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Research Article

An Observational Study of Nidranash Hetu as Per Charaka Samhita in the Present Era

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ABSTRACT:

Study Aims: This investigation evaluates the classical etiopathogenesis of Nidranash as expounded in Charaka Samhita and assesses the relevance of these classical Hetus in today's population.

Objectives: Systematic collection and classification of textual references on Nidranash from Charaka Samhita into five categories—Karya, Kala, Vikara, Prakruti, and Vayu—and conduct an observational cross-sectional survey of 300 insomnia patients to map these ancient principles to modern lifestyle triggers.

Methodology: A total of 1,236 patients were screened at the Kayachikitsa OPD.Three hundred patients (aged 18–60 years) meeting diagnostic criteria were enrolled.Data were collected using a structured Case Record Form (CRF) and validated for randomization using a statistical Run test.Observations: The 31–40 years age group was most affected (39.66%), with a slight male predominance (55.66%).High-stress occupations, such as business

(28.66%) and service (26.33%), dominated the sample.Psychological stress (Chinta) was reported in 34.66% of cases.When mapped to the five classical Hetus, Karya (occupational stress/overwork) emerged as the dominant trigger (48%, n = 144), followed by Vayu/Vata Prakopa (28%, n = 84), Kala (14.33%, n = 43), Prakruti (7.33%, n = 22), and Vikara (2.33%, n = 7).
Principal Conclusions: The classical etiology defined by Acharya Charaka remains thoroughly valid in the modern era, with work overload and hyper-arousal (Karya Vyagrata) identified as the primary modern driver of sleep disorders.

Keywords: Nidranash, Charaka Samhita, Hetu, Insomnia, Trayopastambha, Karya Vyagrata, Vata Prakopa, Ayurveda

Introduction

Ayurveda, the ancient Indian system of medicine, provides a holistic framework for maintaining physiological homeostasis and overall well-being.
The three sub-pillars of life—Ahara (diet), Nidra (sleep), and Brahmacharya (regulated lifestyle)—are central to this philosophy[1]. Sleep, in particular, is vital for cellular repair, cognitive function, metabolic regulation, and psychological balance.In Charaka Samhita (Sutrasthana 21/36), Acharya Charaka emphasizes that happiness and misery, strength and debility, and even life and death are fundamentally dependent on proper sleep.
Sleep occurs when the mind (Manas) and soul (Atma) become exhausted, and the sensory organs (Indriyas) detach from their respective sensory objects.[2]
It is primarily governed by Kapha Dosha and Tamo Guna.[3]
Conversely, the loss or impairment of sleep, termed Nidranash or Anidra, is classified under the 80 Nanatmaja Vata Vikaras.[4] In modern clinical science, Nidranash correlates with insomnia, a disorder characterized by difficulty initiating or maintaining sleep despite adequate opportunity, leading to daytime dysfunction.[5]
In the contemporary era, insomnia has emerged as a significant public health issue, with prevalence rates in India reaching 25.7%.[6]
Chronic sleep deprivation accelerates the incidence of non-communicable diseases, cardiovascular disorders, metabolic syndromes, and psychiatric illnesses.[7]
In Charaka Samhita (Sutrasthana 21/57), Acharya Charaka outlines the fundamental aetiological sutra for sleep loss:

एत एव च विज्ञेया निद्रानाशस्य हेतवः।
कार्यं कालो विकारश्च प्रकृतिर्वायुरेव च ॥५७॥

This sutra categorizes all causes of Nidranash into five broad categories: Karya (occupational stress/activity), Kala (chronobiological time/age), Vikara (pathological conditions), Prakruti (individual constitution), and Vayu (direct Vata provocation).
The present study was undertaken to scientifically review these classical Hetus and evaluate their observational prevalence in the modern population.

Materials and Methods

Literary Search and Classification: A comprehensive textual search of Charaka Samhita and its primary commentary, Ayurveda Dipika by Chakrapanidatta, was conducted to isolate all references mentioning Nidra and Nidranash.
A total of 66 textual references were identified and cataloged into three analytical categories: Hetu Sutras (causative factors, n = 10), Chikitsa Sutras (therapeutic protocols, n = 10), and Linga Sutras (symptomatic manifestations, n = 46).Specific classical causes were then structured into Charaka's five-fold classification framework.

Clinical Study Design and Patient Selection

A cross-sectional clinical survey was carried out in the outpatient department (OPD) of Kayachikitsa at Ashtang Ayurved Mahavidyalaya Hospital, Pune.
Ethical approval from the institution was obtained before starting the screening process.The required sample size was determined using a standard epidemiological formula:
$n = (Z^2 \times P \times q) / e^2$
where Z = 1.96 (representing a 95% confidence interval), P = 0.257 (the prevalence of insomnia in India, which is 25.7%), q = 1 - P = 0.743, and e = 0.05 (the desired precision).
The calculated sample size was 293.3, which was rounded up to 300 patients.

Diagnostic, Inclusion, and Exclusion Criteria

To diagnose Nidranash, the following criteria were met: (1) difficulty in falling asleep, staying asleep, or experiencing restorative sleep; (2) continued problems despite having enough opportunity to sleep; (3) presence of daytime distress or functional impairment; and (4) occurrence of symptoms at least three times a week for a duration of one month.

Inclusion Criteria: Individuals between the ages of 18 and 60, of any gender, who fulfilled the diagnostic criteria and provided informed written consent.

Exclusion Criteria: Individuals below 18 or above 60 years (to avoid sleep disturbances caused by senile Vata), those with major psychiatric conditions such as schizophrenia or bipolar disorder, patients currently using sedative or tranquilizing drugs, and individuals with a history of neurosurgery or epilepsy who are on anticonvulsant medications.

Data Collection and Statistical Randomization

Each enrolled patient was interviewed using a structured Case Record Form (CRF) to collect information on demographic factors, occupation, Agni, Koshtha, dietary habits, lifestyle-related addictions, and classical Hetus.
Data randomization was verified using the non-parametric Wald-Wolfowitz Run Test.Statistical assessment of expected runs (μ), standard deviation (σ), and Z-score was

done using Microsoft Excel and GraphPad Prism version 9.0, with significance established at p < 0.05.

RESULTS

Out of 1,236 patients screened on an OPD basis, 300 met the diagnostic criteria and were enrolled in the survey. Demographic evaluation revealed that the 31–40 years age bracket was most severely affected (39.66%, n = 119), followed by 18–30 years (26.00%, n = 78), 41–50 years (19.00%, n = 57), and 51–60 years (15.33%, n = 46). Males comprised 55.66% (n = 167) and females 44.33% (n = 133). Occupational profiling indicated high representation among business professionals (28.66%, n = 86), service personnel (26.33%, n = 79), drivers (19.66%, n = 59), housewives (10.00%, n = 30), manual workers (8.00%, n = 24), and teachers (7.33%, n = 22).

Ayurvedic physiological examination showed that 47.66% (n = 143) presented with *Vishama Agni* (irregular digestive fire) and 42.66% (n = 128) had *Krura Koshtha* (hard bowel pattern), with 61.00% reporting irregular bowel evacuation (*Asamadhankarak Mala Pravritti*). Active addictions (tobacco, alcohol, smoking) were present in 55.33% (n = 166). Furthermore, 60.33% (n = 181) worked over 8 hours daily, and 83.00% (n = 249) took no daytime rest.

Parameter	**Category**	**No. of Patients**	**Percentage (%)**	**Primary Dosha / Phenotype**
Age Distribution	18–30 years 31–40 years 41–50 years 51–60 years	78 119 57 46	26.00% 39.66% 19.00% 15.33%	Pitta-Raja Dominance Pitta-Vata Peak Vata Transition Early Vata Stage
Gender	Male Female	167 133	55.66% 44.33%	Occupational Vata Hormonal/Lifestyle Vata
Socioeconomic Status	Rich (> 5 Lakhs) Upper Middle (2.5–5 L) Lower Class (< 1 Lakh) Lower Middle (1–2.5 L)	112 83 66 39	37.33% 27.66% 22.00% 13.00%	Affluent Urban Stress Sedentary Vata Vitiation Physical Fatigue Vata Financial Anxiety
Agni (Digestive Fire)	Vishama Agni Manda Agni Sama Agni Tikshna Agni	143 69 55 33	47.66% 23.00% 18.33% 11.00%	Vata Dominance Kapha Obstruction Equilibrium Pitta Dominance
Koshtha (Bowel Habit)	Krura Koshtha Madhyama Koshtha Mrudu Koshtha	128 111 61	42.66% 37.00% 20.33%	Vata Predominance Pitta-Kapha Balance Pitta Predominance
Daily Work Hours	> 8 Hours 8 Hours < 8 Hours	181 72 47	60.33% 24.00% 15.66%	Karya Vyagrata (Vata) Normal Regimen Low Physical Strain

Table 1: Demographic and clinical characteristics of 300 survey patients suffering from Nidranash (Insomnia).

Statistical Run test analysis confirmed that data distribution across all classical *Hetus* was purely randomized (Z = 0.14 for Karya, falling within the critical range of -1.96 to +1.96). When classifying patients into the five basic *Charakokta Hetus, Karya* (occupational stress and overwork) emerged as the single largest primary cause, accounting for 48.00% (n = 144). *Vayu / Vata Prakopa* was the second major factor at 28.00% (n = 84), followed by *Kala* (14.33%, n = 43), *Prakruti* (7.33%, n = 22), and *Vikara* (2.33%, n = 7) (Table 2).

Basic Hetu Category	**Specific Modern Triggers**	**No. of Patients**	**Percentage (%)**	**Z-Score (Run Test)**	**Statistical Significance**
Karya (Work Stress)	Chinta, Krodh, Work Overload, Competition	144	48.00 %	0.14	Non-Significant (Randomized)
Vayu (Vata Vitiation)	Atidhoomapan, Asukha Shayya, Irregular Habits	84	28.00 %	-0.71	Non-Significant (Randomized)

Kala (Time / Age)	Age-related Vata, Shift Work, Night Vigils	43	14.33 %	-0.87	Non-Significant (Randomized)
Prakruti (Constitution)	Vata-Pradhana / Vata-Pitta Prakruti	22	7.33%	0.10	Non-Significant (Randomized)
Vikara (Pathology)	Acute Pain, Chardi, GERD, Somatic Disease	07	2.33%	0.88	Non-Significant (Randomized)

Table 2: Distribution and statistical Run test analysis of 300 survey patients according to Charakokta 5 basic Hetus.

DISCUSSION

The findings of this observational survey provide robust empirical validation for the classical aetiological framework of *Nidranash* outlined in *Charaka Samhita* (Sutrasthana 21/57). In Ayurvedic physiology, sleep onset requires the retraction of *Manas* and *Indriyas* from sensory objects, a process fundamentally governed by *Kapha Dosha* and *Tamo Guna*. Any factor that provokes *Vata* or *Pitta* elevates *Rajo Guna*, suppressing *Tamo Guna* and preventing sensory disengagement.

The clinical data demonstrates that *Karya Vyagrata* (work-induced cognitive engagement and overwork) is the chief modern driver of insomnia, accounting for 48.00% of cases. In contemporary society, competitive work environments, prolonged screen exposure, and cognitive hyper-arousal maintain continuous activity in the *Manovaha Srotas*, inhibiting the natural transition into sleep. Furthermore, psychological stress (*Chinta*, 34.66%) and anger (*Krodh*, 21.66%) directly provoke *Prana Vayu* and *Sadhaka Pitta*, further disrupting mental tranquility.

The high prevalence of *Vishama Agni* (47.66%) and *Krura Koshtha* (42.66%) among insomniacs highlights the gut-brain axis in Ayurvedic pathology. Irregular dietary habits (*Vishamashan* and *Adhyashan*) vitiate *Samana Vayu* and *Pachaka Pitta*, generating *Ama* and exacerbating systemic Vata, which manifests as central nervous hyper-excitability. Thus, classical *Nidana Parivarjana* (avoidance of causative factors)—specifically managing work stress, restoring digestive harmony, and adopting Vata-pacifying sleep hygiene—remains the indispensable first line of management for insomnia.

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