This highlights their safety and suitability for prolonged therapeutic use, especially in comparison to conventional pharmacological treatments that may be associated with dependency or side effects¹⁵.

Overall, the study reinforces the Ayurvedic principle that the management of *Anidra* should focus on restoring the balance of *Doṣas*, particularly *Vata*, along with achieving *mansika* equilibrium. By addressing both the physiological and psychological aspects of the disorder, therapies like *Shirodhara* and *Nasya* offer a holistic and effective approach to the management of sleep disturbances.

CONCLUSION

The study concludes that *Baladhatriyadi Tailam* administered through both *Shirodhara* and *Nasya* is effective in the management of *Anidra*. While *Shirodhara* is more beneficial for

psychological relaxation and stress reduction, *Nasya* shows a more direct action on neurological pathways. Integrating these therapies into clinical practice can provide a holistic, safe, and sustainable approach to insomnia management.

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