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The Management of Primary Insomnia through *Pancha Sugandha Sadhita Takra Dhara* - A Pilot Study

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ABSTRACT

Ayurveda essentially sees every disease as a psychosomatic manifestation and views the Mind and Body as two aspects of one unit. The three *Stambha* of Ayurveda are *Vata*, *Pitta* and *Kapha* which control all vital functions of body, to support these *Tristambha* there are three *Upastambha* namely *Ahara*, *Nidra* and *Brahmacharya* which increases the strength of *Tristambhas*. Ayurveda emphasizes mind and body achieves proper relaxation and rest through *Nidra*. Mainly *Vata Vaigunyata* is responsible for *Anidra*. *Anidra* can be clinically correlated with Insomnia. In modern medical science for the management of Insomnia includes administration of Antipsychotic and Sedatives, each of them is having its own limitations. On the other side, *Ayurveda* having a light of hope for this condition by correction of basic pathology particularly through *Panchakarma*, like external treatment in the form of *Shirodhara* which is one among the *Murdhni Taila*. In this present study 10 subjects with Primary Insomnia. Treatment given was *Shirodhara* with *Panchasugandha Sadhita Takra Dhara* for the duration of 14 days. The treatment had shown positive response by increasing duration of sleep and quality of sleep along with over well being in terms of quality of life.

Key words: Insomnia, *Anidra*, *Shirodhara*, *Panchasugandha*, Aroma therapy.

INTRODUCTION

Nidra is harmonious feature gifted by nature. It is considered as *Brimhana* factor because it promotes health by nourishing *Dhatu*s and increasing *Kapha* which is responsible for the strength and immunity of the body as well as mind. The physiological change during *Nidra* is best manifested in *Hrudaya*. *Hrudaya*

is seat of *Chetana*, when it is invaded by *Tamo Guna* person is subjected to *Nidra* and *Tamoguna* is cause for sleep.

According to *Charaka*, *Sukha*, *Dukha*, *Pusti*, *Karsya*, *Bala*, *Abala*, *Vrishata*, *Klibata*, *Gynam*, *Janana* and *Marana*, all these depends on *Nidra*.^[1] In context to relation between body and mind, Ayurveda emphasizes mind and body achieves proper relaxation and rest through *Nidra*. The man in this techno world is trying to get overcome such harmonious feature by elaborating his mental dimensions.

About one third of life is spent in sleeping, most of the people need 6 to 8 hours sleep per day. Among all physiological needs the sleep one among them. According to *Yogratnakara*,^[2] "*Shareere Jayate Nityam Vancham Nnam Chaturvidha Bubbhuksha Cha Pippasa Cha Susupta Cha Suratasprhaa*"

Sleep appears necessary for our nervous system to work properly.^[3] Too little sleep leaves us drowsy and unable to concentrate on next day. The sleep is

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influenced by circadian cycle or biological clock, Neurotransmitters and two major phases of sleep namely Rapid eye movement [REM] and Non Rapid eye movement [NREM] which contains 4 stages also called as sleep wake cycle, such REM and NREM cycle occurs throughout the night every 70 - 90 minutes. In later half of night the REM phase are longer in duration.

It has been observed that^[4]

- Persons sleeping for 7-9 hrs per day have significantly lower rates of illness.
- There is a decrease in the metabolic rate during night sleep and [5-25%] energy is conserved
- Neuronal activity is high during REM sleep.
- Brain uses higher oxygen during REM sleep compared to awake .
- Muscles are relaxed
- The high percentage of REM sleep in infants and children is thought to be important for maturation of brain.
- Infant have an overall greater total sleep time than any other age group, In deep sleep there is release of Growth Hormone.

That's why Ayurveda stresses on sleep and described it as one among the primary tripod of life. However, man is mentally disturbed – this ultimately disturbs psycho-neuro-biological rhythm of sleep, which is broadly discussed under the sleep disorders. Words such as *Anidra*, *Nidranasha*, *Alpanidra* and *Asvapnaare* used for sleeplessness in Ayurvedic literature and modern it is termed as Insomnia. Charaka included the *Anidra* in 80 *Nanatmaja Vata Vyadi*^[5] and one among the *Adharaneeya Vega*.^[6]

According to *Sushruta*, *Nidranasha* is caused by aggravated conditions of the bodily *Vayu* and *Pitta*, aggrieved state of the *Mind*, wasting of *Dhatu*s and *Trauma* (physical or mental).^[7]

Anidra leads to *Angamarda*, *Shirogaurava*, *Jrumbha*, *Glani*, *Bhrama*, *Apakti*, *Tandra* and *Vatajanya Vyadhis*.^[8] *Acharya Charaka* has said *Nidra* as *Bhutadhatri* which occurs at night and nourishes all living being. Old age is another important factor

responsible for Insomnia. Due to advancing in ageing *Vatika* activity predominates producing restlessness and increases the brain activity which ultimately results in Insomnia. *Raja* and *Tama* are the *Doshas* of *Manasa*, which vitiates the *Manovaha Srotasa* along with *Sharirika Doshas*.

By observing these descriptions regarding *Nidra* and *Anidra*, it can be concluded that all *Acharyas* considered the importance of *Nidra*, hence *Anidra* or *Alpa Nidra* is seen in many diseases as a *Lakshana* and it may be *Upadrava* or *Arishta Lakshana* also. Hence, the *Nidana*, *Samprapti* and *Chikitsa* are explained regarding *Asvapna*, the *Acharyas* considered its independent manifestation too as a disease.

Insomnia has a great impact on social, occupational and other functioning areas of the individual. It may not be a life threatening illness, but has tendency to damage person's daily routine life. Insomnia is the compliant of inadequate sleep, it can be classified according to the nature of sleep disruption and the duration of the complaint which can be in the form of difficulty in falling sleep or difficulty in maintaining sleep or nonrestorative sleep.^[9]

Among types of Insomnia Primary Insomnia is sleeplessness that cannot be attributed to some other causes. Lifestyle changes like unaccustomed heavy work, sleep at late nights, shift works, these disturbs the biological clock in our body known as circadian cycle or clock. Excessive use of caffeine, nicotine, alcohol, cocaine, spicy food and drugs like analgesics and anti anxiotic on their sudden withdrawal leads to Insomnia.

Recent studies shown that about 40% of women and 30% of men are suffering from Insomnia and women are twice as likely to affect when compare to men. WHO health survey reveals that 35% of respondents in India have reported mild to extreme difficulty associated with sleeping.^[10]

Adults are not far behind in the tech related sleep loss loop, new research from british chiropractic association reveals that more than One in two [54%]use mobile phone in bed and nearly half [49%] confess to using a laptop or tablet at bedtime these suppresses the secretion of melatonin- nature's sleep inducing hormone.^[11]

Studies have shown that risk of Strokes, Hypertension, Arteriosclerosis, Obesity, Diabetics and Depression are much higher in patients suffering from Insomnia.

A new study showed that men who underwent a period of sleep deprivation at least for 6 months had an impaired insulin response leading to diabetes. This confirms that lack of sleep has detrimental effect on insulin sensitivity.

Some people suffer from Sunday night Insomnia, on Sunday evening people start anticipating the week ahead and thinking about how to perform at work in next day. This can lead to anxiety and sleep difficulties.^[12]

Insomnia is treated with Sedatives, Tranquilizer and Hypnotics, at higher doses it may result into some illeffects, dependent gets withdrawal symptoms ranging from restlessness and Insomnia to convulsions and death.

With these disturbing statistics and increasing prevalence of sleep related disorders even modern medicine is considering non pharmacological treatment, which include Adequate sleep hygiene, Regular exercise in evening, relaxation technique, Yoga, counselling and some of the protein rich foods provide the amino acid tryptophan, which converts to melatonin hormone may lead to good sleep for example dried apricots, figs, sunflower seeds and leafy green vegetables like spinach etc. Even magnesium is known as nature's tranquiliser and is needed to relax your muscles and for converting tryptophan to melatonin. Eating one to two spoons of pumpkin seeds – *Kushmanda Beeja* which is rich in magnesium and zinc is one among the *Nidra Janaka Dravya*.

Keeping the above mentioned facts in mind and importance of sleep disorders a clinical study on, The Management of Primary Insomnia through *Pancha Sugandha Sadhita Takra Dhara*^[13]- A Pilot Study, was conducted.

The fundamental principles of Ayurvedic treatment is broadly divided into *Anathaparimarjana* and *Bahirparimarjan Chikitsa*. *Takra Dhara* is a variety of *Shiro Dhara* and one among the *Murdni Taila*.^[14] *Acharya Sushruta* narrates human body as a tree with roots upward and branches down, further adds that

as its necessary to irrigate tree in its roots in order to flourish it completely, similarly human body needs to be irrigated in its roots i.e., head, in order to keep it moist and to enhance its functions. *Shiro Dhara* is unique procedure which directly act on *Shiras* which is the seat of *Manas, Prana Vata* which regulates the affairs of all *Indriyas*. Thus *Takra Dhara* is excellent remedy for Insomnia.

MATERIALS AND METHODS

A minimum of 10 subjects suffering from Primary Insomnia were selected through clinical survey, patients attending the O.P.D/I.P.D of Post-Graduate studies in Kayachikitsa, Ayurveda Mahavidyalaya and Hospital, Hubli. Subjects fulfilling the criteria of diagnosis as per the Performa were selected for the study.

Through Athen's Insomnia Scale^[15] objective parameters were assessed before and after treatment. Athens scale is measured by assessing 8 factors, these are rated on a 0-3 scale and the sleep is finally evaluated from the cumulative score of all factors and reported as an individual's sleep outcome. Over the period of time, AIS is considered to be an effective tool in sleep analysis. A cut off score of > 6 on the AIS is used to establish the diagnosis of Insomnia.

Sleep factors				
Sleep induction	0: no problem	1: slightly delayed	2: markedly delayed	3: very delayed or did not sleep at all.
Awakening during nights	0: no problem	1: minor problem	2: considerable problem	3: serious problem or did not sleep at all
Final awakening	0: not earlier	1: a little earlier	2: markedly earlier	3: much earlier or did not

				sleep at all
Total sleep duration	0 : sufficient	1 : slightly insufficient	2 : markedly insufficient	3 : very insufficient or did not sleep at all.
Sleep quality	0 : satisfactory	1 : slightly unsatisfactory	2 : markedly unsatisfactory	3 : very unsatisfactory or did not sleep at all.
Well being during day	0 : normal	1 : slightly decreased	2 : markedly decreased	3 : very decreased
Functioning capacity during the day	0 : normal	1 : slightly decreased	2 : markedly decreased	3 : very decreased
Sleepiness during day	0 : none	1 : mild	2 : considerable	4 : intense

Treatment given;

1. *Amapachana : Shunti Churna*

Matra : 5 gm Bid,

Kaala : Before food,

Anupana : *Ushnodaka*

Duration : Till *Niramalakshana* are obtained.

2. *Takra Dhara : Panchasugandhasadhita Takra Dhara*

Duration : 14 days for 30 minutes for 1st day and gradually increased by 5 minutes every day upto 45 minutes.

Effects of therapy in Insomnia

No.	Subjects OPD No / Age	Before Dhara - Athens score	After Dhara - Athens score
1.	12578/51yrs	10	02
2.	5977/38yrs	09	01
3.	9618/46yrs	11	01
4.	12510/30yrs	11	04
5.	12659/54yrs	08	05
6.	16721 /41	08	02
7.	12561/32yrs	08	04
8.	12976/36yrs	15	08
9.	17705 /53 yrs	11	04
10.	17397 /51 yrs	07	06

OBSERVATION

Initiation of sleep: Out of 10 subjects 03 had delayed sleep initiation up to 1-2 hrs after going to bed now improved with initiation of sleep within half an hour.

Awakening at nights: All 10 subjects were having awakening in between nights about 2-3 times, but after treatment 04 subjects improved with no awakenings at night and other 06 had one time awakening at night.

Final awakening: All 10 were having early awakening in the morning hours, 02 subjects had awakening at 4.00am improved to 6.00am, 07 subjects who were awakened at 5.30 to 6.00am got mild improvement by getting up at 6.30am and 01 subject didn't had any difference in final awakening.

Total sleep duration: 07 subjects were having 5 hrs sleep improved to 7 hour sleep, 02 had 3-4 hour sleep

improved with 6 hour sleep and 01 subject sleep duration was insufficient .

Sleep quality: out of 10 subjects, 08 were having slightly unsatisfactory of sleep quality and after treatment they were satisfactory about the sleep and 01 subject was having markedly unsatisfactory sleep improved to satisfactory and 01 subject had slightly unsatisfactory remained same after treatment also.

Well being during day: 02 subjects were having slightly reduced well being improved to normal after treatment, 02 subjects with markedly well being improved to slightly, 03 were normal before and after treatment also and 02 subject had slightly reduced well being during day remained same after treatment.

Functioning capacity during day: 07 subjects had slightly reduced improved to normal, 02 had normal functioning capacity was normal before and after treatment and 01 subject with slightly reduced remained same.

Sleepiness day time: 05 subjects were having mild sleep in day time become nil after treatment, 02 subjects after treatment got mild sleep in day time which was absent before and 02 subjects mild sleep was same before and after treatment and 01 subject didn't had any changes.

Other findings :

Manasika Bhavas

1. *Bhaya* - 02 subjects were having fearful thoughts for unreasonable cause which was reduced after treatment.
2. *Krodha*: 04 subjects were having violent tendencies oftenly became rarely.
3. *Shoka*: 02 subjects were having *Shoka* oftenly and remained same after treatment.
4. *Dweshya*: 06 subjects were having revenging tendency oftenly was reduced only for few events.
5. *Vishada*: 02 subjects had depressed mood in unreasonable causes and mildly improved after treatment.
6. *Moha*: All subjects were having normal affliction.

7. *Chinta*: out of 10 subjects, 02 were having excessive worry with irritation after treatment irritation was reduced and 04 had *Chinta* occasionally which was midly reduced .

8. *Manasa - Arthesu Avyabhicharanena*: 03 subjects were having deviation of mind frequently and 07 were getting deviation rarely.

- Out of 10, 08 subjects had lightness of head, calm and relaxed mind and reduced thoughts in nights.
- 01 subject got improved hair growth and reduced hair fall.

Gender/age: Out of 10 subjects 04 were female and 06 were male, all were ranging from 30 to 60 yrs as per criteria .

Occupation: Out of 10 subjects all were working except 02 female subjects were housewives.

Education: All subjects have completed their degree except 02 male subject completed secondary education.

Economical status: out of 10 subjects 06 were from middle class and 04 were poor middle class.

Diet: 05 subjects were vegetarian and another 05 were mixed diet.

Prakruti: 04 subjects belongs to *Vatapittala Prakruti*, 02 of them were *Vatashleshmala Prakruti*, another 02 subjects were *Shleshma Pittala Prakruti* and 02 subject were *Vatala Prakruti*.

Agni: 06 subjects were having *Samagni*, 03 were belongs *Teekshnagni* and 01 subject was having *Visamagni*.

Kosta: 06 subjects were having *Madhyama Kosta*, 02 were having *Kroora Kosta* and 02 *Mrudu Kosta*.

DISCUSSION

Shirodhara has profound impact on nervous system, that means the treatment directly and immediately calms, relaxes and has a cleansing effect on mind and nerves and also relieves tension, stress, fatigue, worry, fear and headache. It regulates the mood and gives feeling of pleasure and relaxation. According to modern, stress or anxiety is main cause for Insomnia, and in condition of *Anidra* (insomnia) the main vitiated *Dosha* is *Vata*, so balance of *Vata Dosha* and

increment of *Kapha Dosha* enhances the *Tama*, which counter acts the *Raja Dosha*.

As the pressure has an effect on impulse conduction, prolonged and continuous pressure is applied in *Shirodhara* through medication like *Takra*, *Taila* etc. over head causes tranquility of mind and induces the sleep. Ultimately this process nourishes the essential components of body and helps to get ride the problem like Insomnia. Here an attempt is made with *Panchasugandhasadhita Takra Dhara* with ingredients like *Kankola*, *Puga*, *Lavanga*, *Karpura*, *Jatiphala* as mentioned in *Raja Nighantu*. *Dravya* taken for *Takra Dhara* are Aromatic drugs which has pleasant smell. Aroma therapy is a caring, hands-on therapy which seeks to induce relaxation, to increase energy, to reduce the effects of stress and to restore lost balance to mind, body and soul.

An *Aroma* therapy^[16] which has recently spread in the medical field and aimed at enhancing the prevention and symptomatic treatment for diseases. It is complementary therapy in care of cancer patients and alternative medical therapy for Dementia, Sleeplessness and sleep disturbance. It is important that fragrance and its application acts on Hippocampus and Autonomic nervous system.

Panchsugandha drugs	Characteristics
<i>Kankola</i>	It has calming properties and used in Hypertension and stress,
<i>Puga</i>	It is considered as <i>Vatanadi Balya</i> , by using internally <i>Mana Prasannata</i> occurs and <i>Madaka</i> in nature
<i>Lavanga</i>	Acetic odour is quite Refreshing,
<i>Jatiphala</i>	By inhaling the unique spicy and musky aroma it can stimulate Brain activity and acts as sedative
<i>Karpoora</i>	Increases the <i>Prana</i> , opens up

senses and brings clarity to the mind, eases headache and awakens perception .
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Shirodhara acts by transcutaneous penetration of medicine through the skin and absorption by capillary infiltration. probably it normalizes the two important neurotransmitters serotonin and Nor epinephrine which regulates a wide variety of neuropsychological processes along with sleep.

CONCLUSION

In context to relation between body and mind, Ayurveda emphasizes that both *Shareera* and *Satwa* interacts with one another in all spheres of life. So Ayurvedic approach to the disease is definitely psychosomatic in nature and *Anidra* is one among them. The treatment given was *Panchsugandha Sadhita Takra Dhara* showed encouraging results with sleep factors as mentioned in Athens Insomnia Scale. From this study, it is stated that Ayurveda can be a promising alternative in Insomnia. Further clinical trials are needed to establish a standard management of sleep disorders.

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