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CONCEPTUAL STUDY OF NIDRANASH WSR INSOMNIA- A REVIEW ARTICLE

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ABSTRACT

The man of 21st century is breathing under various stresses, strains and anxiety. Co-ordination between ambitions and capabilities is no more seen. Insomnia refers to the difficulty in initiation, maintenance, duration or quality of sleep. People may experience poor concentration, lower productivity and poorer work quality as a result of Insomnia. Ahara, Nidra and Brahmacharya have been compared with the three legs of a sub- support and have been termed as the three Upasthambhas. [1] The ancient Acharyas have stated that happiness and sorrow, growth and wasting, strength and weakness, virility and impotence and the knowledge and ignorance as well as the existence of life and its cessation depend on the sleep. [2] According to Acharya Kashyapa, getting good sleep at a proper time is one of the characteristic of a healthy man. [3] Insomnia is among the most prevalent complaints brought to the attention of primary care physicians. Approximately 20% of patients seen by primary-care physicians report significant sleep disturbances. [4] In Sushruta Samhita,

it is described that sleep occurs when the Hridaya – seat of Chetana is covered by Tama.^[5] Sharangadhara mentions that Nidra is a state where predominance of Kapha and Tamas is witnessed.^[6]

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Charaka has described Anidra as one of the Vataja Nanatmaja Vikara.^[7] According to Acharya Sushruta, Nidranash is caused by aggravated conditions of the bodily vayu and pitta, as aggrieved state of the mind,wasting of Dhatus and trauma (physical or mental).^[8] The International Classification of Sleep Disorders – Third Edition (ICSD-3) has grouped common sleep disorders into six major categories, Insomnia being one of them. Insomnia can be classified as Transient, Acute and Chronic.^[9]

Historical review

Vedic Period (c. 1500 – c. 500 BCE)

Rigveda

न स्वप्नाय स्पृहयन्ति देवा : । ऋग्वेद 8/2/18

In Rugaveda Nidra is mentioned as "Svapna"

• Yognidra

The sleep of God Vishnu at the end of each yuga is termed as Yoga Nidra. (Raghuvamsham 10/14). In other reference it is also mentioned that the Yoga Nidra is a great sleep of God Bramha during the period between the pralaya (destroy) and utpatti (To produce).

Yajurveda

In Yajurveda, it is mentioned that sleeping is unhealthy and awaking is healthier one. (Yajurveda 30/17)

Puran reference

• Skanda puran

ये स्वपन्ति स्खं रात्रौ तेषां कायाग्निरिध्यते।

आहारं प्रतिगृहयति ततः पुष्टिकरं परम ॥ वै. सु. सा. 21/11

In skanda puran, benefits of Nidra are mentioned. It states that, the Nidra taken at proper time and in proper quantity increases the digestion power of the human being. Due to increase in the digestion power one can consume good quantity of food, which helps him to increase the power of body.

Garud Puran

सुखं स्विपत्यनृण्वान व्याधिमुक्तश्च यो नर : ।

सावकाशस्तु वै भुड्के यस्तु दरैर्न सन्गत : ॥ वै. सु. सा. 21/13

In garudpuran it is mentioned that, person not having any runa (financial problem/loan), any vyadhi- i.e. vyadhimukta (disease free), always take meals slowly, and not doing sexual contact with wife always get proper nidra (good sleep) and stays happily.

Smriti sahitya

Dakshasmriti

प्रदोषपश्चिमौ यमौ वेदाभ्यासन तौ नयेत।

प्रहरद्वयं शयानो हि ब्रम्हभुयाय कल्पते ॥ दक्षस्मृति, वै. सु. सा. 21/8

There are two terms mentioned in Dakshasmruti. One is pradosha prahara – it means the time period after the suryodaya and second is pashima prahara – it means the period before suryodaya.

• Manusmriti

अहोरात्रे विभजते सूर्यो मान्षदैविके ।

रात्रि स्वप्नाय भुतनां चेष्टायै कर्मणामहः ॥ मनु, वै. सु. सा. 21/7

According to Manusmruti the Surya divides the ahoratra (whole day of human being and God) in two different parts. Out of which the ratra (night) is reserved for the nidra (sleep) and the day period is for doing karma (work).

Samhita period (1000BC-100BC)

During this period Charaka, Sushruta, Bhela, Harita and Kashyapa Samhita gave descriptions regarding Nidra and Nidranash.

Charaka has described Nidan of Nidranash in the context of Atinidra chikitsa in Sutrastana 21st chapter and chikitsa of Nidranash is also described. But Bhela and Harita have mentioned special chapters on Nidra in this context they have explained the Nidana and chikitsa of Nidranash.

Sangraha Kala (500BC-800BC)

In Ashtanga Sangraha and Ashanga Hridaya, Nidana and Chikitsa for Nidranash is described.

Conceptual study of nidra

Etymology

The term 'Nidra' is feminine gender. It is derived from the root 'DRA' with suffix 'Ni' and the root 'Dra' means undesired 'GATU' to Lead, it is a state which is hated; therefore, it is termed as 'Nidra'. Nidra is formed by Sutra 'Ataschopasarge'. [10]

Definition of Nidra/sleep

Maharshi patanjali defined nidra as

Sleep is the mental operation having the absence of cognition for its grasp. The commentator Vyas made it clear that sleep is a state of unconsciousness but the consciousness remains about his own unconsciousness.^[11]

According to Acharya Vagbhata, the Srotasa become accumulated with sleshma and the mind is devoid of sense organs because of fatigueness, so an individual gets sleep.^[12]

Sharangadhara mentions that Nidra is a state where predominance of Kapha and Tamas is witnessed.^[13]

Synonyms of nidra

In Amarkosha 4 synonyms have been mentioned^[14]

- 1. Shayanam
- 2. Svapah
- 3. Svapnah
- 4. Samvesh

In Vaidyaka Shabda Sindhu, 3 synonyms are available. [15]

- 1. Sambhashah
- 2. Suptih
- 3. Svapanam

In Charak Samhita Bhudhatri has been used as synonym and in Sushruta Samhita the word Vaishnavi Maya is used.

Types of nidra

Acharya Charaka classifies the sleep condition into six categories

1. Tamobhava nidra-Caused by Tamas^[16]

- 2. Sleshma samudbhava nidra Caused by Kapha (vitiated).
- 3. Manah shrama sambhava nidra Caused by Manasika Shrama.
- **4. Agantuki nidra** Agantuki (indicative of bad prognosis leading to imminent death)^[17]
- **5. Vyadhyanuvartini nidra -** Caused as a complication of the disease like Sannipata-jwara etc.^[18]
- **6.** Ratri svabhava prabhuva nidra Caused by very nature of night. [19]

In Ashtanga Hridaya, Acharya Vagbhatta considered only four types of Nidra and included the all seven types in these viz. [20]

The commentator Hemadri considered them as:

- 1. Mithyayog rupa: Taken in wrong manner
- **2. Atiyog rupa** Excessively taken
- 3. Hinyog rupa Inadequate sleep
- 4. Samyayojya Rupa- Properly taken

Acharya sushruta described only three types of nidra

- 1. Tamasi This can be correlated to Tamobhava and Agantuki Nidra mentioned by Charaka.
- 2. Vaishnavi or Svabhaviki
- ^{3.} Vaikariki This Nidra may be correlated with Manaha-Sharira Shrama Sambhava, Vyadhyanuvartini and Sleshma Samudbhava Nidra varieties described by Acharya Charaka.^[21]

Nidra and Kala

According to Ayurveda night is the proper time for sleep, and hence person should not remain awake at night and should not sleep in day time because both are Dosha Prakopaka. It is advised to take sleep avoiding the first and last parts of night.^[22]

Manu, the great law maker has described the divisions of time, and then has remarked that the thirty Muhurta periods (24hours) is divided by the sun into day and night, the day being intended for the activities and the night designed for the rest and repose.^[23]

How much sleep is needed for the healthy life depend on the age and condition of the body. Children need more sleep per day in order to develop and function properly up to 18 hours for newborn babies, with a declining rate as a child ages. A newborn baby spends almost 9

hours a day in REM sleep. By the age of five or so, only slightly over two hours is spent in REM. Studies say that school age children need about 10 to 11 hours of sleep.^[24]

Indications divasvapna

Those injured by fall and assault, those exhausted by journey by a vehicle, vigil, are having anger, grief and fear and those who are accustomed to day sleep should take day time sleep.^[25]

In summer season, nights become shorter and Vata gets aggravate in the body due to the absorption of fluid (Adana). Therefore, during this season sleep during day time is prescribed for all.^[26]

Acharya Chakrapani, Sushruta and Vagbhata has stated that those who had not slept properly at night, they should make it up by sleeping during day time for half the period spent in night vigil.^[27]

Ratri jagarana (Awakening in night time)

According to Acharya Sushruta persons who suffer from Kaphaja Vikaras, Medo Roga and those who had taken poison or bitten by poisonous creatures should not sleep in the nights also. Ratri Jagarana causes dryness in the body, sleep during day time causes unctuousness and in the sitting posture does neither cause dryness nor unctuousness.^[28]

Nidranash

In Ayurveda Nidra is considered as an essential factor for all the living beings. It is quite evident by the previous descriptions regarding Nidra that when it is enjoyed in a rightful manner affects the body and mind equally. Acharya Charaka explained the Nidra and Nidranash in the context of Astauninditiya Adhyaya.

Synonyms of nidranash

Asvapna	Nashtanidra
• Anidra	 Nidrabhanga
Alpanidra	Nidrapranasha
 Akalanidra 	 Nidraghata
 Avyavahita 	Nidravighata
Ratri Jagarana	Nidra Viparyaya
 Prajagarana 	 Nidrabhighata
Mandanidra	 Nidrakshaya

Nirukti of word nidranash

It is composed of two words Nidra + nass. The suffix Nash provides negatives meaning to the act of Nidra. In Ayurved Vishvakosha part I Nidranash and Anidra having the same meaning. Nidranash means no proper sleep.

Nidan panchaka of nidranash

Hetu

Ahara viharajanya nidan of nidranash

Nidana	Ch	Su	A.S.	A.H.
Rukshaanna Sevana	-	-	-	+
Dhoomapana	+	-	-	+
Vyayama	+	-	-	+
Upavasa	+	-	-	+
Asukhashayya	+	-	+	-
Kshudha	-	-	+	-
Maithuna	-	-	+	-
Trit	-	-	+	-

Upacharajanya nidan of nidranash

Nidana	Ch	Su	A.S.	A.H.
Vamana	+	_	+	+
Virechana	+	-	+	-
Shirovirechana	+	-	+	+
Raktamokshana	+	-	+	-
Sweda	1	-	-	+
Anjana	ı	_	-	+
Langhana	ı	-	-	+

Manasika nidan of nidranash

Nidana	Ch	Su	A.S.	A.H.
Bhaya	+	-	-	-
Chinta	+	-	+	+
Krodha	+	-	-	+
Manastapa	-	+	-	-
Shoka	-	-	+	+
Vyatha	_	-	+	_
Harsha	-	-	+	-

Anya nidan in nidranash

Nidan	Su
Abhighata	+
Kshaya	+

Purvarupa

Purvarupa of Nidranash are not mentioned in Ayurvedic classics.

Rupa	Ch	Su	A.H.	A.S.
Jrumba	+	+	+	+
Angamarda	+	+	+	+
Tandra	+	+	+	+
Shiroroga	+	-	-	-
Shirogaurava	+	+	+	+
Akshigaurava	+	+	-	-
Jadya	-	-	+	+
Glani	-	-	+	+
Bhrama	-	-	+	+
Apakti	-	-	+	+
Vataroga	-	-	+	+

Rupa

The symptoms which demonstrate a manifested disease are included under Rupa. In Ayurvedic classics some symptoms are mentioned due to holding up to sleep.

Samprapti

Types of samprapti

- Sankhya: According to our ancient Acharyas, Asvapna is of two type's viz. Nidranash due to Vataprakopa and Nidralpata due to Pittaprakopa. So Sankhya Samprapti of Nidranash can be two in number.
- Vikalpa: In Nidranash, mainly Vata Prakopa occurs and its Chala and Laghu Guna vitiate, which keeps the mind active, causing Anidra.
- **Pradhanya**: In Pradhanya Samprapti, the predominance of morbid humors are described in terms of the comparative and superlative degrees but here as Anidra is a Vataja Nanatmaja Vyadhi, vitiation of Vata only takes place. So there would not be Pradhanya Samprapti in the case of Nidranash.
- **Bala:** Bala of Nidranash can be determined by the strength of manifestation of its symptoms, severity, duration etc.
- Kala: It is an important factor, while considering Nidra as well Nidranash. As Acharya Charaka has mentioned Kala under the causative factors of Nidranash. Sleeping in day time is contraindicated and not advised. Not sleeping in night time; indicating that Kala interferences with cause of Nidranash thus the time factor arehaving an influential effect on Nidra and Nidranash.

Samprapti Ghataka

Dosha: Vata and Pitta (Vriddhi), Kapha (Kshaya)

Dushya: Rasa Agni: Jatharagni

Srotasa: Manovaha, Rasavaha Srotodushti

Prakara: Atipravritti (Over indulgence)

Adhisthana: Hridaya

Chikitsa

Management modalities according to various classics can be classified as

1. Ahar

2. Vihar

3. Panchakarma

4. Manas

Ahar upacharas in nidranash

Ahar	Ch	Su	A.H.	A.S.	B.P.
Gramya, Anupa, Jaleeya	+				
mamsa rasa		_	_	_	_
Shali Anna	+	+	-	+	-
Dadhi	+	-	+	+	-
Kshir	+	+	+	+	-
Goodhooma	-	+	-	-	-
Ikshu	-	+	-	+	+
Pishta Anna	-	+	-	+	-
Peeyusha	+	-	+	-	-
Morata	+	-	-	-	-
Meat of Bil and Vishikara	-	+	-	-	-
Draksha	-	+	-	-	-
Mishri	-	+	-	-	-
Madya	-	-	+	+	+
Yoosha	-	-	-	-	+
Masha	-	-	_	+	+
Kilata	-	-	_	+	-
Tila	-	-	-	-	+
Matsya	-	-	-	-	+

Vihar upacharas in nidranash

Vihar	Ch	Su	A.H.	A.S.
Comfortable bed	+	+	-	+
Comfortable room	+	-	-	-
Proper time	+	-	-	_

To wear clean clothes	-	+	-	-
To speak slowly	-	+	-	-
To takebath	-	-	+	+
To observe celibacy	-	-	+	+
To lay down in fragnant and airy place	-	-	-	+

Panchakarma upacharas in nidranash

Abhyanga, Utsadana, Chakshu Tarpana, Shiro lepa, Vadana lepa, Murdha taila, Karna purana, Shirobasti, Shirodhara.

Chikitsa	Ch	Su	A.H.	A.S.	B.P.
Abhyanga	+	+	+	+	+
Utsadana	+	-	-	-	-
Samvahana	+	+	-	+	+
Akshitarpan	+	-	+	+	-
Murdhatail	+	+	-	-	-
Udvartana	-	+	+	+	+
Shirobasti	-	-	+	+	-
Shirastarpana	-	-	+	-	-
Karnapurana	-	-	-	+	-
Padabhyanga	-	-	-	-	+

Manas upacharas in nidranash

Chikitsa	Ch	Su	A.H.	A.S.	B.P.
Manonukula Vishaya grahana	+	-	-	-	-
Manonukula Shabda grahana	+	-	-	-	-
Manonukula Gandha grahana	+	-	-	-	+
Sukha sparsh	ı	-	-	+	-
Nischinta	1	-	+	-	-
Nityatrupti	ı	-	+	-	-
Santosha	_	_	_	_	+

Upadrava of Nidranash / Complications of Insomnia

Nidra is a natural urge. The suppression of this urge leads to many complications. Suppression of the urge for sleep causes yawning, malaise, drowsiness, headache and heaviness in the eye.^[30] In Yogaratnakara, indigestion is included to this list.^[31] Due to Nidranash produces Kaphakshaya, this decreased and dried Kapha sticks in the walls of Dhamanis and causes Srotorodha. This, results in so much exhaustion that eyes of the patient remain wide open and watery secretion from comes eyes. This dangerous exhaustion is Sadhya up to three days then becomes Asadhya.^[32]

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Upashaya

All drugs, diet, and regimen such as Mamsasevana, Madya, Kshir, Abhyanga, Utsadana, Tarpana, Snehasevana etc, may be considered as upashaya of Nidranash.

Anupshaya

All drugs, diet, and regimen such as Rukshanna, Yavanna, Dhoompana, Krodha, Shoka etc may be considered as anupdhaya of Nidranash .Also hetus of Nidranash can be taken as Anupshaya.

Common sleep disorders

Disorders are grouped into six major categories: [33]

- 1. Insomnia
- 2. Sleep Related Breathing Disorders
- 3. Central Disorders of Hyper somnolence
- 4. Circadian Rhythm Sleep-Wake Disorders
- 5. Parasomnias
- 6. Sleep Related Movement Disorders

Insomnia can be classified as transient, acute, or chronic

- Transient insomnia lasts for less than a week. It can be caused by another disorder, by changes in the sleep environment, by the timing of sleep, severe depression, or by stress.
 Its consequences sleepiness and impaired psychomotor performance are similar to those of sleep deprivation. [34]
- 2. Acute insomnia (Short term insomnia) is the inability to consistently sleep well for a period of less than a month. Insomnia is present when there is difficulty initiating or maintaining sleep or when the sleep that is obtained is non-refreshing or of poor quality. Acute Insomnia is also known as short term Insomnia or stress related insomnia.^[35]
- 3. Chronic insomnia lasts for longer than a month. It can be caused by another disorder, or it can be a primary disorder. People with high levels of stress hormones or shifts in the levels of cytokines are more likely than others to have chronic insomnia. Symptoms might include muscular weariness, hallucinations, and/or mental fatigue. Chronic Insomnia can cause double vision. [36]

Causes of insomnia

Transient and short-term insomnia

Environmental - such as noise or light, extremes of temperature, or poor bed.

Stress - Primarily life events such as new job or school, deadlines or exams, or death of a relative or close friend.

 Chronic insomnia: Differential diagnosis is broader and includes the following categories:

Medical disorders - Include chronic pain syndromes (eg, arthritis, cancer), advanced COPD, chronic renal disease (especially if on hemodialysis), chronic fatigue syndrome, and fibromyalgia.

Neurologic disorders - Include Parkinson disease and other movement disorders, as well as headache syndromes, particularly cluster headaches, which frequently are triggered by sleep. Psychiatric disorders - Most chronic psychiatric disorders.

Management of insomnia

Insomnia can be managed simply by removing the causative factors. Behavioral, psychological treatments along with sleep education and sleep hygiene proved better improvement in the patients of Insomnia.

Psychological and Behavioral treatment for insomnia^[37]

Stimulus control therapy

A set of instructions designed to associate the bed/ bedroom with sleep and to re-establish a consistent sleep-wake schedule:

- (1) Go to bed only when sleepy;
- (2) Get out of bed when unable to sleep;
- (3) Use the bed/bedroom for sleep only (no reading, watching TV, etc.);
- (4) Arise at the same time every morning;
- (5) No napping.

Sleep restriction therapy

A method designed to curtail time in bed to the actual amount of sleep time. For example, if a patient reports sleeping an average of 6 hours per night, out of 8 hours spend in bed, the initial recommended sleep window (From lights out to final arising time) would be restricted

to 6 hours. Periodic adjustments to this sleep window are made contingent upon sleep efficiency, until optimal sleep duration is reached.

Relaxation training

Clinical procedures aimed at reducing somatic tension (e.g., progressive muscle relaxation, autogenic training) or intrusive thoughts at bedtime (e.g., imagery training, meditation) interfering with sleep.

Cognitive therapy

Psychological methods aimed at challenging and changing misconceptions about sleep and faulty beliefs about Insomnia and its perceived daytime consequences. Other cognitive procedures may include paradoxical intention or methods aimed at reducing or preventing excessive monitoring of and worrying about Insomnia and its correlates/consequences.

Sleep hygiene education

General guidelines about health practices (e.g., diet, exercise, substance use) and environmental factors (e.g., light, noise, temperature) that may promote or interfere with sleep. This may also include some basic information about normal sleep and changes in sleep patterns with aging.

Cognitive behavior therapy

A combination of any of the above behavioral (e.g., stimulus control, sleep restriction, relaxation) and cognitive procedures.

Pharmacological treatment

Sedative – A drug that subdues excitement and calms the subject without including sleep through drowsiness may be produced. [70]

Hypnotic: A drug that induced and/or maintains sleep, similar to normal arousal sleep. These are more or less general CNS depressants with differing time-action and dose-action relationships.^[71]

In addition some antihistaminics (Promethazine, disphen-hydramine), some neuroleptic / antidepressant (Chlorpromazine, amitriptyline), and opioids (Morphine, Pethidine) have significant sedative action, but are not reliable for treatment of insomnia.

DISCUSSION

According to Ayurveda, in Nidranash sharirik and manasika hetu causes aggravation of Vata-Pitta and Rajas guna vruddhi with Shleshma and Tamas kshaya.

- 1. Nidra is very important phenomenon for healthy body and mind. Nidra maintains the nourishment of the body, relaxes the mind, enhance the longevity of the human beings.
- 2. Vata –Pitta predominance and Rajas plays an active role in the pathogenesis of Nidranash
- 3. Manasika Nidanas, Sharirik Nidanas as well as Psychic stress are the main causative factors of the disease.

According to modern science in the condition of Insomnia probably the function of structures like thalamus and forebrain might be diminished along with quantitative decrease in serotonin and increase in quantity of catecholamine.

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