A Randomized Comparative Clinical Study to Assess the Efficacy of *Tailadhara* and *Takradhara* in *Anidra* Pertaining to Patients of *Pakshaghatha*

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ABSTRACT

Shirodhara is one amongst the *moordhni taila* procedure. In the classics, there is an explanation regarding four types of *moordhni tail*a like *Shiro abhyanga, Shirodhara, shiropichu* and *shiro basti*. These are the special treatment modalities told for the disorders of *Shira*s. In *shirodhara, taila* or any other drava dravya is made to oscillate over the shiras for a stipulated period in a rhythmic manner. *Nidra* is considered as one among the *trayo upastamba* i.e. the sub pillars which supports the life. Ayurveda explains about anidra or nidra nasha while explaining about *vata vriddhi lakshana, pitta vriddhi lakshana* and in *vataja nanatmaja vikara*. Sleep disorders in C.V.A. patients are common. There are some varieties of sleep disorders occurring in such patients are.Sleep disorders occurring in patients of pakshaghata are sleep apnea, daytime sleep and insomnia. In this study shankapushpi siddha *taila dhara* and *takra dhara* was performed to evaluate the efficacy in anidra pertaining to patients of *pakshaghata*. Assessment of sleep was done using the insomnia screening questioner, Athens insomnia scale and daily sleep diary assessment.

Key Words: *Moordhni taila, Tailadhara, Takradhara, Anidra*

INTRODUCTION

Ahara, nidra and *brahmacharya* are considered as the three supportive pillars of life[1]. They will help to increase the *bala, varna* and *upachaya* till the end of the lifespan. Nidra is also considered as one of the *adharaneeya vega*. Dharana of nidra vega will result in *jrumbha, angamarda, tandra, shiroroga* and *akshigaurava*[2]. Proper quantity and quality of *nidra* is essential for sustaining the life. Such nidra will help in *sukha, Pushti, bala, vrishatha, jnanam, jivitham.* If nidra is not of proper quantity and quality

it will result in *dukham, karshyam, abalam, klibata, ajnanam* and even death[3.]

Nidra is a state of the body where in *jnanendriya, karmendriya* and *manas* gets exhausted and they dissociate themselves from their *vishaya*, which makes the individual to sleep [4.]Sushruta Acharya explains that when *samjnavaha srotas* are filled with kapha and indriyas are deprived from their *indriyarthas* then the person goes to sleep. He also mentions the role of kapha and tamas in the *nidra utpatti* [5.] According to Ashtanga sangraha, due to

avarana of srotas by kapha and also due to shrama of *jnanendriya* and *karmendriya* which results in dissociation of the senses resulting in *nidra* [6]

DSM-5 defines insomnia disorder as dissatisfaction with sleep quality or quantity associated with one or more of the following symptoms. 1) Difficulty in initiating sleep 2) Difficulty in maintaining sleep with frequent awakening or problems returning to sleep 3) Early morning wakening with inability to return to sleep. The sleep disturbances may occur during the course of another mental disorder or medical condition, or it may occur independently.

Ayurveda explains about *anidra* or *nidranasha* while explaining vata *vriddhi lakshana*, *pittavriddhi* lakshana and also vataja nanatmaja vikaras. Acharya Charaka explains nidra and nidra nasha in the context of *ashtau ninditiya adhyaya*. Charaka included aswapna under 80 nanatmaja vikara but has not explained in chikitsa sthana [7]. Sushrutha Acharya explains nidranasha in garbhavyakarana shareera. He also explains *vaikarika nidra* in the same chapter along with chikitsa. Vagbhata in Ashtanga sangraha mentions in *viruddha annavijnaniya adhyaya* [8].

Pakshaghata is also a *vataja nanatmaja vikara*. According to the National Stroke Association, more than one half of the stroke survivors experience sleep problem. Most important sleep disturbances occurring in stroke patients are sleep apnoea, insomnia and day time sleep. Researches also show that stroke patients are less likely to fall asleep during the day to compensate the loss of sleep during the night.

Different treatment modalities are explained for the treatment of anidra. *Moordhni taila* is one among them[9]. Through the different procedures the oil is being anointed on the head of the patient is considered as *Moordhni taila*. It is of four types *Abhyanga, Seka, Pichu* and *Basti* [10]. Shiras is considered to be the seat of prana. It is one of the *trimarma* and also a *dasha pranayatana*. It is considered as the *uttamanga* wherein all the indriyas are seated.

According to ancient Indian concept, purusha is compared to a tree having mula in the *urdhwa bhaga* and shakha in the *adho bhaga*. Here mula is understood as the head region which controls the remaining part of the body. This means that when the root of the tree is cut, then the tree cannot exist. Similarly, if the injury to the shiras occurs, then it may lead to the destruction of the body [10]. According to dhara kalpa, Shirodhara is indicated in burning sensation, swelling, discharge in the wounds [12]. According to Ashtanga hridaya, dhara is indicated in *arumshika, shirastoda, shirodhaha, paka and vrana*[13].

In this study, anidra occurring in the patients of pakshaghata were included for the study and were randomly divided into two groups. In the first group, *Shirodhara* with shankapushpi siddha taila was performed for a period of 30 minutes in a day for a total period of 7 days and in the second group, *Shirodhara* was performed with shankapushpi siddha takra.

AIMS AND OBJECTIVES

1) To evaluate the effect of shankapushpi siddha taila dhara in anidra pertaining to patients of pakshaghata.
2) To evaluate the effect of shankapushpi siddha

takra dhara in anidra pertaining to patients of pakshaghata.

3) To compare the effect of shankapushpi siddha taila dhara and shankapushpi siddha takra dhara in anidra pertaining to patients of pakshaghata.

MATERIALS AND METHODS

1.   SOURCE OFDATA:

A minimum of 30 patients diagnosed with *Anidra* were selected for the study from IPD/OPD of Shri Dharmasthala Manjunatheshwara Ayurveda Hospital, Kuthpady, Udupi.

2.   METHOD OF COLLECTION OF DATA:

It is a clinical study to compare the efficacy of shankapushpi siddha *taila dhara* and shankapushpi siddha *takra dhara* in *anidra* pertaining to patients of *pakshaghata* and for evaluation, a detailed proforma was prepared considering all the points pertaining to history, signs & symptoms and examinations as mentioned in our Ayurvedic classics and allied sciences to confirm the diagnosis and to evaluate the result of the therapy.

3. INCLUSION CRITERIA:

- Patients of both gender presenting with diagnostic criteria.
- Patients with chronicity of 1-6 months
- Patients fit for taila and takra dhara

4. EXCLUSION CRITERIA:

- Patients who were under sedatives
- Patients with aphasia
- Patients who were not fit for taila dhara and takra dhara

5. STUDY DESIGN:

This is an open label randomized comparative clinical study with pre-test and post-test design.

Selected 30 patients were randomly allotted into two groups 15 in each group based on the permuted block randomization method.

- **Group A- Shankapushpi siddha taila dhara group.**
- **Group B-Shankapushpi siddha takra dhara group.**

6. INVESTIGATIONS:

If necessary, routine haematological examinations, E.C.G were carried out.

7. DURATION OF THE STUDY:

➢ **Duration of treatment: 7 days**

➢ **Duration of follow up: 7 days**

➢ **Total duration of the study: 14 days**

8. INTERVENTION:

The selected patients were randomly allotted into two groups

Group A - Taila dhara group

Group B - Takra dhara group.

8.1. POORVA KARMA

A. Collection of materials: like *droni, dharapatra*, vessels, cotton pads, clothes etc.

B. Preparation of medicine:

500 ml of prepared taila was heated using double boiling method.

C. Preparation of the patient:

Patient was made to lie down in supine position; dhara patra was hanged to the dhara stand at a height of 4 angula above the fore head. Eyes were covered with cotton pad; ears were covered with cotton plug. A band was tied on the fore head at the level of eye brows.

2. PRADHANA KARMA

Oil which was heated by double boiling method was taken and added with the remaining oil, later the temperature was checked by dipping the finger in the oil. Then this oil was poured into the dhara patra slowly by covering the hole at the bottom. Then dharapatra was oscillated from right to left side in a rhythmic manner. Another vessel was placed at the head end to collect the used oil; this oil is again reheated and used. The procedure was continued for a period of 30 minutes.

3.PASCHAT KARMA:

After the dhara, excess oil was wiped off, eye pad and cotton pad was removed and was advised to take rest for a period of 10-15 minutes and asked to take bath with luke warm water.

TAKRA DHARA

Same procedure was followed as mentioned above, but takra was not heated.

FOLLOW UP

For 7 days.

Criteria for Assessment

1. Insomnia screening questionnaire

2. Daily sleep dairy: to assess the effect of treatment.

3. Athens insomnia scale

4. To give some objectivity to nidranasha, lakshana were scored based on standard scoring method and were assessed before treatment, after treatment and after follow up.

5. Blood pressure, respiratory rate and pulse rate was assessed before and after treatment.

OBSERVATION

In this study 30 patients of pakshaghata pertaining to anidra were included for the study and were randomly divided into two groups. Group A – shankapushpi siddha taila dhara group Group B- shankapushpi siddha takra dhara group.

Total number of patients registered for the study -32

Number of patients completed the study-30

Drop outs -2

Table 1 Demographic observations

Parameter	Observation in each parameter		Maximum number of patients		Percentage	
	Group -A	Group -B	Group -A	Group -B	Group -A	Group -B
Age	60-70 years	60-70 years	8	13	53.3	43.3
Sex	Male	male	10	11	66.7	73.3
Occupation	Not working	Not working	8	11	53.3	73.3

Table 2 Observation related to disease

observation	Maximum observation		Number of patients		Percentage	
	Group -A	Group -B	Group -A	Group -B	Group -A	Group -B
Side affected	Left	Left	12	12	80	80
Type of brain lesion	infract	infract	11	12	73.3	76.6
Karmakshaya	present	present	10	22	66.66	73.33
Sankocha	present	Present	5	9	33.33	30
Shotha	present	present	6	11	40	36.66

Improvement observed on various parameters of anidra treated with shankapushpi siddha tailadhara

Table 3 Angamarda

Angamarda	Negative rank			Positive rank			Ties	Total	Z value	P value	Inference
	N	MR	SR	N	MR	SR					
BT-AT	11	6	66	0	.00	.00	0	11	-3.12	0.002	S
AT-FU	8	4.50	36.00	0	.00	.00	3	11	-2.71	0.007	S

BT-FU	11	6.00	66.00	0	.00	.00	0	11	-3.02	0.003	S

Table 4 Shirogaurava

SHIROGAURAVA											
BT-AT	15	8.0	120	0	.00	.00	0	15	-3.48	0.000	HS
AT-FU	9	5.00	45.0	0	.00	.00	6	15	-2.81	.005	S
BT-FU	15	8.00	120	0	.00	.00	0	15	-3.54	.000	HS

Table 5 Jrumbha

JRUMBHA											
BT-AT	14	7.50	105.0	0	.00	.00	0	14	-3.391	0.001	S
AT-FU	10	5.50	55.00	0	.00	.00	4	14	-3.16	.002	S
BT-FU	14	7.50	105.0	0	.00	.00	0	14	-3.49	.000	HS

Table 6 Jadya

JADYA											
BT-AT	2	1.50	3.00	0	.00	.00	2	4	-1.414	0.157	NS
AT-FU	1	1.00	1.00	0	.00	.00	3	4	-1.00	.317	NS
BT-FU	3	2.00	6.00	0	.00	.00	1	4	-1.732	.083	NS

Table 7 -Glani

GLANI											
BT-AT	9	5.00	45.0	0	.00	.00	0	9	-2.73	.006	S
AT-FU	4	2.20	10.00	0	.00	.00	5	9	-2.00	.046	S
BT-FU	9	5.00	45.00	0	.00	.00	0	9	-2.88	.004	S

Table 8- Bhrama

Bhrama											
BT-AT	13	7.00	91.00	0	.00	.00	0	13	-3.27	.001	HS
AT-FU	10	5.50	55.00	0	.00	.00	3	13	-3.051	.002	S
BT-FU	13	7	91.00	0	.00	.00	0	13	-3.31	.001	HS

Table 9 Tandra

BT-AT	4	2.50	10.00	0	.00	.00	0	4	-1.89	.059	NS
AT-FU	1	1.00	1.00	0	.00	.00	3	4	-1.00	0.317	NS
BT-FU	4	2.50	10.0	0	.00	.00	0	4	-1.85	.063	NS

Table 10 Apakthi

Apakthi											
BT-AT	2	1.50	3.00	0	.00	.00	4	6	-1.34	.180	NS
AT-FU	2	1.50	3.00	0	.00	.00	4	6	-1.414	.157	NS
BT-FU	4	2.50	10.00	0	.00	.00	4	6	-1.80	.058	NS

Table 11 Insomnia screening questionnaire

Insomnia screening questionnaire											
BT-AT	15	8.00	120.0	0	.00	.00	0	15	-3.62	.000	HS
AT-FU	13	7.50	97.50	1	7.50	7.50	1	15	-3.02	.001	HS
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.68	.000	HS

Table 12-time for getting sleep

Time for getting sleep											
BT-AT	15	8.00	120.0	0	.00	.00	0	15	-3.45	.001	HS
AT-FU	6	5.50	33.00	4	5.50	22.0	5	15	-6.32	.527	NS
BT-FU	15	8.00	120.0	0	.00	.00	0	15	-3.771	.000	HS

Table 13 Sleep interruption

Sleep interruption											
BT-AT	15	8.00	120.0	0	.00	.00	0	15	-3.50	.000	HS
AT-FU	8	5.00	40.00	1	5.00	5.00	6	15	-2.33	.020	S
BT-FU	15	8.00	120.0	0	.00	.00	0	15	-3.68	.000	HS

Table 14-wake up time

Wake up time											
BT-AT	14	7.50	105.0	0	.00	.00	1	15	-3.37	.001	HS
AT-FU	8	5.00	40.0	1	5.00	5.00	6	15	-2.33	.020	S
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-353	.000	HS

Table 15 Naps during day

Naps during day											
BT-AT	13	7.00	91.00	0	.00	.00	2	15	-3.27	.001	HS
AT-FU	9	5.00	45.00	0	.00	.00	6	15	-3.00	.003	S
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.531	.000	HS

Table 16- feel during day

Feel during day											
BT-AT	15	8.00	120.00	0	.00	.00	0	15	-3.49	.000	HS
AT-FU	9	5.61	50.50	1	4.50	4.50	5	15	-2.48	.013	S
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.53	.000	HS

Table 17 Duration of sleep

Duration of sleep											
BT-AT	15	8.00	120.00	0	.00	.00	0	15	-3.69	.000	HS
AT-FU	13	7.50	97.50	1	7.50	7.50	1	15	-3.20	.001	HS
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.71	.000	HS

Table 18 Athens insomnia scale

Athens insomnia scale											
BT-AT	15	8.00	120.00	0	.00	.00	0	15	-3.62	.000	HS
AT-FU	13	7.50	97.50	1	7.50	7.50	1	15	-3.20	.001	HS
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.68	.000	HS

Improvement observed on various parameters of anidra treated with shankapushpi siddha takra dhara

Table 19- Angamarda

Angamarda											
BT-AT	13	7.00	91.00	0	.00	.00	0	13	-3.28	.00	HS
AT-FU	6	3.50	21.00	0	.00	.00	7	13	-2.33	.020	S
BT-FU	13	7.00	91.00	0	.00	.000	0	13	-3.35	.001	HS

Table 20- Shirogaurava

Shirogaurava											
BT-AT	15	8.00	120.00	0	.00	.00	0	15	-3.52	.000	HS
AT-FU	7	4.00	28.00	0	.00	.00	8	15	-2.53	.011	S
BT-FU	15	8.00	120.0	0	.00	.00	0	15	-3.57	.000	HS

Table 21- Jrumbha

Jrumbha											
BT-AT	9	5.00	45.00	0	.00	.00	3	12	-2.88	.004	S
AT-FU	5	3.00	15.00	0	.00	.00	7	12	-2.23	.025	S
BT-FU	11	6.00	66.00	0	.00	.00	1	12	-3.022	.003	S

Table 22-Jadya

Jadya											
BT-AT	5	3.00	15.00	0	.00	.00	0	5	-2.12	.034	S
AT-FU	2	1.50	3.00	0	.00	.00	3	5	-1.414	.157	NS
BT-FU	5	3.00	15.00	0	.00	.00	0	5	-2.07	.038	S

Table 23-Glani

Glani											
BT-AT	11	6.00	66.00	0	.00	.00	3	14	-2.99	.003	S

AT-FU	7	4.00	28.00	0	.00	.00	7	14	-2.64	.008	S
BT-FU	13	7.00	91.00	0	.00	.00	1	14	-3.27	.001	HS

Table 24 Bhrama

Bhrama											
BT-AT	11	6.00	66.00	0	.00	.00	1	12	-3.03	.002	S
AT-FU	5	3.00	15.00	0	.00	.00	7	12	-2.12	.034	S
BT-FU	12	6.50	78.00	0	.00	.00	0	12	-3.14	.002	S

Table 25 Tandra

Tandra											
BT-AT	2	1.50	3.00	0	.00	.00	1	3	-1.414	.157	NS
AT-FU	1	1.00	1.00	0	.00	.00	2	3	-1.00	.317	NS
BT-FU	3	2.00	6.00	0	.00	.00	0	3	-1.73	.083	NS

Table 26 Apakthi

Apakthi											
BT-AT	2	1.50	3.00	0	.00	.00	4	6	-1.41	.157	NS
AT-FU	3	2.00	6.00	0	.00	.00	3	6	-1.732	.083	NS
BT-FU	4	2.50	10.00	0	.00	.00	2	6	-1.890	.059	NS

Table 27-Insomnia screening questionnaire

Insomnia screening questionnaire											
BT-AT	14	7.50	105.00	0	.00	.00	1	15	-3.74	.000	HS
AT-FU	6	3.50	21.00	0	.00	.00	9	15	-2.44	.014	S
BT-FU	14	7.50	105.00	0	.00	.00	1	15	-3.39	.001	HS

Table 28 Time for getting sleep

Time for getting sleep											
BT-AT	15	8.00	120.00	0	.00	.00	0	15	-3.50	.000	HS
AT-FU	5	4.50	22.50	3	4.50	13.50	7	15	-.707	.480	NS
BT-FU	15	8.00	120.00	0	.00	.00	0	15	-3.49	.000	HS

Table 29 Sleep interruption

Sleep interruption											
BT-AT	14	7.50	105.0	0	.00	.00	1	15	-3.63	.000	HS
AT-FU	7	4.00	28.00	0	.00	.00	8	15	-2.64	.008	S
BT-FU	14	7.50	105.0	0	.00	.00	1	15	-3.39	.001	HS

Table 30 Wake up time

Wake up time											
BT-AT	14	7.50	105.0	0	.00	.00	1	15	-3.55	.000	HS
AT-FU	5	3.00	15.00	0	.00	.00	10	15	-2.23	.025	S
BT-FU	15	8.00	120.0	0	.00	.00	0	15	-3.52	.000	HS

Table 31 Naps during day

BT-AT	**12**	**6.50**	**78.00**	**0**	**.00**	**.00**	**3**	**15**	**-3.27**	**.001**	**HS**
AT-FU	8	4.50	36.00	0	.00	.00	7	15	-2.64	.008	S
BT-FU	15	8.00	120.0	0	.00	.00	0	15	-3.48	.000	HS

Table 32 Feel during the day

Feel during day											
BT-AT	12	6.50	78.00	0	.00	.00	3	15	-3.12	.001	HS
AT-FU	10	5.50	55.00	0	.00	.00	5	15	-3.051	.002	S
BT-FU	14	7.50	105.0	0	.00	.00	1	15	-3.42	.001	HS

Table 33 Duration of sleep

Duration of sleep											
BT-AT	14	7.50	105.0	0	.00	.00	1	15	-3.63	.000	HS
AT-FU	5	3.00	15.00	0	.00	.00	10	15	-2.23	.025	S
BT-FU	14	7.50	105.00	0	.00	.00	1	15	-3.39	.001	HS

Table 34 Athens insomnia scale

Athens insomnia scale											
BT-AT	14	7.50	105.00	0	.00	.00	1	15	-3.63	.000	HS
AT-FU	5	3.00	15.00	0	.00	.00	10	15	-2.26	.025	S
BT-FU	14	7.50	105.0	0	.00	.00	1	15	-3.39	.001	HS

Comparing the improvement of various parameters of anidra on both groups

Table 35 Angamarda

Angamarda	N	Group-A	Group-B	Mean rank		Sum rank		U	Z	P	
BT-AT	24	11	13	13.82	11.38	152.00	148.00	57.00	-1.06	.286	NS
AT-FU	24	11	13	10.86	13.88	119.5.	180.50	53.50	-1.16	.245	NS
BT-FU	24	11	13	12.09	12.85	133.00	167.00	67.00	-.326	.744	NS

Table 36 Shirogaurava

shirogaurava											
BT-AT	30	15	15	15.70	15.30	235.50	229.50	109	-.142	.887	NS
AT-FU	30	15	15	14.33	16.67	215.00	250.00	95.00	-.803	.422	NS
BT-FU	30	15	15	14.17	16.83	212.50	252.50	92.50	-1.03	.299	NS

Table 37 Jrumbha

Jrumbha											
BT-AT	26	14	12	13.75	13.21	192.50	158.50	80.50	-.024	.838	NS
AT-FU	26	14	12	11.71	15.58	164.00	187.00	59.00	-1.502	.133	NS
BT-FU	26	14	12	12.04	15.21	168.50	182.50	63.500	-1.29	.195	NS

Table 38 Jadya

Jadya											
BT-AT	9	4	5	6.50	3.80	26.00	19.00	4.00	-1.75	.079	NS
AT-FU	9	4	5	5.38	4.70	21.50	23.50	8.50	-.447	.655	NS
BT-FU	9	4	5	6.75	3.60	27.00	18.00	3.00	.917	.005	S

Table 39 Glani

Glani											
BT-AT	23	9	14	11.28	12.48	101.50	174.50	56.00	-.442	.658	NS
AT-FU	23	9	14	12.39	11.75	111.50	164.50	59.500	-.255	.799	NS
BT-FU	23	9	14	11.61	12.25	104.50	171.50	59.500	-.272	.786	NS

Table 40 Bhrama

Bhrama											
BT-AT	25	13	12	11.963	14.13	155.50	169.50	64.500	-.841	.400	NS
AT-FU	25	13	12	11.80	15.08	144.00	181.00	53.00	-1.52	.128	NS
BT-FU	25	13	12	10.27	15.69	133.50	191.50	42.500	-2.26	.024	S

Table 41 Tandra

Tandra											
BT-AT	7	4	3	3.25	5.00	13.00	15.00	3.00	-1.32	.186	NS
AT-FU	7	4	3	4.13	3.83	16.50	11.05	5.500	-2.24	.823	NS
BT-FU	7	4	3	3.25	5.00	13.00	15.00	3.00	-1.34	.180	NS

Table 42 Apakthi

Apakthi											
BT-AT	12	6	6	6.33	6.67	38.00	40.00	17.00	-.192	.847	NS
AT-FU	12	6	6	7.00	6.00	42.00		15.00	-.561	.575	NS
BT-AT	12	6	6	6.33	6.67	38.00	40.00	17.00	-.192	.847	NS

Table 43 I.S.Q

I.S.Q											
BT-AT	30	15	15	13.60	17.40	204.00	261.00	84.00	-2.003	.045	NS
AT-FU	30	15	15	12.30	18.70	184.50	280.50	64.500	-2.363	.018	S
BT-FU	30	15	15	11.27	19.73	169.00	296.00	49.00	-3.105	.002	S

Table 44 Time for getting sleep

BT-AT	30	15	15	13.43	17.57	201.50	263.50	81.500	-1.409	.159	NS
AT-FU	30	15	15	15.43	15.57	231.50	233.50	111.50	-.044	.024	S
BT-FU	30	15	15	12.70	18.30	190.50	274.50	70.500	-2.253	.965	NS

Table 45 Sleep interruption

Sleep interruption											
BT-AT	30	15	15	11.77	19.23	176.50	288.50	56.500	-2.822	.005	S
AT-FU	30	15	15	15.27	15.73	229.00	236.00	109.00	-.165	.869	NS
BT-FU	30	15	15	12.20	18.80	183.00	282.00	63.00	-2.557	.011	S

Table 46 Wake up time

Wake up time											
BT-AT	30	15	15	13.50	17.50	202.50	262.50	82.500	-1.492	.136	NS
AT-FU	30	15	15	14.33	16.67	215.00	250.00	95.00	-.828	.407	NS
BT-FU	30	15	15	12.10	18.90	181.50	283.50	61.500	-2.388	.017	S

Table 47 Naps during day

Naps during day											
BT-AT	30	15	15	13.07	17.93	196.00	269.00	76.00	-1.67	.094	NS
AT-FU	30	15	15	15.60	15.40	234.00	231.00	111.00	-0.070	.944	NS
BT-FU	30	15	15	13.33	17.67	200.00	265.00	80.00	-1.485	.138	NS

Table 48 Feel during day

Feel during day											
BT-AT	30	15	15	12.60	18.40	189.00	276.00	69.00	-2.02	.042	S
AT-FU	30	15	15	15.80	15.20	237.00	228.00	108.00	-.207	.836	NS
BT-FU	30	15	15	12.97	18.03	194.50	270.50	74.500	-1.887	.059	NS

Table 49-Duration of sleep

BT-AT	30	15	15	14.57	16.43	218.50	246.50	98.500	-.984	.325	NS
AT-FU	30	15	15	11.83	19.17	177.50	287.50	57.500	-2.660	.008	S
BT-FU	30	15	15	11.47	19.53	172.00	293.00	52.00	-3.049	.002	S

Table 50 Athens insomnia scale

BT-AT	30	15	15	14.10	16.90	211.50	253.50	91.500	-1.345	.179	NS
AT-FU	30	15	15	11.83	19.17	177.50	287.50	57.500	-2.660	.008	S
BT-FU	30	15	15	11.27	19.73	169.00	296.00	49.00	-3.105	.002	S

RESULTS

In angamarda tailadhara group shows significant result and in takra dhara group shows highly significant result. (table 3, table 19)

In shirogaurava tailadhara group shows highly significant result after treatment and after follow up and in takra dhara group shows highly significant result. (table4, table 20)

In jrumbha tailadhara group shows significant result after treatment and in takra dhara group also shows significant result. (table5, table-21)

In bhrama tailadhara group shows highly significant result after treatment and in takra dhara group shows significant result. (table-8, table-24)

In tandra tailadhara group shows non-significant result after treatment and in takra dhara group also shows non-significant result. (table9, table-25)

In apakthi tailadhara group shows non-significant result after treatment and in takra dhara group shows non-significant result. (table 10, table 26)

In I.S.Q tailadhara group shows highly significant result after and in takra dhara group shows highly significant result. (table 11, table 27)

In time for getting sleep tailadhara group shows highly significant result after treatment and in takra dhara group also shows highly significant result. (table 12, table 28)

In sleep interruption tailadhara group shows highly significant result after treatment and in takra dhara group also shows highly significant result. (table 13, table 29)

In wake-up time tailadhara group shows highly significant result after treatment and in takra

dhara group shows highly significant result. (table 14, table 30)

In naps during day tailadhara group shows highly significant result and in takra dhara group shows highly significant result. (table 15, table 31)

In feel during day tailadhara group shows highly significant result and in takra dhara group shows highly significant result. (table 16, table 32)

In Duration of sleep tailadhara group shows highly significant result and in takra dhara group shows highly significant result. (table 17, table 33)

In Athens insomnia scale tailadhara group shows highly significant result and in takra dhara group shows highly significant result. (table 18, table 34)

DISCUSSION

MODE OF ACTION OF SHIRODHARA

Shirodhara is a procedure wherein continuous pouring of medicated liquids over the fore head for a stipulated period of time was considered. In present work, shankapushpi siddha taila and shankapushpi siddha takra was selected for the study separately as well as to compare the efficacy of both.

Continuous pouring of taila over the fore head for specific period of time produces a tranquilizing effect and induces good sleep. Studies were conducted to find whether absorption of the drug was possible through skin. These experiments depict that skin is impermeable to watery solutions of salts or other substance. It has on the other hand been shown that it is possible to produce a certain amount of absorption by

application of substances conveyed through fatty vehicles. According to modern science, local application of ointment may pass through the stratum corneum into the blood vessel and produce desirable effect by reaching the target organ.

Continuous pouring of oil in relaxed and comfortable position had an additional effect which can be compared to cradling of a mother. This acts as sedative and gives soothing effect for brain and results in good sleep.

Studies are conducted to show the effect of Shirodhara, which can be explained on the basis of penetration effect, stimulation effect and relaxation effect.

Penetration effect: During the continuous pouring of liquid over the forehead, there is penetration of the drug through the skin. The degree of the penetration depends on the density and consistency of the drugs. Certain amount of drug absorption is possible when they are in lipid media.

Stimulating effect:

Any substance falling from a certain height possesses a potential energy and this energy will be converted into kinetic energy according to the law of conservation of energy. If the height remains the same then the potential energy depends on the mass of the substance i.e. if more is the mass of the substance then more will be the energy possessed by the substance.

Relaxing effect

Continuous pouring of oil in relaxed and comfortable position had an additional effect

which can be compared to cradling of a mother. This will have a sedative and soothing effect for brain which results in sleep.

Here drug of choice was shankapushpi and the drug itself was having the properties of nidra janaka and had the medhya effect. Ayurveda explains that dravyas used for abhyanga, avagaha, pralepa, parisheka undergo paka with the help of bhrajaka pitta and the virya of a drug is absorbed through the romakupa, dhamani and circulated all over the body. Here also by the action of the bhrajaka pitta, virya of the drug was absorbed.

Here both shankapushpi siddha taila dhara and shankapushpi siddha takra dhara was effective. But when comparing the effect of both the groups, taila dhara group showed better results when compared to the takra dhara group. In takra dhara group after follow up there was recurrence of some of the symptoms in some patients.

CONCLUSION

Anidra in pakshaghata patients is a common occurrence, pakshaghata is a vataja nanatmaja vikara. Anidra will commonly seen in vata vriddhi condition and pitta vriddhi condition. In this study anidra pertaining to patients of pakshaghata was taken and were subjected to shankapushpi siddha taila dhara and shankapushpi siddha takra dhara based on the group allotted. Shankapushpi itself is having medhya ,nidrajanana effect. Here mainly vata vriddhi is the cause for anidra.

OVER ALL EFFECT

Effect on symptoms of anidra

The symptom angamarda in taila dhara group, showed 50% reduction in symptom. In takra dhara group 58% reduction in the symptom was seen.

Shirogaurava-In tailadhara group, there was 61% reduction in symptom and in takra dhara group there was 66% reduction of symptom was seen after treatment.

Jrumbha- In tailadhara group there was 67% reduction in symptom and in takra dhara group there was 65% reduction of symptom was seen after treatment.

Jadya - In tailadhara group there was 40% reduction in symptom and in takra dhara group there was 60% reduction of symptom was seen after treatment.

Glani- In tailadhara group there was 65% reduction in symptom and in takra dhara group there was 46.6% reduction of symptom was seen after treatment.

Bhrama - In tailadhara group there was 52% reduction in symptom and in takra dhara group there was 50% reduction of symptom was seen after treatment.

Tandra - In tailadhara group, there was 71% reduction in symptom and in takra dhara group there was 50% reduction of symptom was seen after treatment.

Apakthi - In tailadhara group there was 42.85% reduction in symptom and in takra dhara group there was 28.57% reduction of symptom was seen after treatment.

Insomnia Screening Questionnaire- In tailadhara group there was 41.86% reduction in symptom

and in takra dhara group there was 35.89% reduction of symptom was seen after treatment.

Time taken for getting sleep- In tailadhara group there was 67% reduction in symptom and in takra dhara group there was 54.76% reduction of symptom was seen after treatment.

Sleep interruption- In tailadhara group there was 50% reduction in symptom and in takra dhara group there was 40% reduction of symptom was seen after treatment.

Duration of sleep- In tailadhara group there was 39.53% reduction in symptom and in takra dhara group there was 38.46% reduction of symptom was seen after treatment.

Athens Insomnia scale - In tailadhara group there was 41.86% reduction in the severity of insomnia was seen and in takra dhara group there was 38.46% reduction was seen after treatment.

Here mainly vata vriddhi is the cause for anidra. Here shankapushpi siddha tailadhara group showed better result when compared to the shankapushpi siddha takra dhara group.

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