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Review Article

PROSPECTIVE APPROACH ON DIAGNOSIS AND MANAGEMENT OF NIDRAVIKARA (SLEEP DISORDER/ INSOMNIA) IN AYURVEDA

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ABSTRACT

Sleep is an essential component of human life to keep health and well-being absence of which cause a lot of neuro-psycho-physiological derailment in the body. In another words if normal sleep is disturbed for a short time it can be managed but if it continues for a prolong period than the condition is called as a diseases which can be termed on the basis of its characteristics like sleep disorder, insomnia etc. Several diagnostics criteria's including different scales have been taken into practical for diagnosing the variety of sleep disorder. The concept of sleep disorder has also been enriched with description in classical text like *Nidranasha*, *Anidra* etc. which has been systematically defined along with a reasonable causing factors. The management of sleep disorder has become a serious issue nowadays looking to the disorders observed in daily life of growing civilization starting from food to working schedule etc. The effect of sleeplessness has put not only work place disturbances damaging the expected outcome rather it has become global epidemic damaging to neuro-psycho-physio-socio-economic load of human being and nation. As per statistics female adults are more prone to sleep disorder amongst the higher socio-economic group. This sleep disorder is experienced with obesity, depression and poor immune system etc. in the long run. The probable and possible management in Ayurveda stands an unique option. The traditional way of management pertaining to sleeplessness/insomnia has been elaborated in this paper.

INTRODUCTION

Sleep is one of the essential and basic physiological process seen in higher animals. A full night refreshing sleep is essential for adequate day time functioning. It is now well known that sleep is not a mere passive state but an active neuro-behavioural state maintained by highly organized interaction of neural networks and neurotransmitters of central nervous system. Sleep has an important role in the regulation of CNS, body's physiological functions, regulating metabolism, catabolism, temperature, learning and memory consolidation¹. Psychiatric conditions are very commonly associated with insomnia². Overall it was noted that among psychiatry patients insomnia was very common (40% psychiatry patients) Insomnia/sleep disorder is a condition of loss/disturbed sleep which has come as a felt expression nowadays resulting to a

lot of neuro-physio morbidity. It can affect people of any age and is more common in adult female than adult male and among shift workers and patient with circadian rhythm sleep disorders because of normal sleep wake cycle due to work or social demand. Sleeping disorder can determine the work performance as well as contributing factor to obesity, anxiety, depression, irritability, concentration problem, memory problem, poor immune system etc. and also an associated cause for developing high risk in chronic diseases³. As per the international data 30-40% of American adult having insomnia out of which 10-15% of adults suffer from chronic insomnia⁴. Insomnia is a broader term which includes wide range of sleeping disorder starting from lack of sleep quantity. In Ayurveda we find certain description related to

Nidranasha, which is used indicating a pathological condition in which patient is devoid of sleep. There are several similar terms are also found in Ayurvedic texts like *Aswapana*, *Akalanidra*, *Avyavahitanidra*, *Prajagran*, *Nidraghat*, *Nidra-viparaya* etc. which are taken as pathological conditions in different places as mentioned in the texts and are broadly termed as *Nidravikara*.

Historical Review – According to different classical texts we find the description of *Nidra* in different aspects. From the time immemorial complete sleep has been felt necessary and have been described in various spiritual texts like *Upnishad*, *Bhagwatgeeta* etc. person is able to have its complete health, if proper diet and proper sleep is obtained opined by *Bhagwat Geeta*

“Yuktaaharaviharasyayuktachestasyakarmasu
Yuktaswapnabhodhasya yoga bhavatidukhha”

Bhagwat Geeta

Where it has been clearly mentioned by that there must be appropriate sleep. Similarly the great sages of India have described several goodness of sleep in several places like *Upanishad*, *Veda* etc. In *Mandukya Upanishad*, sleep is described as condition in which *Atma* doesn't have desire for anything and doesn't dream anything and this condition is called *Sushuptavastha* or *Nidra* in complete state. *Shankaracharya* speaks in his *Brahmsutrabhashya* that the position of *Atma* during *Nidra* is collectively mentioned as complete *Nidra*. *Chhandogya Upanishad* clears the role in which mind is unaware about its surroundings and does not see any dream is called *Supta* or *Nidra*. *Upanishad* and *Kaushika sutra* refer that, sleep is such a state where *Atma* for the time being enjoys *Brahmananda* and also vital function of body are carried out through *Prana*. According to *Charaka*, *Nidra* has been considered as a positive process for achieving good health in absence of which a man suffers from a lot of diseases.

“Nidrayatamsukhamdukhampushtikarshayabalabalam”
Vrishtaklibtagyanamaganamjivitamna cha”

Ch.su.21/36

There is a natural Phenomenon between sleeping and awaking and so many historical evidences are being supported for a reason and if the normal sleep is not achieved then condition may lead into serious health hazards like neurological, psychosomatic diseases etc.

Physio-pathological review: In Ayurveda a lot of symptoms are linked with lack of proper *Nidra* under which if person is suffering from *Murcha*, *Trishna*, *Kshaya*, *Tandra*, etc. However, they are all been included under the various factors.

Physiological issues and medical conditions like chronic disease Arthritis, Asthma, Cough, GIT disorder, Neurological disorder, Parkinson, etc. Dietetic factors like intake of excessive alcohol, taking of tea and coffee before bed time and some sort of arietated drinks, incompatible diet like intake of spicy and non-veg preparations but these factors are considered to be reason to be the reason of short term short term sleeplessness. Psychological issues like people with mood disorder, anxiety, depression, angry temperament in nature and especially *Pitta & Vata Prakriti* in Ayurveda are also contributory factors. Some other factors are also responsible if sleeping pattern is disturbed like watching TV, Computer, Video games, mobile phone, etc. Practically, reduction in required total time in bed can lead to complaints of Sleep disorder/Insomnia.⁵

In addition to this, other factors contribute a significant input in causing insomnia/sleeplessness like occupation, socio-economic status, marital status (married, divorced, widow, single), mental and specially post-menopausal women's are more predisposed to Insomnia/ sleeplessness.

Charak has clearly mentioned the concept of *Nidra* in a very scientific manner as ⁶

“Yadatumansiklantekarmantmanklamanvitae
Vishayebhyonivartantaetadaswapitimanava”

Ch.su21/35

These lines clearly indicate that sleep was thought to be a passive state that was initiated through withdrawal of sensory input where *Mana* is distracted from the *Panchgyanindriya & Panch-karminidriya* which may called as external stimuli, but currently withdrawal of sensory awareness is believed to be as factor in sleep but an active initiation mechanism that facilitates brain withdrawal is also recognised. Similarly if the sleep is not properly activated then the process of sleep is considered as *Nidravikara* as cited by *Madhava*.⁷

“Indriyartheshuasamviatigauravamjhrimbhanamklama
Nidartesaivyaishyehatasyatandravinirdeshyait”

Ma.Ni. murchabhramadinidan 17/20

In this above references the following symptoms of sleep disorder have been filtered:

1. *Indriyartheshuasamviti* =Lack of concentration and focus
2. *Gauravam*= Fatigue / Feeling tired often
3. *Jrimbhanam*= Yawns often during the day
4. *Klama*= Mental & Physical tiredness
5. *Nidrataisaiv*= Feeling of sleeplessness / drowsy (day time fatigue / worrying /sleeping)

However the symptoms are quite identical to the symptoms as described in modern science as:

- i. Difficulty falling asleep at night
- ii. Waking during the night
- iii. Still feeling sleepy after a night's sleep
- iv. Day time fatigue or sleepiness
- v. Irritability, depression or Anxiety
- vi. Poor concentration & focus
- vii. Being uncoordinated, an increase in error or accidents.
- viii. Tension headache
- ix. Difficulty socializing
- x. GIT Symptoms
- xi. Worrying about sleeping

Sleep conditions according to Ayurveda

According to *Charaka* there are six types in which the varieties are multifactorial as *Tamobhava* which is linked to body where a Psycho-temperament of person to sleep usually more and being agreed by *Sushruta* is *Tamasnidra*. But it has been considered as bad sign to the person. *Sleshmasambhava*, it is also sometimes temperament related as sometimes also related to environment, food, disease condition etc. *Shramsambhava*, where the musculo-skeletal exertion and excessive weakness tiredness etc. are responsible. *Agantuki*-Related to exogenous factors. *Vyadhianuvarteni*-Sometimes some diseases may cause sleep. *Ratriswabhava prabhava* -Normal sleep pattern during night hours although some sort of similar descriptions like *Vaishnavinidra*, *Tamasinidra*, *Vaikarinidra* are also described by *Susruta* in which all these varieties are later related. But in these descriptions, there is no specific mention of sleeping hours rather certain advice have been given for the persons to induce sleep. (*Ch.Su.21/41*) These are the conditions which are responsible for insomnia as described in Ayurveda and advised to take sleep in day hour to compensate loss of sleeping hours.

According to modern there are specific sleeping hours have been described from person to person and condition to condition according to age to age also. An average adult needs between 7.5 to 8 hours of sleep per night. But some people can function with 6 hours sleep and some need 9 hours or more. Infants needs between 14 to 16 hours of sleep. The amount of sleep needed to work next day varies from individual to individual and is altered genetically and hereditarily also⁸.

Similarly *Charak* also advised to enhance the sleep hours in following conditions and persons due to lack of sleep hours since those conditions are responsible for *Nidranasha* (*Ch.su.21/39-41*). Apart

from this, *Charak* has also advised to take more sleep in summer season due to want of sufficient sleep during night hours. As the nights are smaller and certain indication are there not to sleep in specific condition and place except summer season and person having obese using viscous things daily cough temperament, suffering from cough ailments and persons having some toxic related diseases. It is the matter of most important that *Charak* has stated normal pattern of sleep habit are to be followed strictly which is called *Ratriswabhava Nidra* and which is widely accepted world-wide, but when a person sleeps beyond the normal hour of sleep then he may suffer from a lot of diseases which are practically known as Insomnia. Specially the older people more lightly and get less deep sleep so more time is allowed for them to sleep. Several disease conditions are described to be responsible for sleep disorder/ Insomnia:- like *Halimaka* (type of Anaemia), *Shirashool* (Head ache), *Staimitaya* (feeling of body covered with wet cloth), *Gurugatrata* (Heaviness in body), *Angamarda* (Body pain), *Agninasha* (loss of appetite), *Hridyapralepa* (palpitation), *Shopha* (Swelling/Anasarca), *Arochaka* (Anorexia), *Hrilasa* (Nausea), *Peenasa* (Rhinitis), *Ardhavabhedaka* (Migraine), *Kotha* (Urticaria), *Kandu* (Itching), *Tandra* (Drowsiness), *Kasa* (Cough, cold), *Gala-amaya* (Throat pain), *Smriti Budhi Pramoha* and *Indriyaasamarthata* (Lack of sensory activities), *Strota Avrodha* (Obstruction of channels), *Jwara* (Fever), and *Vishabhava* (Enhancement of toxicity). *Charaka* has clearly advised that he should take care of sleep proper in order to avoid Insomnia, otherwise lot of problems and disease conditions are manifested, that's why he has concluded.

*"Tasmathitaahitamswapanam
budhwaswapyatsukhambudha"*

Ch.Su.21/49

If sleep is not taken properly during night hours and slept in day hours than body became *Ruksha*, due to vitiation of *Vayu* and by sleeping in day hours cough matters are elevated and causing obesity and at the last it has been told that both diet and sleep are equally responsible for maintenance of good health and person should always be conscious about adequate sleep and adequate diet.

According to modern sleep pattern is divided into two Rapid Eye Movement (REM) and Non-Rapid Eye Movement (NREM). NREM - is further divided into deeper stages of sleep Stage N1, N2 and N3. N1:-Eyes are usually closed. N2:-The sleep is light in nature with slow heart rate. N3: It is called deep sleep stage and very difficult to awaken. During the

N3 condition the body tissue repairing process along with immune system develops.⁹

The present table denotes the way of diagnosis of severity of sleep disorder in modern system of medicine.^{10,11}

Problem	None	Mild	Moderate	Severe	Very severe
1.Difficulty falling asleep	0	1	2	3	4
2.Difficulty staying asleep	0	1	2	3	4
3.Problem waking up too early	0	1	2	3	4

4. How satisfied? Dissatisfied are you with your current sleep pattern?

Very satisfied Satisfied moderately satisfied Dissatisfied Very Dissatisfied
0 1 2 3 4

5. How Noticeable to others do you think your sleep problem is in terms of impairing the quality of life?

Not at all noticeable A little Somewhat Much Very much noticeable
0 1 2 3 4

6. How worried/distressed are you about are you about current sleep problem?

Not at all worried A little Somewhat Much Very much worried
0 1 2 3 4

7. To what extent do you consider your sleep problem to interfere with your daily functioning (e.g. daytime fatigue, mood, ability to function at work /daily chores, concentration, memory, mood etc.) Currently?

Not at all interfering A little Somewhat Much Very much interfering
0 1 2 3 4

All the scores for seven items (questions 1+2+3+4+5+6+7) =Total score

Total Score Categories are

- A) 0-7=No clinically significant insomnia
- B) 8-14=Sub threshold insomnia (mild)
- C) 15-21=Clinical Insomnia (moderate)
- D) 22-28=Clinical insomnia (Severe)

So far Ayurvedic diagnostic criteria is concerned the following *Charak Nidravikara Nidana Padhati* Performa has been developed in consultation with Ayurvedic texts.

S.No	Symptoms	Since how many Days	How many times in a Day	Effect from any medicine	Automatic relief
1.	<i>Shirashool</i> (Headache)				
2.	<i>Stamityata</i> (Body covered with something)				
3.	<i>Gurugatrata</i> (Heaviness in body)				
4.	<i>Kshudamandyata</i> (Anorexia)				
5.	<i>Hridayaprelapa</i> (Palpitation and discomfort in chest)				
6.	<i>Pinasa/Ardavabhedaka</i> (Headache/ Rhininitis)				
7.	<i>Urushoola</i> (Pain in chest)				
8.	<i>Tandra/Klama</i> (Tiredness or fatigue)				
9.	<i>Kasa / Galamaya</i> (Neck / throat pain)				
10.	<i>Smritipramoha/ Buddhipramoha</i> (Difficulty remembering things and difficulty thinking clearly and making decisions)				
11.	<i>Indriyasamarthata</i> (poor alertness and difficulty keeping thoughts focused)				
12.	<i>Divaswapana</i> (Feeling sleepy in day hours)				
13.	<i>Jrimbhanam</i> (Yawning)				
14.	<i>Arochaka</i> (Anorexia)				
15.	<i>Angamarda</i> (Body ache)				

Total score system**Nine point score**

1.If the frequency more than once of serial number 1, 3, 6, 8, 10, 11, 12, 13, 15 than it is severe type *Nidravikara*.

Seven point score

2.If the frequency of seven points i.e., 1, 3, 8, 10, 11, 12, 15 than it is moderate type *Nidravikara*.

Five point score

3.If the frequency of five points i.e., 1, 3, 8, 12, 13 or positive without frequency of any ten points than it is mild type of *Nidravikara*.

However these points are to be clinically present and the diagnosis must be done accordingly if desired some of the points may be taken inter alia during diagnosis by the physician. Moreover, it is to mention here that attempts have been made to corroborate with the available modern system of diagnosis on the criteria of sign and symptoms simulated in Ayurveda.

Management of Nidravikara (Sleep disorder/ Insomnia)

Management of *Nidravikara* sometime became difficult though sedative medicine are prescribed and it has been felt easier in field of treatment, because before going to manage the causative factors are to be ascertained. However, some of common treatments are prescribed for *Nidravikara* which can be advocated in general. *Samanyachikitsa* includes *Abhyanga* with *Tilataila*, *Snana*, *Samvahana*, *Shirolepa* with *Bhrami*, *Jatamansi* paste and *Shirodhara* with *Bhramitailam* and specifically *Shirovasti*, *Shirotarpan*, *Murdhampuran*, *Karnapurana* etc. Psychosomatic Management is very important in Ayurveda. Apart from this there should be some sort of advice to patient as *Sukhashaya*, *Mridushaya*, *Bhayatyaga*, *Chintatyaga* and *Manoanukool Shabd graham*, *Gandhagrahan* and *Vishayagrahan*. The Patient should be satisfied with the limitation of therapy. The diet usually should be *Yusha*, *Mamsa rasa* and apart from them *Sheetaahara*, *Snehahara*, *Guda*, *Masa* are also advised to be taken. So far some medicinal formulations are concerned few medicines are to be advocated looking into condition of Patient like *Ashwaganda Churn*, *Brahmi Churn*, *Shankhpushpi swarasa*, *Rudrakshabeejachurna*, *Jatamansi Churn*, *Guduchisatva*, *Mandukparnichurn*, *Guduchikwath* are important single preparations which are to be given with sugar, honey and as per the required dose. Apart from this same compound formulations like *Loknath Rasa*, *Nidrodya Rasa*, *Kalyanakguda*, *Ashwagandha ghrit*, *Salmalipaka*, *Satavariguda*, are also to be prescribed judiciously. It is also

important to advise the patient to follow recommended yoga and meditation as per applicability.

CONCLUSION

Nidravikara or sleep disorder has been a serious concern in medical field as the problem getting more day by day due to most often lifestyle changes and dietary habits as well as lack of exercise and meditation etc. Though this disease is principally related to lifestyle where worriness and anxiety perturbs the concentration of the person. It is highly essential to maintain the proper ratio between rest and work and it would be more helpful if the medication/sedative are avoided as far as possible and recommended diet, meditation, exercise are required and separation of work and family responsibilities. Apart from this certain proven herbal preparations could be continued for a proper lifestyle management issue.

In general, the life is kept control over the mind and all sort of management prescribed for *Satvajaya* are to be followed to the possible. Living life without worry and to remain always satisfied is the prime concern for keeping the body and mind healthy and Ayurveda speaks very clearly with the blessings of "*Jeevamsardashatam*" means are expectancy is 100 years with full satisfaction.

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