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A Clinical Study in the Management of *Anidra* with *Jatamansi Churna* and *Shirodhara*

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ABSTRACT

The insomnia is a sleep disorder where people have trouble sleeping or inadequate, poor-quality sleep. They may have difficulty falling asleep, waking up frequently during night with difficulty returning to sleep, and awaking up too early in the morning. It is followed by daytime sleepiness, low energy, irritability and a depressed mood. The findings suggest that sleeplessness epidemic affects an estimated 150 million in developing world. Words such as *Anidra*, *Nidranasha* & *Asvapna* are used for insomnia in Ayurvedic literature. Charaka included the *Asvapna* on 80 *Nanatmaja vata* diseases. The present clinical study was in the management of *anidra* with *jatamansi churna* and *shirodhara*. According to Dravya Guna Vijanan *Jatamansi* is *nidrajanan* drug and under *Murdini taila siroseka* is said to be effective in inducing sound sleep. Fifty patients were selected randomly from OPD and IPD of Kayachikitsa, Govt. Ayurvedic College & Hospital, Jalukbari, Guwahati-14, Assam. Group A was treated with *Jatamansi churna* with a dose of 1gm twice daily with adequate amount of water for 60 days. Group B was treated with *Jatamansi churna* for same dose as group A for 60 days along with *Shirodhara* with *Tila Taila* for 7 days. After completion of the study result were assessed in terms of clinical recovery, symptomatic relief and improvement of ASI score. The study showed good results.

KEYWORDS

Insomia, Anidra, Jatamansi, Sirodhara, Til taila



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INTRODUCTION

Insomnia is the complaint of inadequate sleep. It is also known as sleeplessness, is a sleep disorder where people have trouble sleeping¹. They may have difficulty falling asleep or staying asleep as long as desired². Insomnia commonly leads to daytime sleepiness, lethargy, and a general feeling of being unwell, both mentally and physically. Low energy, irritability, anxiety, depressed mood and mood swings are common associated symptoms¹. It can be short term (days-weeks) or long term (lasting more than a month)^{1,12}. It can occur independently or as a result of another problem³ for e.g. stress, chronic pain, heart failure, hypothyroidism, certain medication, working night shifts, sleep hygiene³.

Health is the supreme foundation of *Dharma, Artha, Karma & Moksha*⁴. To maintain the healthy state of body & mind Ayurveda believes that life sustains on *Ahar, Nidra, Brahmacharya* i.e. known as *Trayopastambhas*⁵. Importance of *Nidra* is clearly illustrated by Ayurveda.

As mentioned in *Sushruta Sarirasthan* 4th chapter, *Vayu, Manastap, Kshya* and *Abhighat* are the cause of *Anidra*. *Charaka* included the *Asvapna* on 80 *Nanatmaja vata* diseases⁶.

Shirodhara is a very popular panchakarma therapy which is mentioned as *Shiro Seka*⁷ in the classical Ayurvedic texts. *Shiroseka* is a type of *Murdini taila* and it is said to be effective in inducing sound sleep⁸. As *Anidra* is a *vataja* disorder so *shirodhara* using *Tila Taila* is specifically indicated in this condition as mention in *Dharakalpa*⁹. *Jatamansi* is indicated as *nidra janan* by Bhavaprakash Nighantu, Priya Nighantu. According to Koyadev Nighantu, Dhanantari Nighantu, Saligram Nighantu, Bhavaprakash Nighantu it has properties of *vata samak* and *pitta samak*. According to Koyadev Nighantu it has *daha prasamak* property. According to Bhavaprakash Nighantu *Jatamansi* has the property of *vedana sthapan* and *samgya sthapan* and according to Saligram Nighantu, Priya Nighantu, Bhavaprakash Nighantu it has *medhya* property. Due to these karma of *Jatamansi* help to treat *anidra*.

Prevention:

- Sleep hygiene have to maintain.
- The time for sleeping and waking must be same.
- Avoidance of vigorous exercise, caffeinated drinks a few hours before going to sleep¹¹.

AIMS AND OBJECTIVES

i) To evaluate the effect of *Jatamansi* in *Anidra*.



ii) To evaluate the efficacy of *Shirodhara* with *tila taila* and *Jatamansi* in *Anidra*.

This study is focused on the management of *Anidra* with *jatamansi churna* and *shirodhara*. *Jatamansi* was given orally. English name of *jatamansi* is Spikenard. Scientific name of *jatamansi* is *Nardostachys Jatamansi* DC. Part use is rhizome. The English name of *tila* is Sesame. Botanical name is *Sesamum indicum* Linn. *Tila taila* was applied externally.

MATERIALS AND METHODS

SAMPLE SIZE & METHOD FOR CLINICAL TRIAL:

Level of study: OPD and IPD of Kayachikitsa, Govt. Ayurvedic College & Hospital, Jalukbari, Guwahati-14, Assam.

No. of group: 2 groups.

Sample size: There were 50 patients selected randomly from OPD and IPD of Kayachikitsa, Govt. Ayurvedic College & Hospital, Jalukbari, Guwahati-14, Assam.

Drop out: There were 6 patient dropped out at various levels.

Duration: 2 months

Shirodhara: 7 days.

Group A: Group A consisted of 30 patients and treated with *Jatamansi churna* with a dose of 1gm twice daily with adequate amount of water for 60 days

Group B: Group B consisted of 14 patients and it was treated with same dose as Group A for 60 days along with *Shirodhara* with *Tila Taila* for 7 days.

MATERIALS:

- i) *Tila taila* one & a half lt. which is to be changed after every three days.
- ii) *Shirodhara yantra* fixed to *Droni*.
- iii) Vessel of different size.
- iv) Cotton & role gauge
- v) *Churna* of *Jatamansi*.

Inclusion Criteria:

- ❖ Male & female patients of age group between 18 to 70 years.
- ❖ Patients complaining of disturbed sleep with Athens insomnia scale (AIS) score ≥ 6 and Pittsburgh sleep quality Index (PSQI) ≥ 5 were included in study.
- ❖ Patients willing to give written consent.

Exclusion Criteria:

- ❖ Age below 18 years to above 70 years.
- ❖ Associated with other major disease (Malignancy, Epilepsy patient, Schizophrenia, Renal failure patient, Severe hypertension, uncontrolled diabetes mellitus)
- ❖ Pregnant lady and lactating mother.
- ❖ Allergy to the medication

Diagnostic Criteria:

- ❖ Sleep efficiency index.
- ❖ Clinical history



Assessment Criteria:

- ❖ On the basis of improvement of sign & symptoms.

Laboratory Investigation:

- ❖ Blood R/E
- ❖ Other investigation if necessary.

Statistical Analysis:

All the value expressed in standard statistical method.

- Paired t test used for statistical analysis of each group.
- Unpaired t test used for comparing the groups.

ETHICAL CLEARANCE:

The prior consent of patients was taken before administrating the drug by fulfilling the condition as per IEC(Institutional Ethical Committee).

IEC/1620-125 Dated 09/05/16

OBSERVATIONS:

Total 50 patients were enrolled for the present study, out of which 6 patients dropped out at various stages during the study, finally leaving 44 ~~numbers~~ of patients for the study. Group A had 30 ~~numbers of patients~~ and Group B had 14 patients, respectively. Maximum no of patients were 27.2% belonging to the age group 26 to 35 years of age and minimum no of patients were 6.8% belonged to the age group 66 to 75 years, male 68.1% and 31.8% female, 79.5% Hindu, 18.1%

Muslims and 2.2% Christian, 65.9% married and 34% unmarried, 9.09% patients belonged to poor class, maximum no (50%) of patients were middle class and 40% were rich, 43.1% were Graduate, 27.2% were read upto 12th standard, 25% were read upto 10th standard and 4.5% were uneducated, there were 20.4% students, 18.1% were service holders, 15.9% were business workers, 13.6% were house workers, 11.3% were laborer, 9.09% were drivers, 6.81% were retired person and 4.5% were agricultural workers, 65.9% patients were from rural area, 34.09% were from urban area, 97.7% were non-vegetarian and only 2.2% were vegetarian, 20.4% patients are addicted to tea or coffee, 18.1% addicted to smoking, 22.7% addicted to betel nut 13.6% addicted to alcohol 15.9% addicted to tobacco and 9.09% had no history of addiction. Out of 44 patients 65.9% were *Rajasik Prakriti* followed by 34.09% of *Tamasik Prakriti*. Problem related to sleep initiation was found to be the major symptom in almost all cases of *Anidra*. There were 36.36% patients suffered from moderate complains of sleep initiation, 34.09% people suffered from mild severity of sleep initiation, while 29.54% suffered severe complains of sleep initiation. Out of 44 patients 27.27% complained of severely less duration of sleep i.e. less than 3 hours, 47.7% patients



suffered moderately less duration of sleep i.e. sleeping for only 3-4 hours and 25% patients had mild complains of less duration of sleep i.e. sleeping for 4-5 hours. There were 27.27% patients complained of severe sleep interruption of more than 8 times, 50% suffered from moderate severity in sleep interruption of 6-8 times at night and 22.27% suffered from mild interruption in sleep i.e. 3-5 times. Out of those patients included in the study 13.6% had presence of severely fearful dreams, 40.9% had moderate forms of dreams i.e. some forms of disturbing dreams and 45.45% suffered from mild severity i.e. presence of occasional dreams. Among the 44 patients 27.27% had severely non restorative sleep i.e. difficulty in staying awake during day time, 38.6% suffered from moderate grade of non-restorative sleep i.e. losing interest in all hobbies and activities and 34% suffered from mild severity i.e. waking up un-refreshed. In group-A 63.3% suffered from 40-60% of Sleep Efficiency Index and 26.6% was between 60-80% of Sleep Efficiency Index, 10% cases reported to have severely less Sleep Efficiency Index of 40%. In group-B 21.42% cases reported to have severely less Sleep Efficiency Index of 40%, 42.85% suffered from 40-60% Sleep Efficiency Index and 35.51% was between 60-80% of Sleep Efficiency Index. In group-A, incidence of associated

complaints were mainly *Aruchi* 80%, *Siragaurava* 93.3%, *Srama* 63.3% *Angamarda* 70%, *Apaki* 83%, *Jrumbha* 26.6%, *Glani* 33%, *Bhrama* 26.6%, *Klama* 50%, *Sirahsula* 70% and in group-B associated complaints were *Aruchi* 85%, *Siragaurava* 100% and *Srama* 92.8% *Angamarda* 78.5%, *Apaki* 64%, *Jrumbha* 71%, *Glani* 57%, *Bhrama* 64%, *Klama* 50%, and *Sirahsula* 92%.

RESULTS AND DISCUSSION

- Table no – 1. In group A, $t_{29}=8.34$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective in sleep initiation.
- Table no- 2. In group B, $t_{13}=6.5$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective in sleep initiation.
- Table no– 3 shows comparison of sleep initiation where Group A mean is 1.06 and Group B mean is 1.28, SD is ± 0.7 , $t_{42}=1$, $p> 0.1$, hence difference is not significant. It implies that the treatment procedure in group A and group B are equally effective.
- Table no – 4. In group A, $t_{29}=7.44$, hence it shows statistically highly significant result at the p value <0.001 . It



implies *jatamansi churna* is effective on duration of sleep.

- Table no- 5. In group B, $t_{13}=6.2$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective on duration of sleep.
- Table no:6 shows comparison the effect on duration of sleep where Group A mean is 0.93 and Group B mean is 1.42, SD is ± 0.746 , $t_{42}= 2.06$, $p< 0.05$, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.
- Table no – 7. In group A, $t_{29}=7.8$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective on interruption of sleep.
- Table no- 8. In group B, $t_{13}=8.57$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective on interruption of sleep.
- Table no:9 gives comparison the effect on interruption of sleep. Group A mean is 0.96 and Group B mean is 1.5, SD is ± 0.66 , $t_{42}= 2.55$, $p< 0.02$, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.

- Table no – 10. In group A, $t_{29}=5.04$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective on occurrence of dreams.
- Table no- 11. In group B, $t_{13}=6.54$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective on occurrence of dreams.
- Table no:12 gives comparison the effect on occurrence of dreams. Group A mean is 0.53 and Group B mean is 1.57, SD is ± 0.704 , $t_{42}= 4.66$, $p< 0.001$, hence difference is highly significant. It implies that the treatment procedure in group B is more effective than group A.
- Table no – 13. In group A, $t_{29}=6.83$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective on non restorative sleep.
- Table no- 14. In group B, $t_{13}=5.61$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective on non restorative sleep.
- Table no:15 gives compare the effect on non restorative sleep. Group A mean is 0.93 and Group B mean is 1.42, SD is ± 0.806 , $t_{42}= 1.91$, $p< 0.10$, hence difference is not significant. It implies that



the treatment procedure in group A is and group B are equally effective.

- Table no – 16. In group A, $t_{29}=7.41$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective on sleep efficiency index.
- Table no- 17. In group B, $t_{13}=7.42$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective on sleep efficiency index.
- Table no:18 shows compared effect on sleep efficiency index. Group A mean is 1.03 and Group B mean is 1.5, SD is ± 0.763 , $t_{42}= 1.94$, $p < 0.10$, hence difference is not significant. It implies that the treatment procedure in group A and group B are equally effective.
- Table no – 19. In group A, $t_{29}=16.56$, hence it shows statistically highly significant result at the p value <0.001 . It implies *jatamansi churna* is effective in Athens insomnia scale score.
- Table no- 20. In group B, $t_{13}=13.30$, hence it shows statistically highly significant at the p value <0.001 . It implies *jatamansi churna* along with *shirodhara* are effective in Athens insomnia scale score.
- Table no:21 shows comparison of Athens insomnia scale score between group

A and B. Group A mean is 11.56 and Group B mean is 14.57, SD is ± 3.93 , standard error is 1.24 $t_{42}= 2.42$, $p < 0.02$, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.

DISCUSSION ON PROBABLE MODE OF ACTION OF JATAMANSI CHURNA IN ANIDRA:

Jatamansi has *Madhur Rasa, Snigdha Guna, Sita Virya*¹⁰. According to Charak *anidra* is *nanatmaja vataja* disease. Due to *Madhura rasa Snigdha Guna, Sita Virya* it alleviates *vata*. According to various *Acharya karma* of *Jatamansi* is that it alleviates all the three *doshas*, it is *dahaprasamak, varnya* and also *vedanasthapak*¹⁰, it has also action on the nervous system such as *samgyasthapa, medhya, valya, vedanasthapan, nidrajanan*. Due to these *karma* of *Jatamansi* help to treat *anidra*.

DISCUSSION ON PROBABLE MODE OF ACTION OF SHIRODHARA WITH TILA TAILA IN ANIDRA:

As per the principle of drug absorption, maximum absorption is in the scalp region and comparatively oil is better absorbed than water¹¹.

Tila has *Rasa- madhura, Guna- guru, snigdha, Vipaka- madhura*¹⁰. Due to *madhura rasa vata* is decrease. *Guru guna, snigdha guna* and *madhura vipaka* are



contradictory for *vata dosha*. So *tila* is helpful for treated *anidra*. Some karma of *tila* is *vata shamaka*, *vedanasthapana*, *medhya*, *rasayana*, *snehopaga*, *vajikara*¹⁰. Due to these karma *tila* alleviates *vata*; which is helpful to treat *anidra*.

CONCLUSION

The results were analyzed statistically which shows both *Jatamansi* alone and *Jatamansi* with *Shirodhara* are effective for

the management of signs and symptoms of *Anidra*. But the combined therapy of *Jatamansi* along with *Shirodhara* are more effective in duration of sleep, interruption of sleep, occurrence of dreams and Athens insomnia scale score. *Jatamansi* and combined therapy of *Jatamansi* with *Shirodhara* are equally effective in sleep initiation, non-restorative sleep and sleep efficiency index. In this study no any adverse reaction was noted.

Table.1 Effect on Sleep Initiation (Group A) n=30

	Mean value	SD	SE	t29	p	Remarks
BT	1.83	0.69	0.127	8.34	<0.001	S
AT	0.76					

Table 1 Description: The mean level of symptom of sleep initiation is reduced from 1.83 to 0.76 which was statistically highly significant at the p value <0.001. (BT-before treatment, AT-after treatment, SD-standard deviation, p-probability)

Table 2 Effect On Sleep Initiation (Group B) n=14

	Mean value	SD	SE	t13	p	Remarks
BT	2.21	0.72	0.194	6.5	<.001	S
AT	0.928					

Table 2 Description: The mean level of symptom of sleep initiation is reduced from 2.21 to 0.928 which was statistically highly significant at the p value <0.001 (BT-before treatment, AT-after treatment, SD-standard deviation, p-probability, S-significant)

Table 3 Comparison of Sleep Initiation

Group	Mean value	Mean B-A	SD	SE	t42	p	Remarks
A	1.06			0.22	1	>0.1	NS
B	1.28	0.22	0.70				

Table 3 Description: $t_{42} = 1$, $p > 0.1$, hence difference is not significant. It implies that the treatment procedure in group A and group B are equally effective (SE-standard error, SD-standard deviation, p-probability, NS-nothing significant).

Table 4 Effect on Duration Of Sleep: Group A. n=30

	Mean value	SD	SE	t29	P	Remarks
BT	1.86	0.68	0.125	7.44	<.001	HS
AT	0.93					

Table 4 Description: The mean level of duration of sleep reduced from 1.86 to 0.93 which was statistically highly significant at the p value of <.001 (BT-before treatment, AT-after treatment, SD-standard deviation, p-probability, S-significant)

**Table 5** Effect On Duration Of Sleep: Group B. n=14

	Mean value	SD	SE	t13	P	Remarks
BT	2.35	0.851	0.229	6.2	<.001	HS
AT	0.92	0.51				

Table 5 Description: The mean level of duration of sleep reduced from 2.35 to 0.92 which was statistically significant at the p value of <0.001(BT-before treatment, AT-after treatment, SD-standard deviation, p-probability, S-significant)

Table 6 Comparison the Effect on Duration of Sleep

	Mean value	Mean B-A	SD	SE	t42	P	Remarks
A	0.93	0.49	0.746	0.237	2.06	<.05	S
B	1.42						

Table 6 Description: t42= 2.06, p< 0.05, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.(SE- standard error, SD-standard deviation, p-probability, S-significant).

Table 7 Effect on Interruption of Sleep(Group A).n=30

	Mean value	SD	SE	t29	p	Remarks
BT	2	0.669	0.123	7.8	<.001	HS
AT	1.03					

Table 7 Description: The mean interrupted sleep had reduced from 2 to 1.03 which was statistically significant at the p value <0.001(BT-before treatment, AT-after treatment, SD-standard deviation, p-probability, S-significant)

Table 8 Effect on Interruption of Sleep (Group B).n=14

	Mean value	SD	SE	t13	p	Remarks
BT	2.1	0.648	0.175	8.57	<.001	HS
AT	0.64					

Table 8 Description: The mean interrupted sleep had reduced from 2.1 to 0.64 which was statistically significant at the p value <0.001(BT-before treatment, AT-after treatment, SD-standard deviation, p-probability, S-significant)

Table 9 Comparison the Effect on Interruption of Sleep

	Mean	Mean B-A	SD	SE	t42	p	Remarks
A	0.966	0.53	0.66	0.209	2.55	<.02	HS
B	1.5						

Table 9 Description: t42= 2.55, p< 0.02, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.

Table 10 Effect on Occurrence of Dreams (Group A).n=30

	Mean value	SD	SE	T29	P	Remarks
BT	1.43	0.57	0.105	5.04	<.001	S
AT	0.9					

Table 10 Description: The mean value on occurrence of dream reduced from 1.43 to 0.9 which was statistically significant at the p value <0.001

Table11 Effect on Occurrence of Dreams (Group B).n=14

	Mean value	SD	SE	T13	P	Remarks
BT	2.21	0.93	0.24	6.54	<.001	S
AT	0.64					

Table 11 Description: The mean value on occurrence of dream reduced from 2.21 to 0.64 which was statistically significant at the p value <0.001

Table 12 Comparison The Effect On Occurrence Of Dreams

Group	Mean value	Mean B-A	SD	SE	t42	P	Remarks



A	0.53	1.04	0.704	0.223	4.66	<.001	S
B	1.57						

Table 12 Description: $T_{42}= 4.66$, $p < 0.001$, hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.

Table 13 Effect On Non Restorative Sleep (Group A).n=30

	Mean value	SD	SE	T29	p	Remarks
BT	1.866	0.739	0.136	6.83	<.001	S
AT	0.966					

Table 13 Description: The mean level of non-restorative sleep reduced from 1.866 to 0.966 which is statistically significant at the p value <0.001.

Table 14 Effect on Non Restorative Sleep (Group B).n=14

	Mean value	SD	SE	t13	p	Remarks
BT	2.071	0.937	0.253	5.61	<.001	S
AT	0.642					

Table 14 Description: The mean level of non-restorative sleep reduced from 2.071 to 0.642 which is statistically significant at the p value <0.001

Table 15 Compare the Effect on Non Restorative Sleep

Group	Mean value	Mean B-A	SD	SE	t42	p	Remarks
A	0.93	0.49	0.806	0.256	1.91	<0.10	NS
B	1.42						

Table 15 Description: $T_{42}= 1.91$, $p < 0.10$, hence difference is not significant. It implies that the treatment procedure in group A is and group B are equally effective.

Table 16 Effect on Sleep Efficiency Index (Group A).n=30

	Mean value	SD	SE	t29	p	Remarks
BT	1.83	0.765	0.139	7.41	<.001	S
AT	0.8					

Table 16 Description: Sleep efficiency index is the ratio of duration of sleep to the total time spent in bed and is expressed in percentage. The mean SEI reduced from 1.83 to 0.8 which is statistically significant at the p value <0.001

Table 17 Effect On Sleep Efficiency Index (Group B).n=14

	Mean value	SD	SE	T13	p	Remarks
BT	1.85	0.758	0.202	7.42	<.001	S
AT	0.357					

Table 17 Description: The mean SEI reduced from 1.85 to 0.357 which is statistically significant at the p value <0.001.

Table 18 Compare the Effect on Sleep Efficiency Index

	Mean value	Mean B-A	SD	SE	T42	p	Remarks
A	1.03	0.47	0.763	0.242	1.94	<.10	NS
B	1.5						

Table 18 Description: $T_{42}= 1.94$, $p < 0.10$, hence difference is not significant. It implies that the treatment procedure in group A and group B are equally effective.

Table 19 Effect of Treatment on Athens insomnia scale score: Group –A (n =30)

MEAN BT	MEAN AT	MEAN BT-AT	SD	SE	t29	p	REMARK
13	1.43	11.57	3.82	0.698	16.56	<0.001	HS

Table 19 Description: $t_{29}=16.56$ $p < 0.001$, hence the result is highly significant. It implies that the trial drug signifies in reducing insomnia.



Table 20 Effect of Treatment On Athens insomnia scale score: Group –B (n =14)

MEAN BT	MEAN AT	MEAN BT-AT	SD	SE	t13	p	REMARK
15.5	0.928	14.57	4.16	1.112	13.10	<0.001	HS

Table 20 Description: t13= 13.1, p< 0.001,hence the result is highly significant. It implies that the trial drug signifies in reducing insomnia

Table 21 Result showing Comparison between Group A and B on Athens insomnia scale score.

GROUP	MEAN	Mean B-A	SD	SE	n	t 42	P
A	11.56	3.01	3.93	1.24	30	2.42	<0.02
B	14.57				14		

Table 21 Description: t42= 2.42, p< 0.02,hence difference is significant. It implies that the treatment procedure in group B is more effective than group A.



REFERENCES

1. What is insomnia.NHLBI December 13,2011.Archived from the original on 28 July 2016.Retrieved 9 August 2016
2. Golub,R.M.(2012).Insomnia JAMA.307(24):2653-2653
3. What causes insomnia. NHLBI December 13,2011.Archived from the original on 28 July 2016.Retrieved 9 August 2016
4. Charaka Samhita by Pandit Kashinath Pandey, (Charak Sutrasthan 1/15)
5. Charak Samhita (Sutrasthan 11/35), by Pandit Kashinath Pandey
6. Charak Samhita (Sutrasthan 20/11), by Pandit Kashinath Pandey
7. Astanga Hridaya by Pandit Hari Sada Shiva Sastri, Varanasi 2010, P- 301.
8. Charak Samhita (Sutrasthan 21/36), by Yadavji Trikamji, Varanasi, 2009, P-42.
9. Kasture H.S.; Ayurvediya panchakarma Vigyan, Sri Baidyanath Ayurveda Bhavan (p) Ltd., Nagpur, ed.- 7th 2006, P- 119-120, 122.
10. Illustrated Dravyaguna Vijnana,vol.ii.by Dr JLN Shastry
11. Effect of ayurvedic oil dripping treatment with sesame oil vs. with warm water on sleep. A randomized single blinded crossover pilot study. J Altern complement med.22(1):52-58.

12. Harisson's Principle of Internal Medicine 17th edition Vol I, p-174