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## Clinical study of shirodhara and Apamargadi Vati in the management of insomnia (*Anidra*)

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### Abstract

Today's man has become a tired and chronically sleep-deprived generation. Technology and the industrial revolution is one of the biggest factors. People live in a fast-paced, high-tech world that operates 24 hours a day. Working fields like a myriad of businesses and services are accessible around the clock. Television, radio and movie channels broadcast, continuous exposure of mobile and internet day and night. To cope up such conditions occurring around the clock, people work long hours and neglect some important health related matters. Unfortunately sleep is a very common thing to sacrifice. Consequently, insomnia has spread up very widely like other harassing diseases. Insomnia has a great impact on social, occupational and other functioning areas of the individual. The modern medical science is still not having a definite treatment for this disease. In this study 1<sup>st</sup> group treated with *Apamargadi Vati*, 2<sup>nd</sup> group with *Tail Dhara* and 3<sup>rd</sup> group with combined therapy. Effect of therapy was evaluated before and after treatment and found that combine therapy is more effective than individual.

**Keywords:** Insomnia, *Anidra*, *Shirodhara*

### Introduction

Insomnia is a common sleep disorder that affects an estimated 30% of the general population [1]. It is characterized by difficulty with sleeping, which may include falling asleep, maintaining sleep or a combination of the two. It often leads to fatigue, lack of energy, difficulty concentrating and irritability. Women are affected more commonly than men, and it increases in both sexes with age [2]. Additionally, studies have found that insomnia is more prevalent in divorced, separated and widowed adults than in married adults. It also has been observed that several psychiatric and physical illnesses have a strong correlation with insomnia. Insomnia in elderly people results in deterioration of social and/or physical functioning [3].

Insomnia can occur independently or as a result of another problem. Conditions that can result in insomnia include psychological stress, chronic pain, heart failure, hyperthyroidism, heartburn, restless leg syndrome, menopause, certain medications and drugs such as caffeine, nicotine and alcohol. Other risk factors include working night shifts and sleep apnoea [4].

There is no any effective treatment in modern science. Although, hypnotics and sedatives are there in all the prescriptions of psychiatrists and in maximum prescriptions of general practitioners, their role in curing the disease is very limited rather the patients will be addicted for the particular drug.

There comes the relevancy of *Ayurvedic* principles for the treatment, which reveals that the medicine or treatment that cures one disease and creates some other is not a good therapy, but the therapy which cures one disease and does not create any other, is the right treatment [5].

Hence, here a humble attempt had been done to give an effective management process for the disease Insomnia (*Anidra*).

### Material and method

The patients of Insomnia (*Anidra*) fulfilling criteria for selection were registered from O.P.D. & I.P.D., Department of *Kayachikitsa*, I.P.G.T. & R.A., Jamnagar. The complete profile of the patient was prepared as per the detailed proforma consisting of all the relevant data.

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**Treatment Groups**

The patients were selected and randomly distributed in following therapeutic groups.

**Group A (Apamargadi Vati Group)**

Dose: 1 gm tds

Duration: 8 weeks

Anupana: With milk (buffalo)

Here, milk of buffalo has been selected for *Anupana* to enhance the effect of the drugs as *Acharya Charaka* has mentioned that buffalo milk is the best for inducing sleep [6].

**Group B (Taila Dhara Group)**

Drug: *Kshira Bala Taila*

Duration: *Shirodhara* done for 30 min. daily in the morning for 2 weeks.

**Group C (Combined Group)**

In this group combined therapy has been given as mentioned in the groups above.

**Inclusion criteria**

Patients who had complaint of insomnia, either primary or secondary fulfilling the diagnostic criteria were included into the study.

**Exclusion criteria**

Patients who had any complicated or serious medical conditions were excluded for the study.

**Assessment criteria**

Effect of therapy was evaluated before and after therapy by using special scoring system like Brief Psychiatric Rating Scale (BPRS), Disorders of Sleep-Wake (S-W) Schedule scoring and *Manas Bhava* by specific proforma for statistical analysis.

**Result & discussion**

**Overall effect of therapies**

After the completion of therapy in all three groups, none of the patients showed complete remission or unchanged. 62.50% patients each got markedly improvement by combined therapy and *Shirodhara* therapy. Moderately improved patients were noted 85.70% in *Apamargadi Vati* group, 37.50% in combined therapy and 25.00% patients in *Shirodhara*. 14.30% patients were observed improved in *Apamargadi Vati* group followed by 12.50% patients in *Shirodhara* group.

**Table 1:** Relief in symptoms after completion treatment (In %), BPRS Score

Sr.	Symptoms	Shirodhara	Apamargadi vati	Combine therapy
1	Somatic concern	50	100	75
2	Anxiety	66.67	66.44	71.26
3	Tension	63	54.78	81.75
4	Blunted affect	84	19.72	59.68
5	Motor retardation	50	-	-
6	Excitement	75	-	-

**Comparison of the effects**

On the basis of the comparison of the effects of all three groups on individual symptoms, it was found that combined therapy provided better relief in Distress (100%), *Alasya* (laziness) (75.00%), *Angamarda* (Body ache) (83.33%), *Shirahshula* (Headache) (100%), *Chinta* (Excessive thoughts) (90.00%), Somatic concern (75.00%), Anxiety (91.29%), Emotional withdrawal (71.26%), Tension (81.75%) and in all the *Manasika Bhavas* like *Moha*, *Krodha*, *Shoka*, *Bhaya*, *Dwesh* etc. which were having significant relief than other two therapies.

*Shirodhara* proved better in sleeplessness (82.88%), *Shiro Gaurava* (Heaviness of head) (100%), *Udvega* (75.00%), motor retardation (50.00%), blunted affect (84.00%) and excitement (75.00%).

Though, *Apamargadi Vati* also provided significant relief in chief complaints, sleep time, sleep quality, mood after awakening, in *Manasika Bhava* like *Krodha*, *Shoka*, somatic concern, anxiety, emotional withdrawal and in tension, its percentage wise relief was less than other two therapies.

So it can be concluded that combined therapy proved better than *Shirodhara* therapy and *Apamargadi Vati* administered therapy.

**Table 2:** Relief in symptoms after completion treatment (In %)

Sr.	Symptoms	Shirodhara	Apamargadi vati	Combine therapy
1	Sleeplessness	82.88	65.56	82.26
2	Distress	61.54	60.04	100
3	Shiro Gaurav	100	74.96	100
4	Alasya	66.67	49.91	75
5	Angamarda	66.67	50	83.33
6	Shiroruja	100	66.67	100
7	Udvega	75	100	71.43
8	Chinta	77.78	78.12	90
9	NetraDaha	66.67	100	100
10	Bhrama	100	100	100
11	Krodha	88.89	38.71	75
12	Shoka	72.73	50	71.43
13	Sleep time increase	87.89	65.35	100
14	Sleep quality increase	80	68.56	89.50
15	Mood after awakening	76.05	72.61	95.27

### Probable Mode of Action of Shirodhara

The *Shirodhara* is effective in following two ways:

1. Therapeutic effect of medicaments
2. Procedural effect of the process

#### 1. Therapeutic Effect of Medicaments

The modern physiology and biochemistry say that it is possible to produce a certain amount of absorption by the application of substances conveyed in fatty vehicles [7]. The concept of percutaneous absorption envisaged in the modern physiology can be summed up as follows:

There are three possible routes of absorption. The pilo sebaceous follicles play some part in absorption of many compounds. The trans-follicular absorption, the route of penetration is through the follicular pores to the follicles and then to the dermis via the sebaceous gland. The permeability of the cells of the sebaceous gland is greater than that of granular layer of the epidermis.

In this way the substances which are used in *Shirodhara* are absorbed and enter in the blood through and remove the pathology.

#### 2. Procedural effect of the process

The procedural effect of *Shirodhara* itself seems to produce a relaxation response irrespective of the medicament used. In almost all the methods of relaxation like yoga, meditation etc. similar general principles prevail. One involves efforts and concentration focusing attention upon a particular object or sensation and the other a simple watchfulness and observation allowing fine flow of perception. In *Shirodhara*, patients feel relaxation both – physically as well as mentally. Relaxation of the frontalis muscle tends to normalize the entire body and achieve a decrease in activity of sympathetic nervous system with lowering of heart rate, respiration, oxygen consumption, blood pressure, the brain cortisone and adrenaline level, muscle tension and probably an increase in alpha brain waves. It strengthens the mind and spirit and this continues even after the relaxation. Corresponding to different levels and powers of consciousness there are different nerve plexuses and glands in human organisms. Special stimulation of different nerve plexus, glands and brain cells accompanies mental function of different type at different levels.

### Probable Mode of Action of Apamargadi Vati

While going through *Harita Samhita*, decoction of roots of the *Apamarga*, *Kakajangha*, *Kokilaksha* and *Suparnika* (*Bakuchi*) is advised internally in *Anidra* which are not used commonly in psychiatry problems and never have been studied for psycho-neuro-pharmacological activity. However, study on *Apamarga* and *Kakajangha* along with other medicines has been carried out for *Anidra* previously, this yoga – as described in *Harita Samhita* as a whole – never been studied. *Apamarga* has been studied for diuretic, anti-inflammatory and other activities. *Kakajangha* had not shown any such activities. *Kokilaksha* is generally used in urino-genital diseases and recommended for impotence, gonorrhoea etc. *Bakuchi* is widely used in various skin diseases. This indicates the limited efficacy of all these drugs in psycho-neurological field.

On the other hand *Apamarga* is known to its *Shirovirechana* Karma in our texts. Recent pharmacological study of *Kokilaksha* and *Bakuchi* shows their actions like anti-convulsant, cerebral muscle relaxant. Moreover, the

tranquillo-sedative action of *Bakuchi* has also been evaluated as these actions described earlier in the drug contrive.

By going through the above description, it seems that all the drugs of *Apamargadi Vati* have some action at psycho-neurological level. The combination of these drugs might be able to break the pathogenesis of insomnia at different levels.

### Conclusion

On the basis of this study the conclusion can be drawn as follows:

*Nidra* – an essential phenomenon for maintenance and restoration of the life, which is considered under *Trayopastambha*. Proper sleep provides balance of the body constituents, alertness, good vision, good complexion, fired digestive power as well as happiness, vigor, virility, nutrition and long life.

According to modern science, sleep is said to nourish and repair the damages to the tissues caused by various catabolic activities of the body.

*Vata* and *Rajasa* play a key role in the pathogenesis of *Anidra*.

*Manasika Nidanas* as well as Psychic stress are the main causative factors of the disease.

Along with medicines, psychic management which ultimately provides '*Manah Sukham*' is described by our *Acharyas*.

*Anidra* vis-à-vis insomnia can be managed better by *Panchakarma* based procedure *Shirodhara* for counteracting the disturbed *Manasika Bhavas*, which can be termed as stressors, leading to the state of tranquility of mind resulting in inducing sleep. Moreover, simultaneous administration of *Ayurvedic* herbal formulation containing the drugs having tranquillo-sedative, muscle relaxant effect will also be providing added beneficial results.

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