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Anidra And Its Management Through Ayurveda : A Review

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ABSTRACT: -

Nidra (sleep) is considered as one among three *Upastambhas* (Pillars) of human life, others are *Ahar* (diet) and *Brahmacarya* (celibacy). Sufficient quantity and good quality of sleep (sound sleep) gives happiness, nourishment, strength, virility, knowledge and good quality of life. When there is difficulty in initiating or maintaining sleep or both and it may be due to inadequate quality or quantity of sleep, is called *Anidra* (Insomnia). The problem of insomnia increasing day by day due to stressful life, incompatible diet and faulty life style. People over the age of sixty-five years are affected more often than younger people. *Anidra* (Insomnia) associated with anxiety and stress may deteriorate memory and mental power. Physiological disturbances like cardiac disease, diabetes, blood pressure and psychological disturbances may be triggered with *Anidra*. *Acharyas* mentioned causative factors (that increase *Vata* and *Pitta dosha*), clinical features and different therapeutic approaches for the management of *Anidra* (Insomnia). Based on the *Ayurvedic* view the single herbs like *Aswagandha* (*Withania somnifera*), *Jatamansi* (*Nardostachys jatamansi*) etc., different compound formulations, *Shodhan* (Purification) therapies including the *Pathya* (wholesome) and *Apathya* (unwholesome) have been discussed in this article.

Key words: *Ayurveda*, *Anidra*, *Trayaupastambha*, *Sankhapushpi*.



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INTRODUCTION

Ayurveda considered *Ahar* (food), *Nidra* (sleep) and *Brahmacharya* are *Traya Upastambha* (3 sub pillars) that is the three essential supports for achieving a healthy physical and mental states of life. *Nidra* (Sleep) is one of the three essential supports for the health. As per *Acharya Charaka* when *Mana* (Heart/Mind) and *Indriyas* (Senses) getting tired and detached themselves from their objects or not able to perceive any objects, then the individual sleeps. ⁽¹⁾Insomnia is a sleep disorder also known as Sleeplessness in which people have trouble to sleep. The patient of Insomnia might have the problem of falling asleep and staying asleep as long as they want. Insomnia is typically followed by day time sleepiness, low energy, irritability and a depressed mood. Insomnia is one of the most common problem nowadays and affecting a large number of populations. About 6% of people have Insomnia that is not due to another problem and lasts for more than a month ⁽²⁾. Mostly the people over the age of 65 years suffer from Insomnia than younger people. Females are more often affected than males. Heritability estimates of Insomnia vary between 38% in males to 59% in females ⁽²⁾. The complications may occur like Psychological disorders (depression, anxiety disorders); risk of high blood pressure, heart disease diabetes and poor immune system function. ⁽²⁾

As per *Acharya Sushruta*, loss of sleep is caused by aggravation of *Anila (Vata)* and *Pitta*, exhaustion of the mind, loss of *Dhatu*(tissues) and injury to the body. ⁽³⁾ *Anidra /Nidranasha* (Insomnia) may occur as a result of imbalance *Tarpak Kapha*, *Sadhak Pitta* and *Pran Vayu*. ⁽⁴⁾

MATERIALS AND METHODS:

As the present study is a review article, different

Ayurvedic texts, published research papers and available materials on internet have been reviewed for this article.

Physiology of *Nidra* (Sleep):

Acharya Charaka considered that when the *Mana* (Heart/Mind) and *Indriyas* (Senses) get tired and detached themselves from their objects, then the individuals sleep. *Gyanendriyas* and *Karmendriyas* are continuously attached with *Mana* for perceive any kind of objects. When the *Gyanendriyas* (wisdom or knowing senses) and *Karmendriyas* (means of expression, action or senses) get tired by various kinds of activities then the *Mana* gets tired also. In this condition people falls into sleep for resting their *Indriyas* (Senses) and Mind also. *Acharya Charaka* mentioned the following lines- “*Yada tu manasi klante karmatmana klamaanwita. Bishayebhyo nibartante tada swapiti manaba*”⁽¹⁾. According to *Acharya Sushruta* “*Nidra sleshma-tamo bhava*”. It means *Nidra* (Sleep) produced by predominance of *Sleshma* (mucous) and *Tamo guna*. ⁽⁵⁾ *Hridaya* (Heart) is the seat of *Chetana* in living beings. ⁽⁶⁾ When *Hridaya* (Heart) is invaded by *tamo guna*, persons get sleep; *tamo guna* is the cause for sleep and *satva guna* is the cause for waking; overall “*Swabhava* (nature)” is the potent cause for sleeping. ⁽⁶⁾

Sleep manifests naturally both during day and night in the persons have predominance of *tamo guna*; in those have predominance of *rajo guna* sleep occurs at any time without any reason; and the persons with predominance of *satva guna* it occurs at midnight. ⁽⁷⁾

Types of *Nidra*(Sleep) ⁽⁸⁾:

- As per *Acharya Charaka* *Nidra* (Sleep) is of the following types-

1. *Tamobhava* – caused by *tamas*

2. *Sleshma samudbhava* – caused by (vitiated) *kapha*
 3. *Manah sarira shrama sambhava* – due to mental and physical exhaustion
 4. *Aagantuki nidra* – indicative of bad prognosis leading to imminent death
 5. *Vyadhi-anuvartini* – cause as a complication of other disease like *sannipata jwar* etc.
 6. *Ratri swabhava prabhava* – cause by the very nature of night or physiological sleep. It is also known as “*Bhutadhatri nidra*”.
- *Acharya Sushruta* mentioned three type of *Nidra*⁽⁹⁾ –
 1. *Tamasi nidra* – It can be compared with the state of coma, which generally appears before death. Increased *tamas* and aggravated *Kapha dosha* are the factors responsible for this type of *Nidra* (Sleep) and can be compared with *Sanyasa* (Coma) described by *acharya Charaka* where the absolute loss of consciousness is seen prior to death.
 2. *Swabhaviki nidra* – It is physiological stage and generally takes place at night. It nourishes and makes us free from different type of fatigue and is helpful asset for everybody. The time of this type of sleep may differ according to *saririk* and *manasik prakriti* of an individual.
 3. *Vaikariki nidra* – It is a stage of sleeplessness due to decrease *kapha dosha* or increased *vata dosha*, or as a complication of physical as well as mental disorder. The advantages of sleep (nourishment, freshness etc.) are not available in this type of sleep.
3. Excessive physical activities e.g.- exercise, sexual activities
 4. A Sleep in uncomfortable bed and environment
 5. Excessive indulgence at any work (physical or mental) causes mental deviation from sleep; e.g.- excessive watching television; working long time in computer or excessive operating any gadget like mobile phone, video games etc.
 6. The time in which any individual is not habituated to sleep.

C. *Manasik nidana* / Emotional factors –

1. Emotional disturbances like fear, excessive thoughts, anger are the cause of increasing *Vata* and *Pitta dosha* leads to *Anidra* (Insomnia).
2. *Acharya Sushruta* said “*Mana Santapa*”, any kind of mental exhaustion.
3. Predominance of *Sattva Guna* of *Mana* and suppression of *Tamo guna* of *Mana* cause *Anidra* (Insomnia).

D. *Chikitsa apacharaja nidana* / Improper treatment modalities –

1. Excessive indulgence of therapies like *Vamana karma* (Emesis), *Virechana karma* (Purgation), *Nasya karma* (Nasal therapy) and *Raktamokshana karma* (Bloodletting) increase *Vata dosha* that leads to *Anidra* (Insomnia).

E. Others cause of *Anidra* –

1. *Prakriti* (constitution)⁽¹¹⁾ – *Deha prakriti* (physical constitution) is of seven types- *Vataja*, *Pittaja*, *Kaphaja*, *Vata-pittaja*, *Pitta-kaphaja*, *Vata-kaphaja* and *Sannipatik Prakriti*. As per *Acharya Sushruta* “*Prajagaruka*” (less sleep) is a characteristic of *Vataja prakriti*. The persons of *vata* and *pitta prakriti* often suffers from Insomnia.
2. Age – People over the age of sixty years at “*Vriddhavastha*” often suffer from sleeping disorder. *Dhatu kshaya* (Depletion of tissues) and *Vata vridhhi* are the main cause of it.
3. *Vikara* / Disease – *Anidra*/Insomnia may occur as a complication or symptom of another disease. When any physical or mental pathological condition becomes chronic, lack of sleep is a chief complain due to pain and discomfort. E.g. arthritis, depression etc.

Nidana (Causative factors) of *Anidra* (Insomnia)^(10,3):

A. *Aharaja nidana* (dietetic cause) -

1. *Ruksha anna pana* (Dry Food-Drinks)
2. *Laghu guna yukta ahara* (Light Food-Drinks)
3. Excessive consumption of tea, caffeine, alcohol etc.

B. *Viharaja nidana* (Behavioral factors) -

1. Excessive smoking
2. Excessive fasting

4. *Doshic involvement*⁽¹²⁾ – *Vata, pitta, kapha* are the three *Sharirik dosha*. According to *Acharya Sushruta vata vriddhi* leads to *Nidra-nasha* (loss of sleep), *pitta vriddhi* leads to “*Alpa-nidra*” (disturbed sleep) and decrease *kapha dosha* develop “*Prajagaran*” (less sleep).
5. *Abhighata/ Injury* – Any kind of external injury cause loss of sleep due to vitiation of *vata dosha* and pain.
6. *Kshaya* – According to *Acharya Sushruta kshaya* (loss of tissue) is a cause of *Anidra* (Insomnia). It occurs due to ageing, chronic disease or any injury to the body.

Clinical features of *Anidra (Insomnia)* ⁽¹³⁾:

Loss of sleep is the cardinal feature of *Anidra* (Insomnia). As per *Astanga Hridaya* the symptoms of loss of sleep are-

- *Angamarda* (Body ache)
- *Shiro-gaurava* (Heaviness of head)
- *Jrimbha* (Yawning)
- *Jadyata* (Lassitude)
- *Glani* (Exhaustion even without strain)
- *Bhram* (Giddiness)
- *Apakti* (Indigestion)
- *Tandra* (Stupor)
- Disease of *Vata dosha* origin

Management of *Anidra/Insomnia*:

1. ***Nidana Parivarjana (avoiding the Cause)*** – One should avoid the above discussed causative factors first and should rule out if there is any other pathological condition like Neurological disorders or depression which may cause loss of sleep also and treatment should start accordingly.
2. ***Sodhana Chikitsa***^(14,15,16) – The following *Sodhana Chikitsa* (Purification process) are applied for the treatment of *Anidra* (Insomnia).
 - *Abhyanga* (oil massage)
 - *Udvardhana* (rubbing medicated paste and powder)
 - *Shirodhara* by medicated oil
 - *Karnapurana* (Ayurvedic Ear oiling)
 - *Akshitarpana* (Eye treatment)

- Application of “*Pichu (Spine Therapy)*” on head by medicated oil
3. ***Samana chikitsa (Pacification)*** ⁽¹⁷⁾ – It is a type of palliative treatment by medication. The treatment principles of *Anidra* (Insomnia) are – *Vatahara chikitsa; Madhura rasa prayoga* (use of sweet essence food articles) ; *Guruguna ausadha prayoga* (medicine). In *pitta nimittaja - mridu virechana* (Soft purgation) is done.
 - Single herbs: *Aswagandha (Withania somnifera)*, *Jatamansi (Nardostachys jatamansi)*, *Bramhi (Bacopa monnieri)*, *Mandukparni (Centella asiatica)*, *Shankhapushpi (Convolvulus pluricaulis)*.
 - *Kashaya Kalpana* (Decoction form): *Drakshadi kasayam, Vidaryadi kasayam*.

Dose – 60ml, twice daily, half an hour before food.

- *Churna Kalpana* (Powder form): *Jatamansi churna, Aswagandha churna, Tagara mula churna*

Dose – 5 to 10gms at bed time with milk after food [Note – The dose of *Tagara mula churna* (Root powder) is 5gms twice daily with milk after food, over dosage of *Tagara (Valeriana Wallichii)* can cause vomiting, giddiness hence it should be administered in low dosage]

- *Vati Kalpana* (Tablet form): *Manasmitra vatakam, Bramhi vati, Sarpagandha gulika*.

Dose – 1-2 tablets twice daily after food.

[According to *Roga bala* and *Rogi bala*]

[Though *Sarpagandha* have the properties of *ruksha guna* (Dry), *ushna virya* (hot potency), *katu vipaka* (Pungent) and *tikta rasa* (bitter) it indicates in *Anidra* (Insomnia), *Bhrama* (Confusion) , *Unmada* (Insanity), *Apasmara* (Epilepsy)etc. ⁽¹⁸⁾]

- *Lehya Kalpana* (Therapeutic Jams): *Aswagandha lehyam, Dhatukalpa lehyam*.

Dose – 5 to 10gms twice daily after food.

- *Ghrita kalpana*: *Bramhi ghrita, Kalyanaka ghrita*.

Dose – 5 to 10ml at bed time with milk after food.

- *Taila kalpana* (Oil form- Internal): *Kshirabala taila*.

Dose – 20ml twice daily after food.

- *Shiro pichu* (External application): *Kshirabala taila, Narayana taila, Bramhi taila*.

Dose – 10ml at bed time with milk after food.

- *Arista/Asava Kalpana* (fermented product): *Sarasvatarista, Ahiphenasava*.

Pathya (Do's) and Apathyas (Don'ts) for Anidra (Insomnia)^(19,20,21)

Pathyas (Do's) of Anidra (Insomnia)

Pathya ahara (Beneficial diet)	Pathya vihara (Beneficial lifestyle)
<ol style="list-style-type: none"> 1. Intake of <i>madhura, snigdha guna yukta ahara</i> (Sweet, Unctuousness food) <i>shali dhanya</i> (Variety of rice) with <i>dadhi</i> (curd), <i>godhuma</i> (wheat), <i>pisthanna</i> (flour of grains). 2. Soup of domestic marshy and aquatic animals, soup of 'viskira' birds. 3. <i>Dugdha</i> (milk) specially buffalo milk (<i>mahisha kshiram swapna janananam</i>), <i>Madya</i> (alcohol). 4. Food prepared from sugarcane juice. 5. <i>Draksha</i> (grapes), <i>sita</i> (sugar). 	<ol style="list-style-type: none"> 1. <i>Shiro abhayanga</i> (oil massage on scalp), <i>Pada abhyanga</i> (foot massage), <i>Sanvahan</i> (gently pressing the body). 2. <i>Manah sukham</i> (psychic pleasure) and practicing yoga and meditation. 3. Pleasant music and smell of scents of one's own taste. 4. <i>Snan</i> (Bath) 5. Comfortable bed and environment. 6. Maintain a regular sleep / wake up schedule.

Apathyas (Don'ts) of Anidra (Insomnia)

Apathya ahara (Avoidable diet)	Apathya vihara (Avoidable lifestyle)
<ol style="list-style-type: none"> 1. Avoid excessive <i>rukshya</i> (rough), <i>laghu</i> (light), <i>katu</i> (pungent), <i>tikshna guna</i> (Sharp)yukta ahara. 2. Excessive consumption of tea, caffeine, alcohol. 	<ol style="list-style-type: none"> 1. Excessive physical activities and stressful conditions. 2. Irregular sleep habits. 3. Day sleep. 4. Excessive use of any gadget like – mobile phone, laptop, video games and watching television.

Yogic practices⁽²²⁾ – The following yogic practices are beneficial for insomnia

Pranayama – *Anuloma-viloma, Ujjai, Bhramari, Cooling*

Asana – *Suryanamaskar, Tadasana, Matsyasana, Padmasana, Bhujangasana, Paschimottanasana* and *Shavasana*. [These should be performed only under the guidance of qualified yoga therapist]

Effect of proper and improper sleep⁽²³⁾ :

Effect of proper sleep	Effect of improper sleep
1. <i>Sukha</i> (happiness)	1. <i>Dukha</i> (misery)
2. <i>Pusti</i> (nourishment)	2. <i>Karsha</i> (emaciation)
3. <i>Bala</i> (strength)	3. <i>Abala</i> (weakness)
4. <i>Vrishata</i> (virility)	4. <i>Klibata</i> (sterility)
5. <i>Gyana</i> (knowledge)	5. <i>Agyana</i> (ignorance)
6. Life	6. Death

DISCUSSION:

Samhitas says that *Nidra* (sleep) is considered as one among the three *Upastambhas* (3 sub-pillars) of the human body; the others are 'Ahara (Diet)' and 'Brahmacarya (Celibacy)'. Mental and physical exertion bring about inactivity of the mind resulting in the dissociation of the mind and the sense organs from their objects which is responsible for sleep. But if there is excessive exertion, this may cause vitiation of *Vata dosha* leading to sleeplessness. Thus, even though, exertion is a causative factor for sleep, excessive exertion is responsible for the aggravation of *Vata dosha* which causes sleeplessness. The others causative factors discussed earlier like emotional disturbances, excessive thoughts, excessive smoking, chronic diseases etc. and increase *Vata* and *Pitta dosha* leads to *Anidra* (Insomnia). Clinical features, management and effect of proper and improper sleep are discussed in this article. *Aswagandha* (*Withania somnifera*), *Jatamansi* (*Nardostachys jatamansi*), *Bramhi* (*Bacopa monnieri*), *Mandukparni* (*Centella asiatica*), *Shankhapushpi* (*Convolvulus pluricaulis*) and the compound formulation like *Manasmitra vatakam* and the therapies like *Karnapuram* (Ear pulling), *Akshitarpan* (Eye treatment) are very beneficial for management of *Anidra* (Insomnia).

Sleep indulged at improper time, in excess or not at all destroys health and happiness. Keeping awake at nights (avoiding sleep) is produce dryness inside the body, sleeping during day time is unctuous (causes moistness inside) and taking a nap sitting comfortably (during day) is neither dry nor unctuous. ⁽²⁴⁾

CONCLUSION:

Improper sleep disturbs the normal physiological and psychological activities and produce complications like hypertension, anxiety disorders etc. Sleepless persons are always unhappy. Without proper sleep one's mind becomes dull. The brain does not get sufficient rest and loss of sleep involves

such an expenditure of energy through the brain as

to constitute a serious drain upon the nervous system. One should sleep at the proper time at nights daily as much as desirable and become habituated to it. If someone has kept awake at night due to non-habituation (not accustomed to), should sleep for half that period, the next morning without taking any food. ⁽²⁵⁾ Like proper diet, proper sleep is also essential for the maintenance of healthy living because obesity and emaciation are specially conditioned by proper and improper sleep and diet. ⁽²⁶⁾

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REFERENCES:

1. Sharma RK, Dash B. Caraka Samhita, Vol. I, Sutra sthana-21/35. Reprint ed. Varanasi; Chowkhamba Sanskrit Series Office; 2012. p. 381.
2. <https://en.wikipedia.org/wiki/Insomnia>
3. Murthy KRS. Illustrated Sushruta Samhita. Vol- I, Sarira sthana-4/42. Reprint ed. Varanasi; Chaukhambha Orientalia; 2016. p. 65.
4. Abhijeet B. Patil et.al. Insomnia (Anidra) and Ayurveda- A Critical Review. International Ayurvedic Medical Journal. Sep.-Oct.2014. 2(5): 777.
5. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/55. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 48.
6. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/33-34. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 44.
7. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/32. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 44.

8. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/58, 59. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 422.
9. Mishra YC. Ayurvediya Kriya Sarira. Vol. II. First ed. New Delhi; Chaukhambha publications; 2011. p. 462.
10. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/57. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 421.
11. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/61, 63. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 49.
12. Shastri A. Sushruta Samhita. Vol. I. Sutra sthana-15/18. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 78.
13. Murthy KRS. Vagbhata's Ashtanga Hridayam. Vol. I. Sutra sthana-7/64. 7th ed. Varanasi; Chowkhambha Krishnadas Academy; 2010. p. 121.
14. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/52, 53. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 421.
15. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/42. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 46.
16. Murthy KRS. Vagbhata's Ashtanga Hridayam. Vol. I. Sutra sthana-7/66. 7th ed. Varanasi; Chowkhambha Krishnadas Academy; 2010. p. 121.
17. Mahadevan L. Principles & Practice of Ayurvedic Clinical Medicine. First ed. Tamilnadu; Sarada Mahadeva Iyer Ayurvedic Educational & Charitable Trust. 2018. p. 691, 692.
18. Sastry JLN. Illustrated Dravyaguna Vijnana. Reprint ed. Varanasi; Chaukhambha Orientalia; 2010. p. 336.
19. Shastri A. Sushruta Samhita. Vol. I. Sarira sthana-4/43, 44, 45. Reprint ed. Varanasi; Chaukhambha Sanskrit Sansthan; 2010. p. 46.
20. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/52, 53, 54. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 421.
21. Murthy KRS. Vagbhata's Ashtanga Hridayam. Vol. I. Sutra sthana-7/66, 67, 68. 7th ed. Varanasi; Chowkhambha Krishnadas Academy; 2010. p. 121.
22. [https://www.nhp.gov.in/ANIDRA\(Insomnia\)mtl](https://www.nhp.gov.in/ANIDRA(Insomnia)mtl)
23. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/36. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 418.
24. Murthy KRS. Vagbhata's Ashtanga Hridayam. Vol. I. Sutra sthana-7/54, 55. 7th ed. Varanasi; Chowkhambha Krishnadas Academy; 2010. p. 119.
25. Murthy KRS. Vagbhata's Ashtanga Hridayam. Vol. I. Sutra sthana-7/65. 7th ed. Varanasi; Chowkhambha Krishnadas Academy; 2010. p. 121.
26. Sastri K, Chaturvedi GN. Caraka Samhita. Part. I. Sutra sthana-21/51. Reprint ed. Varanasi; Chaukhambha Bharati Academy; 2016. p. 420.