



COMPARATIVE CLINICAL STUDY OF EFFICIENCY OF SHIRODHARA & SARPAGANDHA CHURNA IN THE MANAGEMENT OF INSOMNIA

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ABSTRACT

Insomnia (*Anidra*) is defined as difficulty in initiating and maintaining sleep or both despite adequate opportunity and time to sleep, leading to impaired day time functioning. Due to Insomnia many physiological changes occurs such as variation in respiration, cardiac function, muscle tone, body temperature, hormone secretion and blood pressure. According to *Ayurveda Ahar, Nidra & Brahmacharya* are *Triupstambhas* i.e. the supportive pillars of life which are essential for physical as well as mental health of individual. Considering these aspects study was carried out to find out alternate & safe medicine for *Anidra*. The study was conducted in 30 clinically diagnosed patients of *Anidra* with an objective of clinical study of the efficiency of *shirodhara & sarpagandha churna*. Patients were randomly divided into two groups, Group A & Group B. Patients of Group A were treated with *Shirodhara* and the patients of Group B were treated with *Shirodhara & sarpagandha churna* (Powder of *Rauwolfia Serpentina*). For the statistical analysis of the data the standard statistical package R build 2.5 in used. Group B showed better result in disturb sleep, late night sleep, feeling of insufficient sleep, *klama, manodaurbalya*, & irritability.

KEYWORDS : Insomnia, Anidra, Shirodhara, & sarpagandha churna

Introduction:

Now a day *Anidra* (Insomnia) is becoming a major problem because of stressful and busy life style of present era. The persistent stress and strain in day to day life adversely affect the physical and mental health of individual. Sleep problem is a global epidemic affecting 45% of world population quality of life. *Ayurveda* is a life science which not only deals with all type of ailment but maintain the health of healthy individual. The three *sthambhas* of *Ayurveda* are *Vata, Pitta & Kapha* which control all the vital function of the body. A person is term healthy when all three *sthambha* are in equilibrium state. To support these *sthambha* there are three *upsthambha*. They are *Ahar, Sawapna* (sleep) & *Brahmacharya*.⁽¹⁾ *Upshhambha* is the factors which help and co-operate to main supporters of the life. These *upsthambha* mainly increases strength of *sthambha*.⁽²⁾ Among these *Ahar* mainly affect physical factors & activities. *Brahmacharya* mainly affect mental factor & activities, and *Nidra* affects both physical as well mental factor. So *Nidra* is essential for physical & mental health⁽⁴⁾. *Charaka & Kashyapa* included *Anidra (Nidra-nash)* in 80 *Vataj roga*.^(4,5) According *Charak sukha, dukha, pusti, karshya, bala, abala, guna, aguna, jivan & maran* (death) all these factors are depends on proper & improper *nidra*.⁽⁶⁾ As per *Sushruta* sufficient sleep at right time makes a person free from diseases, with pleasant mind, full of strength & good complexion.⁽⁷⁾ According to *Bhavprakash* sufficient sleep produces freshness & reduces fatigue⁽⁸⁾. *Kashyapa* has accepted that comfortable *nidra* is essential for milk production in Mother.⁽⁹⁾

The amount of sleep we need varies with age and between individuals. People with insomnia fall short of the amount of rest they need and can become distressed and exhausted. Some people fall a sleep normally but wake abnormally early and then find that they can not go back to sleep. Due to insomnia many physiological changes occur such as variation in respiration, cardiac function, body temperature, muscle tone, hormonal secretion & blood pressure. The prevalence of insomnia is increasing world wide at a shocking rate in developed & developing countries. Persistence stress, fast growing competition, habit of unwholesome eating & irregular sleeping pattern, fasting, unconscious towards daily regimen (*dinacharya*) & seasonal regimen (*ritucharya*) are main causes for insomnia. According to *Sushruta* causes of *anidra* are aggravation of *vata & pitta dosha, mansantapa* (excessive exhaustion of mind), *dhatu kshaya* and injury.⁽¹⁰⁾ And according to *Astang samgrah* causes of *anidra* are *Kal* (like morning time, old age),

Sheel (Busy life style), *kshay (Dhatu Kshay)*, *Vyadi* and aggravation of *vata & pitta dosa*⁽¹¹⁾. Being an alarming problem, insomnia needs effective and safe treatment. Modern therapeutics has a broad spectrum of the drugs for the management of insomnia; but they have serious side effects like loss of memory, weight gain, gastrointestinal disturbance & habit forming nature. In *Ayurveda* there is wide scope of research to find out a safest remedy for management of insomnia.

Aims & Objective:

1. To find out safe & effective treatment for *Anidra*.
2. To assess the effect of *Shirodhara & sarpagandha churna* (Powder of *Rauwolfia Serpentina*) in *Anidra*.

Materials and Methods:

Inclusion Criteria:

1. Patients between the Age group of 25 years to 55 years.
2. Patients suffering from disturb sleep, late night sleep, early morning wakeup, feelings of insufficient sleep, *shiroshool, klama* (fatigue), *tandra* (drowsiness), *angamarda* (malaise), *ajeerna* (indigestion), *agnimandya, malabaddhata* (constipation), *manodaurbalya* (lake of concentration) & irretability were selected irrespective of sex, education, socio-economic status & religion.

Exclusion Criteria:

1. Patients suffering with acute illness such as severe hypertension, malignancy, Epilepsy, Schizophrenia, major depression, alcoholic addiction.

Selection of Cases:

For the clinical study 30 clinically *diagnosed* cases of *Anidra* were selected from OPD of *Kayachikitsa & panchakarma* of J.A.M.C. Nagpur during Jan. 2016 to March 2016. For the selection of cases symptoms of inclusion criteria had been taken into consideration & for the subjective assessment of results symptoms of inclusion criteria were observed before the treatment and after the treatment. Detail history & clinical examination of cases was done in every 15 days in 60 days of trial in trial case paper.

Grouping:

Selected patients were randomly divided into two groups each of 15 patients.

Group A - was given *Shirodhara* with *Til tail*. Prior to *Shirodhara shiroabhyanga* with *Til tail* was also done for approx 10 to 15 minutes. *Shirodhara* was continuously done for 45 minutes. 1st course of *Shirodhara* was done for 15 days and again after interval of 15 days 2nd course of *Shirodhara* was done for 15 days.

Group B - was given *Shirodhara* with *Til Tail* and *sarpagandha churna* 5 gm B.D. with Luke warm water for 60 days. Prior to *shirodhara Shiroabhyanga* was also done. *Shirodhara* was done in two coursers of 15 days with an interval of 15 days.

Duration of Trial:

Clinical trial was done for 60 days. In both group patients were advised to take mental & physical rest and warm and light diet.

Criteria of Assessment:

Subjective symptoms were taken into consideration for the assessment of results. Intensity of symptoms was indicated by Grade 0 – Normal, Grade 1 – Mild, Grade 2 – Moderate & Grade 3 – Severe.

Observation:

The following were the observation of the study. Total 30 patients were registered for study. They were divided into two groups; 15 patients in group A and 15 patients were in group B.

Table No. 1 This table shows the distribution of patients according to their age-

Age groups	No. of patients	Percentage (%)
25 -35 Years	6	20
35 -45 Years	14	46.67
45 -55 Years	10	33.33
Total	30	100

Table No. 2 This table shows the distribution of patients according to their sex

Sex	No. of patients	Percentage (%)
Male	17	56.67
Female	13	43.33
Total	30	100

Table 3 This table shows the distribution of patients according to their socio-economic status

Income Status	No. of patients	Percentage (%)
Upper class	6	20
Middle class	14	46.67
Lower middle class	10	33.33
Total	30	100

Table 4 This table shows the distribution of patients according to their occupation

Occupation	No. of patients	Percentage (%)
Working	22	73.33
Housewife	8	26.67
Total	30	100

Table 5 This table shows the distribution of patients according to their deha prakruti

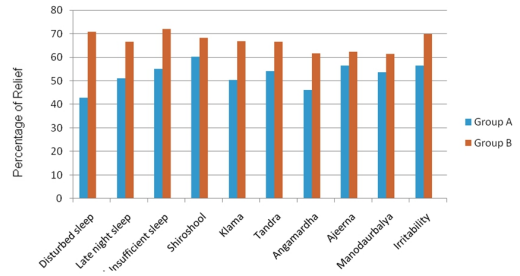
Dehaprakruti	No. of patients	Percentage (%)
Vatapittaja	15	50
Vatakaphaja	6	20
Pittakapha	9	30
Total	30	100

Table 6 This table shows the distribution of patients according to their Koshtha parikshan

Koshtha	No. of patients	Percentage (%)
Mradu	7	23.33
Madhyam	8	26.67
Krura	15	50
Total	30	100

Result:

Fig:1 Bar diagram showing % of relief in symptoms of patients of Group A & Group B



For a **statistical analysis** of the data the standard statistical package R build 2.15 is used. In the following we apply the two sample t-test for testing the equality of means assuming equal variances and two tailed critical region with level of significance at 5%. Thus we reject the hypothesis of equality if p-value < 0.05 i. e. we conclude that the difference in means is significant.

Table 1 Showing effect on symptoms of patients of Group A

Parameter	N	Mean Score		t-statistic	SE (t)	p-value	Remark
		BT	AT				
1 Disturb sleep	15	2.13	1.2	3.597693	0.258499	0.001222	Significant
2 Late night sleep	15	2.07	1	4.67479	0.228887	0.000006	Significant
3 Insufficient sleep	15	1.93	0.87	4.0362	0.262623	0.000381	Significant
4 Shirshool	13	1.54	0.62	3.591034	0.256194	0.00147	Significant
5 Kalma	12	1.33	0.67	3.316625	0.198997	0.003136	Significant
6 Tandra	11	1.18	0.55	3.195048	0.19718	0.004547	Significant
7 Angamardha	10	1.3	0.7	2.77746	0.216025	0.012422	Significant
8 Ajeerna	12	1.33	0.58	3.646712	0.205665	0.001422	Significant
9 Manodaurbalya	11	1.36	0.64	3.380617	0.212979	0.002971	Significant
10 Irritability	12	1.33	0.58	3.129091	0.239686	0.004881	Significant

Table 2: Showing effect on symptoms of patients of Group B

Parameter	N	Mean Score		t-statistic	SE (t)	p-value	Remark
		BT	AT				
1 Disturb sleep	15	2.07	0.06	6.003545	0.244901	0.000001	Significant
2 Late night sleep	15	2	0.67	5.291503	0.251301	0.000001	Significant
3 Insufficient sleep	15	1.93	0.53	6.211884	0.225411	0.000001	Significant
4 Shirshool	12	1.58	0.5	4.423621	0.244114	0.000214	Significant
5 Kalma	11	1.36	0.45	4.152274	0.219293	0.000493	Significant
6 Tandra	10	1.2	0.4	3.794733	0.210827	0.001327	Significant
7 Angamardha	10	1.3	0.5	3.538607	0.226147	0.002347	Significant
8 Ajeerna	12	1.42	0.58	3.964125	0.211958	0.000658	Significant
9 Manodaurbalya	12	1.5	0.58	4.32972	0.21257	0.00027	Significant
10 Irritability	13	1.53	0.46	5.291503	0.202201	0.000001	Significant

Mode of action of drugs:**Sarpagandha Churna** (Rauwolfia Serpentina)

The Sanskrit word *sarpagandha* literally mean's one which smell likes a serpent. It is mentioned in all ancient *Ayurvedic* scriptures. *Charakhas* categorized it as *svapna-janana* (Sedative) (ch. sutra A. 25). According to *Bhav-Prakash* it is '*Nidra Janana*'^(12&13). It depresses heart and reduces blood pressure. It eliminates giddiness, headache, irritability of mind and Induces sleep⁽¹⁴⁾. *Sarpagandha* during last few decades, has attracted the attention of the scientists for its anti- hypertensive property. The botanical name of *sarpagandha* is 'Rauwolfia Serpentina'. The root contains an alkaloid 'ophioxilin' an orange coloured crystalline principle resin, starch and wax. The total 80 alkaloid present, serpina is the chief contains, reserpine, serpentine, yohimbin etc.

Ayurvedic Properties:

According to *Bhavprakash Nighantu* is bitter and pungent in test (*rasa*), pugent in the post digestive effect (*vipaka*) and has hot potency (*virya*). It alleviates *Kapha* and *vata dosa* but aggravates the *pitta dosa*. It has a special potency (*prabhava*) as a sedative, anti epileptic and anti-hysterical. It is beneficial in the treatment of hypertension, fever, psychogenic disorders⁽¹⁵⁾.

Discussion:

Anidra is *Manasa roga* which occur due to vitiation of *mansik dosa Rajas & Tamasa* producing psychosomatic symptoms. Vitiated *vata dosha* acts as triggering force in the initiation of *Anidra* disorder. The effect of *Shirodhara & sarpagandha churna* in *Anidra* patients was valuated. Studies conducted on symptomatic parameters showed over all significant improvement in the *anidra* disorder. Following observation were found during the study period.

1. Overall result with *Shirodhara & sarpagandha churna* in group B was comparatively better than group A.
2. Early response to treatment was observed in group B.
3. In group B patient reported much better mental & physical fitness after the treatment.

People having age group of 35 to 45 year and *vata-pittaja prakruti & Rajas prakruti* were found more affected by this disease. Among both the therapies, Group B which was treated with *Shirodhara & sarpagandha churna* shows marked improvement. Patient with Symptom of wake up 4 to 5 times in overnight had been reduced significantly. Patients who were habitual to sleep late at 2 p.m., slept remarkably earlier and extent of sleep was also improved after treatment. It was also observed that patient treated with *Shirodhara & Powder of sarpagandha churna* developed more confidence; more alertness and their life style become well organized. There was an urge in themselves for active involvement in their day to day activities.

Conclusion:

So it can be concluded that *Shirodhara* and *sarpagandha churna* is a safe and effective treatment for the management of *Anidra* patients. It was observed that mental functions including retaining power and intellectual levels were considerably improved. Tolerance of *Shirodhara & sarpagandha churna* was very well and no adverse reactions were observed in any patient. *Shirodhara & sarpagandha churna* is safe and effective treatment.

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