

Review of Ayurvedic Strategies to Overcome Nidranasha and Improve Quality of Life

THANUSREE N NAIR¹, AKHILESH SHUKLA², HARITHA CHANDRAN³, LEENA P NAIR⁴

ABSTRACT

Introduction: Insomnia is the most commonly reported sleep problem, which profoundly affects the person's quality of life. In Ayurveda various non-pharmacological methods related with dietary modifications, physical and psychological factors are well described for the effective management of Nidranasha (primary insomnia) and to improve the quality of life.

Aim: To explore the non-pharmacological strategies for the effective management of Nidranasha (primary insomnia) from the perspective of Ayurveda.

Comparison with Pharmacologic Treatments: Various pharmacological compounds are effectively used for the symptomatic treatment of insomnia such as hypnotics, antidepressants, neuroleptics etc., however, their safety, dependency and adverse effect remains a matter of concern among physicians, when used for the long-term. Ayurvedic approaches can be a better choice in this situation.

Materials and Methods: For this, Ayurveda classics have been thoroughly studied, PubMed was searched using key words, Anidra, Nidranasha and non-pharmacological treatment for insomnia from Ayurveda, the free full text article published during 2000 to 2017 were reviewed. The information was also taken from the modern medical science article from the same year and from the official web page of Centers for Disease Control and Prevention.

Results: A total of 5 free full text articles from Ayurveda and 40 from modern medicine were found in the PubMed search. Information from the classical Ayurveda texts and published articles both were utilized in this review.

Conclusion: Ayurveda gives importance to the natural sleep for the maintenance of health. It is always better that Nidranasha (primary insomnia) should be initially managed without the use of any pharmacological compound.

Keywords: Anidra, Nidra, Primary insomnia

INTRODUCTION

The quality of an individual's life and how efficiently he/she is functioning depends upon how healthy sleep the person has in the night. Sleep plays an integral part in the health and well-being of the individual [1]. Despite strong evidence of the relationship between insufficient sleep and health problems, most people are ignorant of the amount of sleep they need, their level of sleep deprivation, and the deleterious effect of sleep deprivation on their health [2]. Because of this sleep problems are seen across a wide age spectrum from children to the elderly [3]. By definition, insomnia is "a difficulty in initiating or maintaining sleep, or both" or the perception of a poor quality sleep [4]. It is common and it affects 9% to 15% of the general population worldwide [5] and the incidence goes on increasing day by day in the developing countries like India [6]. The diagnostic criteria for primary insomnia includes, difficulty in initiating or maintaining sleep or non-restorative sleep, causing clinically significant distress or impairment in social, occupational, or other important areas of functioning, not occurring exclusively during the course of another sleep disorder and not due to the direct physiological effects of a substance or a medical condition [7]. Ayurveda regards Nidra (sleep) as one of the most essential factor responsible for a healthy and fulfilled life [8]. It is one of the Trayopastambhas (three great subsidiary pillars) on which the health of a person is firmly balanced [9]. Due to Nidranasha (insomnia), malaise, heaviness of head, yawning, lethargy, fatigue, giddiness, indigestion, drowsiness and Vata disorders manifest [10]. Evidences also prove that sleep loss (less than 7 hours per night) may have wide-ranging effects on the cardiovascular, endocrine, immune, and nervous systems and it will produce diseases such as obesity in adults and children, diabetes and impaired glucose tolerance,

cardiovascular disease, hypertension, anxiety, depression etc., [11]. Various pharmacological compounds are effectively used for the symptomatic treatment of insomnia such as hypnotics, antidepressants, neuroleptics etc., however safety of these drug when used for the long-term, their dependency and adverse effect remains a matter of concern in the medical field. It is always better that patient of insomnia should have natural adequate sleep without the aid of any pharmacological compound. In Ayurveda various non-pharmacological methods are described for the effective management of Nidranasha (primary insomnia).

MATERIALS AND METHODS

For this Ayurveda classics mainly Asthanga Hridaya, Asthanga Sangraha, Bhava Prakasha, Bhel Samgita, Charaka Samhita, Dhanwantari Nighantu, Harita Samhita, Kaiyadev Nighantu Madanpala Nighantu, Raja Nighantu, Sushruta Samhita and Yoga Ratnakara have been thoroughly reviewed to collect the matter related with non-pharmacological approaches for the management of Nidranasha. PubMed was searched for the free full text articles published during 2000 to 2017 by using key words Anidra, Nidranasha and non-pharmacological treatment for insomnia from Ayurveda which were reviewed. The information was also taken from the modern medical science article for the same year and from the official web page of Centres for Disease Control and Prevention.

RESULTS

A total of 5 free full text articles from Ayurveda were found in the PubMed search with the key word Anidra (3 articles), Nidranasha (1 article) and for non-pharmacological treatment for insomnia from Ayurveda (1 article). Searching with the key words non-

pharmacological treatment for insomnia gave result of 40 free full text articles from the modern science (accessed on 01/04/2018). Mainly the information was collected from the Ayurveda classical texts and wherever possible supporting information was taken from the published articles from Ayurveda and modern sciences both.

Dietary items for the management of Nidranasha (primary insomnia): There are many dietary items mentioned in Ayurveda classics, which helpful inducing sound sleep. Including these items in food and following the healthy dietary guidelines will help a person to get healthy natural sleep. The list of such items is given in [Table/ Fig-1] [12-20].

Psychological factors helps in the Management of Nidranasha (primary insomnia): Healthy natural sleep is very closely related with our psychological status. Excess worries, tension, fear, loud sound, unpleasant environment etc., interrupts our healthy sleep pattern. So it is very important to avoid all such psychological factors which are disturbing to us, especially during sleep time. The list of psychological factors which help in the management of Nidranasha (primary insomnia) is given in the [Table/Fig-2] [12-16,21].

External therapies help in the management of Nidranasha (primary insomnia): Few simple external therapies can help in bringing good sleep. The list of therapies from classical texts are given in the [Table/Fig-3] [12-16,22,23].

Healthy Sleep guidelines from Ayurveda which can help in the management of Nidranasha (primary insomnia):

Ayurveda texts have provided detailed guidelines to enhance good sleeping [24-26]:

- At the beginning and end of night, i.e., while going to sleep and waking up, one should only think about virtuous acts and avoid all negative thoughts.
- Lying down in an easy posture on a comfortable bed removes the sense of fatigue, pacifies or soothes Vata Dosha, brings sleep and Dhriti (lost recollection to the mind), and is aphrodisiac and conducive to the growth of the body; conversely, lying down in a contrary manner is attended with contrary results.
- One should always sleep on the bed which is properly covered with the clean, soft and pleasant linen and avoid sleeping on a bed that is not properly covered with sheets and pillows, or is uneven or uncomfortably small.
- For good sleep lie down in the supine or left lateral position and avoid sleeping in the prone position.
- Comfortable bedding encourages quality sleep; it provides good rest and happiness. The bedroom should be calm and clean, with clean bed clothes
- The bed should stand at knee joint level, and the mattress should be soft and pleasant.
- In hot climates, sleeping with a cool breeze is refreshing, keeps flies and mosquitoes away, arrests perspiration, removes the sense of fatigue, fainting and fits, and alleviates any burning, scorched or parched sensation.
- One should not stay awake at night and sleep during the day. Performing both of these are injurious for health. One should observe moderation in sleep.

Dietary items	Charaka Samhita [12]	Sushruta Samhita [13]	Ast-hanga Hridaya [14]	Ast-hanga Sangraha [15]	Bhava Prakasha [16]	Kaiadev Nighantu [17]	Dhanwantari Nighantu [18]	Madanpala Nighantu [19]	Raja Nighantu [20]
Anupa Mamsa (meat of animals inhabiting marshy land)	+		+			+			
Audaka Mamsa (meat of aquatic animal)	+		+			+			
Bileshaya Mamsa Rasa (meat of animals living in burrows)		+							
Dadhi (curd)				+					
Dharoshna Dugdha (warm freshly collected milk)									+
Draksha (grapes)		+							
Guda (jaggery)						+			
Ikshu Drvaynam (sugarcane preparation)		+	+						
Kilata (inspissated milk)	+		+		+	+	+	+	
Kshira (milk)		+	+	+					
Laja odana (cooked puffed rice)						+			
Madya (alcohol)	+		+	+	+		+	+	
Mahish Kshira (buffalo's milk)	+		+		+	+	+	+	
Mahish Mamsa (buffalos meat)	+		+	+	+		+	+	
Mahisha Dahi (curd of buffalo's milk)			+			+			
Mamsa Rasa (meat soup)			+	+					
Masha (black gram)			+						
Morata (Milk of a cow seven days after calving)	+								
Pisthanna (flour preparation)		+	+			+			
Piyush (colostrum)	+				+			+	
Potaki (Basella alba Linn.)					+			+	
Raja Palandu (variety of onion)									+
Shali Anna with Dadhi (rice with curd)	+								
Shali Dhanya (paddy)		+	+			+			
Snehanvit Takra (butter milk with cream)									+
Sukar Mamsa (pork)						+	+	+	
Upodaka/Upodaki (Basella rubra Linn.)						+			+
Vartaki (Solanum indicum Linn.)									+
Vishkira Mamsa Rasa (meat of gallinaceous birds)		+							

[Table/Fig-1]: Showing the dietary items for the management of primary Insomnia [12-20].

Psychological factors	Charaka Samhita [12]	Sushruta Samhita [13]	Asthanga Hridaya [14]	Asthanga Sangraha [15]	Bhava Prakasha [16]	Harita Samhita [21]
Bhaya tyaga (getting free from fear)	-	-	-	-	-	+
Chintatyaga (removing worry)	-	-	-	-	-	+
Lobha tyaga (free from greed)	-	-	-	-	-	+
Manonukula Gandha granaha (exposure to pleasant smell)	+	-	-	-	+	-
Manonukula Sabda granaha (listening pleasant talk)	+	-	-	-	-	-
Manonukula Vishaya grahana (involving in interesting subjects)	+	-	-	-	-	-
Mrudu shayya (cozy beddings)	-	+	-	-	-	-
Nischinta (free from worries)	-	-	+	-	-	-
Nityatrupti (eternal sense of satisfaction)	-	-	+	-	-	-
Santosha (contentment)	-	-	-	-	+	-
Sukha Shayya (comfortable bedding)	-	-	-	+	-	-
Sukha Sparsh (pleasant touch)	-	-	-	+	-	-
Sukhavartalapa (pleasant talk)	-	-	-	-	-	+
Swasteerna Shayana (well covered beddings)	+	-	-	-	-	-
Watching classical dance and hearing humorous voice	-	-	-	-	-	+

[Table/Fig-2]: Showing the psychological factors helpful in the Management of Nidranasha (primary insomnia) [12-16,21].

External therapies	Charaka Samhita [12]	Sushruta Samhita [13]	Asthanga Hridaya [14]	Asthanga Sangraha [15]	Bhava Prakasha [16]	Yoga Ratanakara [22]	Bhel Samhita [23]
Abhyanga (oil massage)	+	+	+	+	+	+	+
Akshitarpana (retention of fat in the eyes)	+	-	+	+	-	+	-
Karnapoorana (oiling ears)	-	-	-	+	-	-	-
Mardana (massage with slight pressure)	-	-	-	-	-	-	+
Moordhnapoorana /Moordhntaila (application of oil over head)	+	+	-	+	-	-	-
Padabhyanga (foot massage)	-	-	-	-	+	+	-
Samvahana (mild massage)	+	+	-	+	+	+	-
Shirobasti (retention of oil over head)	-	-	+	+	-	-	-
Snana (bath)	+	-	+	+	-	-	-
Udvardana (dry powder massage)	-	+	+	+	+	-	-
Utsadana (body anointment)	+	-	-	-	-	-	-

[Table/Fig-3]: Shows the list of external therapies helps in the management of Nidranasha (primary insomnia) [12-16,22,23].

Comparison with Pharmacologic Treatments: Though, the evidences are not enough to make a claim that Ayurvedic non-pharmacological management is better than the drug therapy, but this provides an opportunity to explore the ancient wisdom in the evidence based scientific language. There are many noble efforts done in the modern medicine which gives hope to the advancements of non-pharmacological approach in the management of primary insomnia [27,28]. There may be several advantages of Ayurvedic non-pharmacological therapy such as, being natural; it is free from any adverse effects or addiction which is generally the case of chemical based treatment [29]. The natural approach to attain the quality sleep, does not create any economic burden to the patient and as the approach is simple to follow and once understood properly by the patient it may not require frequent visit to the specialist. Due to lack of research data, it is difficult to stipulate the exact duration of the therapy, again the Ayurvedic approach is based on the several factors such as Prakriti (constitution of the person), status of Dosha (bodily humours), Agni (metabolic capacity) Desha (the locality of the patient), Vaya (age), Kaala (climate) etc., which make it very personalized and due to that the duration may differ person to person.

DISCUSSION

In the PubMed search (as done on 01/04/2018) of free full text articles about Ayurveda and insomnia, from the year 2000 to 2017 only

one article was found which was specific to non-pharmacological approach to insomnia. This article provides the clinical evidence of efficacy of Ayurveda therapy 'Shiro Dhara' (oil dripping on the forehead) in the management of insomnia [30]. Though, ample of information is available in the classical Ayurveda, but there is lack of scientific publications in this field. Even, so far there is no systemic review published particularly in this topic. So the discussion here is mainly based on the information from the classical Ayurveda texts and wherever possible references from the published articles were also used.

Insomnia is characterized by difficulty with sleeping, which may include falling asleep, maintaining sleep or a combination of the two [30]. Before arriving at a diagnosis of primary insomnia, it is important to rule out other potential causes, such as other sleep disorders, side effects of medications, substance abuse, depression, or other previously undetected illness [31]. Ayurveda gives importance to the natural sleep in the maintenance of health. Primary insomnia is that type of insomnia, where the cause is obscure i.e., the insomnia is not related to any diseased condition (psychological or physical). It is always better to go for non-pharmacological approach for the primary insomnia and Ayurveda can give a new insight in this field.

Inclusion of dietary items such as black gram, wheat, milk, ghee, Kilata (inspissated milk), Upodaka/Upodaki (Basella rubra Linn.), meat etc., are having Madhura Rasa (sweet in taste), Madhura

Vipaka (end result of digestion), heavy for the digestion, unctuous, Vatashamaka (pacifying Vata Dosh) and Kapha Vardhaka (increasing Kapha) properties [12-16]. As the increase of Vata Dosh is the main factor of Nidranasha (primary insomnia) so inclusion of these food items will help in the pacification of increased Vata and it will elevate the level of Kapha in the body which will support the person to get healthy natural sleep. Along with this following healthy dietary guidelines which are mentioned in the classical text and avoiding unwholesome, incompatible food etc. are very necessary to get extra health benefits and sound sleep. Sleep disorders are related to functional components of some diets and studies demonstrate that eating functional foods may promote sleep, including barley grass powder, whole grains, maca, panax, Lingzhi, asparagus powder, lettuce, cherry, kiwi fruits, walnut, schisandra wine, and milk [32].

In Ayurveda, excessive worry, fear, anxiety, anger or grief, excessive smoke inhalation, physical exercise or sexual intercourse, fasting, uncomfortable bed, excessive work etc. are mentioned as the causes of insomnia [33]. Worrying, faulty attributions, or unrealistic expectations of sleep may lead to increased emotional distress, and thus, leads to additional sleep disturbance, causing a vicious cycle [34]. The psychological factors which are highlighted by Acharya for the healthy sleep can be useful in the designing of integrated cognitive therapy for the effective management of primary insomnia.

External therapies such as Abhyanga (oil massage) is mentioned as Svapanakara means it helps the individual to get sleep [35]. The Abhyanga is very useful to overcome sleeplessness and other mental ailments. Samvahana (mild massage) is pleasant, soporific and aphrodisiac. It destroys the bodily Vata and Kapha Doshas, removes the sense of fatigue and soothes the blood, skin and muscles [36]. Head massage is said to be beneficial for all the senses and it also helps in initiation of good sleep [37]. May be this is the reason it is included in the Ayurvedic daily regimen and while doing oil massage, Shira (head) is mentioned as specific area where oil should be applied [38]. Such all therapies help in body and mind relaxation, they improve the blood circulation, soothes the muscles, remove fatigue etc., and in this way helps to have good sleep. A series of case report documented a moderate improvement of insomnia with Shirodhara with Brahmi oil at the end of the fifth day in most patients [27].

Acharyas have advised to think and focus only on the positive aspect of life for healthy sleep. This is a kind of relaxation method they have mentioned for the initiation of good sleep. Learning relaxation techniques can be effective in reducing physiological hyper arousal in the patient. The American Academy of Sleep Medicine currently recommends that stimulus therapy, relaxation training, and cognitive behavioural therapy are individually effective therapies in the treatment of insomnia as a standard [39]. Along with Ayurvedic guidelines for healthy sleep some other important aspects of sleep hygiene instructions should also be included here such as avoiding heavy meals close to bedtime, limiting caffeine products throughout the day, avoiding alcohol to aid sleeping, avoiding smoking close to bedtime, avoiding naps during the day time, and avoiding vigorous exercise close to bed time.

LIMITATION

The present review is limited to non-pharmacological approaches for the management of Nidranasha (primary insomnia). Though several drugs are also described in Ayurvedic classics for the management of Nidranasha but its merits or demerits are not discussed here.

CONCLUSION

The non-pharmacological approach of Nidranasha and the guidelines mentioned in Ayurveda texts for healthy sleep can be advised as supportive or drugless therapy for the management of primary insomnia and other sleep disturbances. Modern studies also support the effectiveness of non-pharmacological approach for

the management of insomnia [27,28]. The holistic approach which should include dietary factors, physical, mental and environmental factors is necessary to manage the primary insomnia without aid of any drug. However, the drugs therapy can also be added for better management when it is required.

REFERENCES

- [1] Kaliyaperumal D, Elango Y, Alagesan M, Santhanakrishnan I. Effects of sleep deprivation on the cognitive performance of nurses working in shift. *J Clin Diagnostic Res.* 2017;11(8):CC01-CC03.
- [2] Perry GS, Patil SP, Presley-Cantrell LR. Raising awareness of sleep as a healthy behaviour. *Preventing Chronic Disease.* 2013;10:E133.
- [3] Shankar PR. Knowledge, attitude and behaviour towards sleep among fourth semester medical undergraduates in Pokhara, Nepal. *J Clin Diagnostic Res.* 2008;(2):1074-80.
- [4] Sobana R, Parthasarathy S, Duraisamy, Jaiganesh K, Vadivel S. The effect of yoga therapy on selected psychological variables among male patients with insomnia. *J Clin Diagnostic Res.* 2013;7(1):55-57.
- [5] Ohayon MM. Epidemiology of insomnia: What we know and what we still need to learn. *Sleep Medicine Reviews.* 2002;6(2):97-111.
- [6] Pokharel S, Sharma A. Evaluation of Insomid tablet and Shirodhara in the management of Anidra (Insomnia). *AYU.* 2010;31(1):40.
- [7] Diagnostic and Statistical Manual of Mental Disorders, text revision. 4th edition, Washington, DC, American Psychiatric Association (APA): 2000.
- [8] Shukla A, Prasanth D, Shukla A, Baghel AS, Vyas MK, Vellela J. Relevance of Sleep for Healthy Living : An Ayurvedic Perspective. 2014;27-34.
- [9] Acharya YT, Charaka Samhita, repr., Sutrasthana, chapter 11 Verse 35, Chaukamba Sanskrit Orientalia, Varanasi, 2007, Pp. -74.
- [10] Shastri Paradakara HS, Asthanga Hridaya of Vagbhata, repr- Sutrasthana, Chap-7, Verse 64, Arunadatta commentary, Chaukhamba Surabharati Prakashana, edition-2010, ISBN:978-93-80326-76-4. P-143
- [11] Colten HR, Altevogt BM. Sleep disorders and sleep deprivation: an unmet public health problem. Washington (DC): National Academies Press (US); 2006. Pp. 59.
- [12] Acharya YT, editor. Charaka Samhita of Agnivesha, Chaukamba Sanskrit Orientalia; Varanasi, 2007.
- [13] Acharya YT, editor. Sushruta Samhita of Sushruta, Varanasi: Chaukhamba Surabharati Prakashana; Varanasi, 2008.
- [14] Shastri Paradakara HS, Asthanga Hridaya of Vagbhata, Chaukhamba Surabharati Prakashana, Varanasi, 2010.
- [15] Sharma S., Asthanga Samgraha of Vagbhata, Chaukhamba Sanskrit Series Office, Varanasi, 2012.
- [16] Mishra B., Editor, Bhavaprakasha samhita of Bhavamishra, Chaukhamba Sanskrita Bhavan, Varanasi, 2012.
- [17] Sharma PV, Kaiyadeva Nighantu (Pathya Apathya Vibodhaka), Chaukhamba Orientalia, Varanasi, 2009.
- [18] Sharma PV, Editor, Dhanwantari Nighantu, Chaukhamba Orientalia, Varanasi, 2008.
- [19] Trivedi HP, Editor, Madanpal Nighantu of Acharya Madanapala, Chaukhamba Krishnadas Accademy, Varanasi, 2009.
- [20] Tripathi Indradev, Editor, Raja Nighantu of Narahari, 5th edition, Chaukhamba Krishnadas Accademy, Varanasi, 2006.
- [21] Shastri R.V., Editor Harita Samhita, First edition, Prachya Prakashan, Varanasi, 1985
- [22] Shetty M., Babu S., Yoga Ratnakara; Vol I. Varanasi; Chowkamba Krishnadas Accademy; 2005
- [23] Sharma PV, Bhela Samhita of Bhela, edition, Chaukhamba Viswabharati, Varanasi 2008
- [24] Acharya YT, Charaka Samhita, repr., Sutrasthana, Chapter 8, Verse 19-21, Chaukhamba Orientalia, Varanasi, 2007, P-59-60.
- [25] Sharma P.V. and Sharma G., Kaiyadev Nighantu (Pathyapathya-Vibodhaka), Viharavarga, Sutra 340-345 Chaukhamba Orientalia, Varanasi. 2009, Pp.- 537-538.
- [26] Acharya YT and Acharya RN. Kavyatirtha, Sushruta Samhita, repr., Chikitsa sthana, Chapter 24 Verse 81-83, Chaukhamba Surabharati Prakashana, Varanasi, 2008, Pp. 490.
- [27] Morin CM, Vallières A, Guay B, et al. Cognitive-behaviour therapy, singly and combined with medication, for persistent insomnia: acute and maintenance therapeutic effects. *JAMA: The Journal of the American Medical Association.* 2009;301(19):2005-15.
- [28] Siebern AT, Suh S, Nowakowski S. Non-pharmacological treatment of insomnia. *Neurotherapeutics.* 2012;9(4):717-27.
- [29] Schwartz TL, Goradia V. Managing insomnia: an overview of insomnia and pharmacologic treatment strategies in use and on the horizon. *Drugs in Context.* 2013;2013:212257.
- [30] Vinjamury SP, Vinjamury M, der Martirosian C, Miller J. Ayurvedic therapy (shirodhara) for insomnia: a case series. *Global Advances in Health and Medicine.* 2014;3(1):75-80.
- [31] Centers for Disease Control and Prevention, Key Sleep Disorders, available at https://www.cdc.gov/sleep/about_sleep/key_disorders.html, accessed on 11/03/18
- [32] Zeng Y, Yang J, Du J, Pu X, Yang X, Yang S, et al. Strategies of functional foods promotes sleep in human being. *Current Signal Transduction Therapy.* 2014;9(3):148-55.
- [33] Acharya YT Acharya, Charaka Samhita, repr., Sutrasthana, Chapter 21 Verse

- 51-59, Chaukhamba Orientalia, Varanasi, 2007,P.-119
- [34] Tal JZ, Suh SA, Dowdle CL, Nowakowski S. Treatment of insomnia, insomnia symptoms, and obstructive sleep apnea during and after menopause: therapeutic approaches. *Current Psychiatry Reviews*. 2015;11(1):63-83.
- [35] Shastri Paradakara HS, Asthanga Hridaya of Vagbhata, repr- Sutrasthahana, Chap-2, Verse 8, Arunadatta commentary, Chaukhambha Surabharati Prakashana, edition-2010, Pp.-26.
- [36] Acharya YT, Acharya RN. Kavyatirtha, Sushruta Samhita, repr., Chikitsa Sthana, Chapter 24, Verse 81-83, Chaukhambha Surabharati Prakashana, Varanasi, 2008,.Pp. 490
- [37] Acharya YT, Charaka Samhita, repr., Sutrasthana, Chapter 5, Verse 81-83, Chakrapani commentary, Chaukhamba Orientalia, Varanasi, 2007, Pp. 42.
- [38] Shastri Paradakara HS, Asthanga Hridaya of Vagbhata, repr- Sutrasthahana, Chap-2, Verse 8, Arunadatta commentary, Chaukhambha Surabharati Prakashana, edition-2010, p-26.
- [39] Morgenthaler T, Kramer M, Alessi C, Friedman L, Boehlecke B, Brown T, et al. Practice parameters for the psychological and behavioural treatment of insomnia: an update. *An American Academy of Sleep Medicine report*. *Sleep*. 2006;29:1415-19.

PARTICULARS OF CONTRIBUTORS:

1. P.G. Scholar, Department of Samhita and Basic Principles of Ayurveda, School of Ayurveda, Amrita University, Amritapuri, Kollam, Kerala, India.
2. Lecturer, Department of Samhita and Basic Principles of Ayurveda, Government Ayurveda College, Bilaspur, Chhattisgarh, India.
3. Assistant Professor, Department of Samhita and Basic Principles of Ayurveda, School of Ayurveda, Amrita University, Amritapuri, Kollam, Kerala, India.
4. Associate Professor and Head, Department of Samhita and Basic Principles of Ayurveda, School of Ayurveda, Amrita University, Amritapuri, Kollam, Kerala, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Leena P Nair,
Associate Professor and Head, Department of Samhita and Basic Principles of Ayurveda, School of Ayurveda,
Amrita University, Amritapuri, Kollam, Kerala, India.
E-mail: rklsnp@gmail.com

Date of Submission: **Dec 23, 2017**Date of Peer Review: **Feb 26, 2018**Date of Acceptance: **Apr 19, 2018**Date of Publishing: **Jun 01, 2018****FINANCIAL OR OTHER COMPETING INTERESTS:** None.