

## Clinical evaluation of an Ayurvedic therapy– *Sutashekhara Rasa* and *Brihat Jeevakadya Taila Nasya* in the management of *Ardhavabhedaka* (Migraine)

### Research Article

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### Abstract

*Ardhavabhedaka*-hemicranial headache is a psychosomatic disorder: later replaced by migraine a Greek word "half of the head" because the pain of migraine often occurs on one side (classical Migraine) may affect the entire head. The term "migraine" refers to a syndrome of vascular pathology of the cranial blood vessels and is one of the commonest headache encountered in clinical practise. The survey results suggested that both patients and physicians believe migraine treatment is elusive and that patients are becoming increasingly frustrated and dissatisfied with treatment outcomes. Clinically, it is a *Rakta/Pitta* dominant disease; and *Acharya Charaka* opined that the vitiated *Doshas* after reaching *Shirah* vitiates *Rakta* (*Rasavaha* and *Raktavaha Srotas*) there to produce *Shiro Roga* (headache). Its diagnosis is based on mainly clinical history. For the present study, it was planned to compare the result between *Brihat Jeevakadya Taila Nasya* and *Sutashekhara Rasa* orally (*Pitashamaka*, *Raktashodhaka*, *Deepana* etc.) in Treatment Trial group and Flunarizine in Control group. The overall effect of therapy showed that in Trial group 80.00% patients had marked improvement, followed by moderate improvement in 13.33% and complete improvement in 6.67%. In control group marked and moderate improvement was seen in 60.00% and 33.33% respectively; and 6.67% had mild improvement. No any adverse drug reaction was found during whole study. Total 30 patients were registered and from the results and observation which were received from this study it can be concluded that Trial group is showing better results in *Ardhavabhedaka*.

**Key Words:** *Ardhavabhedaka*, *Brihat Jeevakadya Taila*, Migraine, *Sutashekhara Rasa*.

### Introduction:

Headache in general is one of the commonest complain of the people seeking medical help. Of all the disorders that present to the clinician with headache, migraine is the commonest and also the most burdensome. Migraine is one of the most disabling of

neurological disorders. The World Health Organization (WHO) has identified migraine among the world's top 20 leading causes of disability (1). More than 2/3rd of Migraine sufferers either have never consulted a doctor or have stopped doing so (2). Moreover routine use of these drugs leads to GI tract disturbance. In contrast to that *Ayurveda* has a variety of natural medication in the treatment of various varieties of *Shirah-Shoola*, and these recipes are free from above mentioned GIT complications and rather safe in use. Clinically, it is a *Pitta* dominant disease; and *Acharya Charaka* opined that the vitiated *Doshas* after reaching *Shirah*

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vitiates *Rakta* (*Rasavaha* and *Raktavaha Srotas*) there to produce *Shiro Roga* (headache)(3). Thus, *Rakta* is the main *Dushya* in *Ardhavabhedaka*. Its diagnosis is based on mainly clinical history. The study was conducted in I. P. G. T. & R. A., hospital. In this study, 30 patients were selected and *Sutashekhara Rasa* orally and *Brihat Jeevakadhya Taila Nasya* were given for its *Pittashamaka*, *Raktashodhaka*, *Deepana* etc. properties for 45days. For the present study, an attempt has been made to treat “the disease” by identifying the risk factors for the disease and preventing the recurrence of the disease in the individual by explaining *Pathya Apathya*.

For the present study it was planned to evaluate the efficacy of *Brihat Jeevakadya Taila Nasya* and *SutashekharaRasain* the management of *Ardhavabhedaka*.

#### **Aims and objectives:**

The present study was based on following aims and objects:

1. To study and understand the etiopathogenesis of *Ardhavabhedaka* (Migraine) in *Ayurvedic* classical literature.
2. To evaluate the role of adopted line of treatment/ trail drugs in the management of *Ardhavabhedaka* (Migraine).

#### **Materials and methods:**

The study was approved by Institutional Ethics Committee (No. PGT/7/A/Ethics/2013-14/1767 dated on 10/09/2013). Patients were selected from the O. P. D. of Dept. of Shalakyā –Tantra and referred from other dept. of I. P. G. T. & R. A., G. A. U. Jamnagar. Patients’ written informed consent was taken before starting the treatment. Patients were selected using ‘Simple random sampling method’. The study was conducted in 30 subjects.

#### **Diagnostic criteria:**

**Criteria for inclusion:** Age Control group between 20 to 60 years and having sign and symptom of *Ardhavabhedaka* (Migraine) According to *Ayurvedic* Classics as well as Modern science.

#### **Criteria for exclusion:**

Patients having any chronic debilitating disease with other neurological pathology or having Sinusitis, Hypertension, Secondary headache caused by meningitis, tumor, encephalitis, cervical spondylitis and refractive errors, age Control group below 16 & above 60 etc. were excluded from the study.

#### **Grouping:**

##### **Group A-Trial group**

##### **Group B-Control group**

#### **Intervention:**

Before starting the treatment *Deepana-Pachana* with *Sunthi Churna* 2gm 2 times or *Chitrakadi Vati* 2 Tablet thrice a day was given for 3 days followed by *Kostha Shuddhi* (*Mridu Virechana*) with *Triphala Churna* 6gm at bed time was given for 3 days in group A patients.

#### **Group A-Trial group:**

##### **(1) Brihat Jeevakadya Taila Nasya(4):**

*Nasya* was done in the dose of 6 drops in each nostril for 2 sittings of seven days with the interval of 15 days after each sitting. Total duration was one and half month.

##### **(2) Sutashekhara Rasa Vati (5):**

*Vati* was given in the dose of 250mg BD with *Drakshajala Anupana* for one and half month.

**Drakshajala:** 25 gm of dried *Draksha* is soaked in 200 ml of water overnight and in the next day morning, it is crushed and filtered through a clean cloth and that water is used as *Anupana*. (*Anubhuta*)

#### **Group B- Control group:**

Flunarizine Tab 10mg OD was given for 45 days.

Patients were diagnosed on the basis of subjective criteria of diseases.

#### **Investigations:**

Routine hematological and urine analysis were carried out before treatment to rule out any systemic diseases.

### Scoring pattern:

#### Subjective symptoms

The improvement in patients was assessed on the basis of relief in the signs and symptoms of the disease. The details of the score adopted for the main signs and symptoms in this study are as follows:

#### ❖ Severity of Headache

0 = No headache.

1 = Mild headache, patient is aware only if he/she pay attention to it.

2 = Moderate headache, can ignore at times.

3 = Severe headache, can't ignore but he/she can do his/her usual activities.

4 = Excruciating headache, can't do anything.

#### ❖ Frequency of Headache: Assessed in term of (frequency in days)

0 = Nil

1 =  $\geq 20$  days

2 = 15 days

3 = 10 days

4 =  $\leq 5$  days

#### ❖ Duration of Headache: (Assessed in term of hours/day)

0 = Nil

1 = 1-3 hours/day

2 = 3-6 hours/day

3 = 6-12 hours/day

4 = More than 12 hours/day

#### ❖ Nausea:

0 = Nil

1 = Occasionally

2 = Moderate, but does not disturb the routine work

3 = Severe, disturbing routine work

4 = Severe enough, small amount of fluid regurgitating from Mouth

#### ❖ Vomiting:

0 = Nil

1 = Only if headache does not subside

2 = Vomiting 1-2 times

3 = Vomiting 2-3 times

4 = Forced to take medicine to stop vomiting

#### ❖ Vertigo:

0 = Nil

1 = Feeling of giddiness

2 = Patient feels as if everything is revolving

3 = Revolving signs + black outs

4 = Unconscious

#### ❖ Aura:

0 = Nil

1 = Lasts for 5 minutes.

2 = Lasts for 15 minutes

3 = Lasts for 30 minutes

4 = Lasts for 60 minutes

#### ❖ Gradation For Associated Symptoms:

0 = No symptoms

1 = Mild (can do his/her work)

2 = Moderate (forced to stop work)

3 = Severe (forced to take rest)

4 = Excruciating (force to take medicine)

### Overall assessment:

The improvement was assessed on the basis of subjective symptoms and salivary tests (objective parameters).

**Subjective:** The assessment was done by adopting the following scoring pattern for subjective symptoms-

1. Complete Remission: 100% relief in objective and subjective signs and symptoms.
2. Marked improvement: 76 – 99% relief in objective and subjective signs and symptoms.
3. Moderate improvement: 51 – 75% relief in objective and subjective signs and symptoms.
4. Mild improvement: 26 – 50% relief in objective and subjective signs and symptoms.
5. Unchanged: Below 25% relief in objective and subjective signs and symptoms.

### Statistical estimation of results:

The obtained data were analyzed statistically. The values were expressed as percentage of relief and Standard Error Mean. The data were analyzed by paired 't' test. Unpaired 't' test was applied for comparative study.

$P > 0.05$  = Insignificant

$P < 0.05$  and  $0.01$  = Significant

$P < 0.001$  = Highly significant

## Observations and Results

In this clinical trial of *Ardhavabhedaka*, a total number of 30 patients were registered and were randomly distributed into two groups. 15 patients registered in each group. The general observations are shown in FIGURE NO. 1

Observation reveals that, regarding the chief complaints 100% patients were having *Shirah-Shoola* (headache), followed by *Hrillas* (nausea) and *Chhardi* (vomiting) 93. 33% and 80. 00% respectively, *Bhrama* (vertigo) 46. 67%, and *Aura* 66. 67%, which are identical to the textual *Lakshana* (symptoms) of *Ardhavabhedaka* and migraine.

Regarding the associated symptoms 63. 33% patients were having Photophobia, 66. 67% patients were having Phonophobia, 30. 00% were having Ocular pain, 33. 33% were having Eyelid edema, 26. 67% patients had blurring of vision, 23. 33% had Lacrimation, 50. 00% patients had Stiffness of neck followed by other symptoms, which tally with textual *Lakshana* of *Ardhavabhedaka* and migraine.

Regarding the *Shirah-Shoola*, Maximum (76. 67%) patients were having unilateral headache, that also particularly more in frontal and temporal region i. e., 53. 33% each, nature of pain was *Tivra* (sharp) in 96. 67% patients. Regarding the quality of headache, maximum patients (86. 67%) were having *Shankhanistoda*, *Akshi Nishkashanvat Pida* (53. 33%), *Ghatasambheda* (43. 33%) followed by others. The intensity of headache was excruciating in 60% of patients. Maximum patients (53. 33%) were having chronicity of >5 years. Maximum patients (66. 67%) were having gradual onset of headache. The duration >12 hours of headache was seen maximum i. e., 40. 00%. Regarding frequency, the episode at an interval of  $\leq 5$  days was seen maximum i. e., 80. 00%. Maximum patients (63. 33%) were found to be having continuous nature of headache. This shows that majority of the patients either have never consulted a doctor or have stopped doing so, which suggests the chronicity of disease. It was observed that patients rely on painkiller without any

medical advice given by physician, in a hope to get rid of the headache quickly. But it was not going to stop the pathology. And the patients, who were taking anti-migraine drugs, were not responding. This results in chronic migraines i. e., rebound or transformed migraine headache.

The maximum *Nidanas* (etiological factors) observed in patients were *Lavana-Amla Aahara* (66. 67%), *Samshana* (50. 00%), *Vishamashana* (26. 67%), followed by *Ratrijagarana* 26. 67% and *Diwaswapa* 80. 00%. This shows faulty lifestyle, which is accepted by today's generation. Intake of junk food, taking food at any time, fasting habits of females, etc lead to *Agnimandhya* and *Tridosha Dushti*, which contributes chiefly in the pathogenesis of the disease. Also tyramine and other amines present in today's junk and sour-spicy food causes dilation of the nerves in the brain, resulting in a rush of blood. Faulty diet causes Constipation (23. 33%) and Hyperchlorhydria (70. 00%), which was observed by patients at the time of migraine headache.

Similarly *Ratrijagarana* and *Diwaswapa* aggravate *Vata* and *Kapha Dosha* respectively. Also disturbed sleep was observed in maximum patients i. e., 33. 33%. Disturbances such as sleep deprivation, too much sleep, poor quality of sleep and frequent awakening at night are associated with both migraine and tension headaches, whereas improved sleep habits helps in reducing the frequency of migraine headaches. Sleep also has been reported to shorten the duration of migraine headaches.

Environmental factors, like *Dhupa* (86. 67%), *Dhuma* (23. 33%), *Dhuli* (20. 00%) causes the *Atiyoga* of *Indriyas* and serves as a triggering factor. Female's emotional nature, the responsibilities of the family were the cause of mental factors such as *Chinta* (86. 67%), *Krodha* (70. 00%), *Bhaya* (50. 00%) and *Shoka* (43. 33%).

Sunlight was observed as maximum triggering factor i. e., 83. 33%. Bright lights and other high intensity visual stimuli can cause headaches in healthy subjects as well as patients with migraine headaches, but

migraine patients seem to have a lower than normal threshold for light-induced pain. Sunlight, television and flashing lights all have been reported to precipitate migraine headaches.

Emotional (73.33%) and physical stress (40.00%) also acts as triggering factor. This may lead to *Dhatukshaya* and vitiation of *Vata Dosha*. Awakening/Journey (56.66%) served as triggering factor because it also leads to vitiation of *Vata Dosha*. Skipping breakfast/fasting habits (40.00%) served as triggering factor because it possibly may precipitate migraine headaches by causing the release of stress-related hormones and lowering blood sugar.

#### Effect of therapies on signs & symptoms:

Regarding effect of therapy on Chief complaints, both the group showed significant results. Statistically highly significant ( $<0.001$ ) improvement in severity (81.03%), duration (73.46%) and frequency (75.86%) of headache was obtained in trial group, followed by statistically highly significant ( $<0.001$ ) improvement in severity (66.66%), duration (63.41%) and frequency (61.11%) of headache in Control group. TABLE NO. 1 & 2

Effect of therapy on other associated complaints showed that in trial group 95.12% relief in Nausea, 82.75% in Vomiting, 100% in Vertigo and 100% in Aura was obtained, which was statistically significant. While in Control Group, Nausea was relieved by 76.66%, Vomiting by 94.44%, and Vertigo by 63.63%, which were statistically significant. But no significant result in Aura ( $<0.05$ ) was obtained. This shows that Trial group therapy was more effective than control group therapy on chief complaints. TABLE NO. 3 & 4

The associated symptoms like Blurring of vision, Photophobia, Ocular pain, Eyelid oedema, Phonophobia were relieved by 96.55%, 90.00%, 80.00%, 90.91%, 96.55 in Treatment Trial group and 72.72%, 88.23%, 80.00%, 85.71% and 89.47 in Control group respectively, which were statistically highly significant ( $<0.001$ ). The other associated symptoms like Hyperchlorhydria

and Constipation were relieved by 92.85% and 100% in Trial group which were statistically highly significant and 35.29% and 60.00% in Control group respectively, which were statistically insignificant. This shows that Trial group therapy was more effective than control group therapy on associated symptoms. TABLE NO. 5 & 6

#### Total effect of therapy:

The overall effect of therapy showed that in Trial group 80.00% patients had marked improvement, followed by moderate improvement in 13.33% and complete improvement in 6.67%. In control group marked and moderate improvement was seen in 60.00% and 33.33% respectively; and 6.67% had mild improvement. Not a single case was noted unchanged in any of the groups. FIGURE NO. 2

#### Probable Mode of action:

In the present study *Sutashekhara Rasa* used for systemic treatment of *Ardhavabhedaka*. *Sutashekhara Rasa* is mentioned in *Yogratnakara* for *Amlapitta rogaadhikara*. The compound was slightly modified to meet the cost factor i. e. *Swarna Bhasma* was replaced by *Swarna Makshika Bhasma*(6). In *Ardhavabhedaka*, the root cause is *Agnimandhya*. So if *Agnimandhya* is treated, best production of *Rasa-Rakta Dhatu* occurs. We can't establish that the particular drug acts by their *Rasa, Guna, Virya, Vipaka* mentioned in *Yoga*.

#### Dominant Rasa Panchaka of Sutashekhara Rasa(7)

*Rasa is Katu, Tikta, Madhura, Guna is Snigdha, Laghu, Tikshana, Virya is Ushna, Vipaka is Katu and Doshgnata is Vata-Pitta shamaka.*

*KatuRasa* and *TiktaRasa* have *Deepana – Pachana Karma*(8), which causes *Amapachana* and thus provides proper metabolism and ultimately balances the *Agni*. Thus these *Rasa* works at *AgniDushti* stage in the *Samprapti* of *Ardhavabhedaka* and pacify the *Kapha Dosha*.

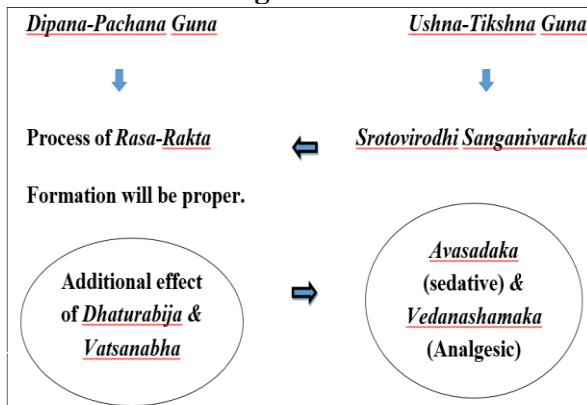
*Ushna Viryahas Deepana – Pachana property, which acts as*

*Agnideepaka*. It also softens and liquefies the morbid *Doshas* which are ultimately removed due to *Virechaka Karma*, thereby relieving constipation.

*Snigdha Guna*, and *Madhura Rasa* having the property *Srushtavinamutra*, which relieves the symptoms of constipation and hyperchlorhydria and pacify the *Vata Dosh* and *Pitta Dosh*.

*Snigdha Guna* has *Kledana Karma*(9) which acts as a binding agent and also strengthens the efficacy of *Dhatu* by providing proper nourishment. *Laghu Guna* and *Tikshna Guna* have *Sroto-shodhaka* property, which helps in expelling the morbid *Doshas*

**Image No 1:**



*Sutashekhara* relives *Amlata* and *Tikshanta* of *Pitta* by acting on *Amashaya* and *Pakvashaya*. Thus it regularizes *Pittotpati*. The driver *Dosh* *Vata* also gets pacified by the contents hence *Chhardi* (vomiting) and *Bhrama* (vertigo) subsides in *Ardhavabhedaka* by use of *Sutashekhara Rasa*. **It works as *Doshpratyника* and *Vyadhipratynika Chikitsa* in *Ardhavabhedaka*.**

The food gets putreficated by improper digestion in intestine (*Vidagdha jeerna*) and produces *Ama-visha*. So *Rasa-Rakta Dusti* and *Vata Vikruti* occurs. By this process different types of diseases are produced. Among them one of the disease is *Ardhavabhedaka*. ***Sutashekhara* is the best line of treatment in such type of *Ama-visha*.** The compound drug is thus having *Shothahara*, *Vedanasthapana*,

*Deepana*, *Pachana* and *Tridosha Shamaka Karma*.

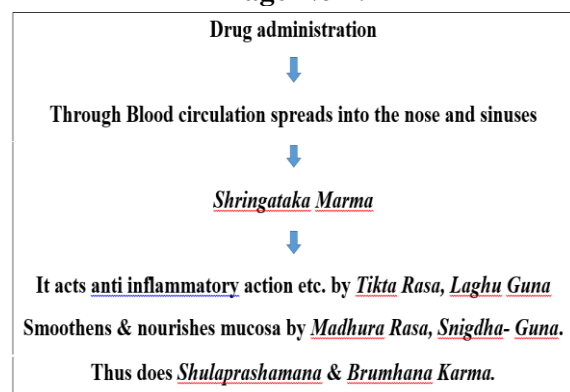
### Probable mode of action of *Brihat Jeevakadya Taila Nasya*

There are various modalities for the alleviation of *Shirahshoola*. According to *Acharya Charaka*, *Nasyakarma* is the best treatment for the *Shiro Roga*(10), because, nose is the nearest pathway for the elimination of *Doshas* from the head. *Ardhavabhedaka* being one of the *Shiroroga* can be best treated with *Nasya* in which morbid *Doshas* are situated in the head. In the present study *Brihat Jeevakadya Taila* used for *Nasya* for treatment of *Ardhavabhedaka*. *Brihat Jeevakadya Taila* is indicated in *Chakradutta* for *Vata-Pittaja Shirahshoola*. *Jeevaka* and *Rishabhaka* will be represented by *Vidarikanda* due to its unavailability.

### Importance of *Snehana Nasya*

*Nasya* is the only procedure which can directly influence *Pranadhistan* and *Indriya*(11):

**Image No 2:**



### *Dravyas in Taila Paka* are *Mrudupaka* (12)

### Biphasic nature of this type of process (*Mrudupaka*) i. e.

1. Aqueous soluble part of active principle will be easily absorbed through mucosa.
2. Fat soluble content can be easily assimilated through nerve endings.

**Dominant Rasa Panchaka of Brihat Jeevakadya Taila**

*Rasa is Madhura, Tikta, Gunais Guru, Snigdha, Viryais Sheeta, Vipakais Madhura, Doshgnata is Vata-Pitta shamaka and Dhatuprabhavais Brihaniya, Balya, Jivaniya Samprapti Vighatana*

In Brihat Jeevakadya Taila most of drugs are Brihaniya, Balya, Rasayana, Jivaniya, Dahaprasamaka. By virtue of its Madhura-Tikta Rasa; Guru-Snigdha properties it pacifies Vata-Pitta Dosha. By Vata pacifying action may regularize motility of the blood vessel wall. By Pitta Shamana properties it may be inhibiting release of inflammatory mediators like serotonin, Prostaglandins etc. Action at the level of Srotasa: - By improving the microcirculation thus allowing improved tissue perfusion and nourishment.

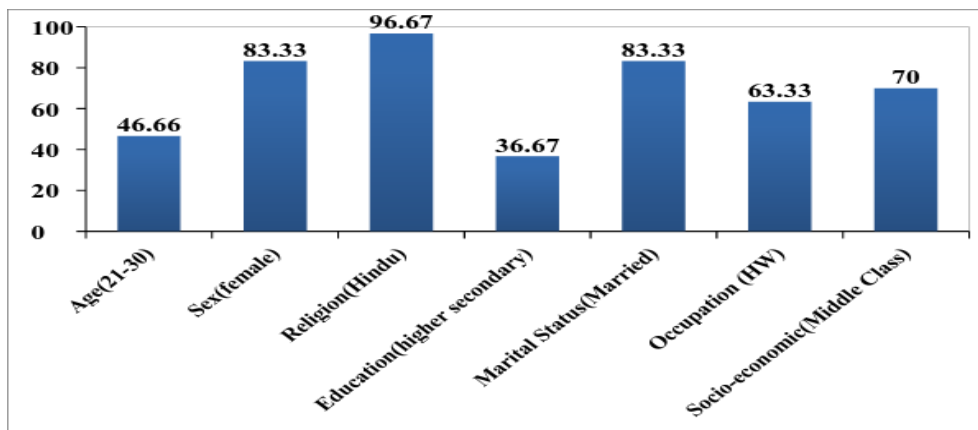
Such drugs probably cause Srotovishodhana or cleaning of microchannels thus promoting the

microcirculatory function, which in turn produces the desired Rasayana effect and improved nutritional status.

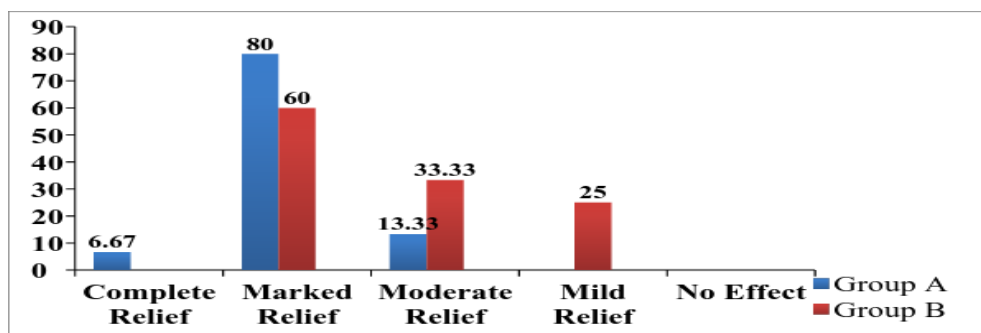
**Conclusion:**

On the basis of similarities between the signs, symptoms, complications, prognosis, chronicity and etymology; Ardhavabhedaka and Migraine are similar clinical entities. Migraine is a clinical diagnosis based on symptoms that are subjective and verifiable only by the patient. Ardhavabhedaka is clinically Pitta dominantly Tridoshaja Vyadhi. Patients from 21-40 years of age group, females, housewives, married and middle class people were more prone to Migraine. Migraine sufferers had severe intensity and unilateral episodic pain with continuous rhythm. It can be inferred that in this study Trial group where in Sutashekhara Rasa along with Brihat Jeevakadya Taila Nasya is given; was showing better results in Ardhavabhedaka (Migraine) than Control group (Flunarizine).

**Figure no. 1: General Observations (n=30): %**



**Figure no. 2: Overall Effect of Therapy:**



**TABLE – 01: EFFECT ON HEADACHE (CHIEF COMPLAINT) IN 15 PATIENTS OF ARDHAVABHEDAKA IN TRIAL GROUP.**

Headache	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
Severity	15	03. 87	0. 73	81. 03	0. 35	0. 09	34. 49	<0. 001
Duration	15	03. 27	0. 73	73. 47	0. 83	0. 21	11. 77	<0. 001
Frequency	15	03. 87	0. 80	75. 86	0. 59	0. 15	20. 00	<0. 001

**TABLE – 02: EFFECT ON HEADACHE (CHIEF COMPLAINT) IN 15 PATIENTS OF ARDHAVABHEDAKA IN CONTROL GROUP.**

Headache	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
Severity	15	3. 80	1. 27	66. 66	0. 91	0. 24	10. 72	<0. 001
Duration	15	2. 73	1. 00	63. 41	1. 22	0. 32	05. 49	<0. 001
Frequency	15	3. 60	1. 40	61. 11	0. 77	0. 20	11. 00	<0. 001

**TABLE – 03: EFFECT ON CHIEF COMPLAINTS IN 15 PATIENTS IN TRIAL GROUP.**

Symptoms	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
Hrillas (Nausea)	13	2. 73	0. 13	95. 12	1. 30	0. 33	7. 76	<0. 001
Chhardi (Vomiting)	12	1. 93	0. 07	82. 76	1. 19	0. 31	6. 09	<0. 001
Bhrama (Vertigo)	05	1. 60	00	100	0. 55	0. 24	6. 53	<0. 05
Purvabhasa (Aura)	11	1. 20	00	100	0. 42	0. 13	9. 00	<0. 001

**TABLE – 04: EFFECT ON CHIEF COMPLAINTS IN 15 PATIENTS OF ARDHAVABHEDAKA IN CONTROL GROUP.**

Symptoms	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
<i>Hrillas</i> (Nausea)	14	3. 00	0. 64	78. 57	1. 08	0. 29	8. 15	<0. 001
<i>Chhardi</i> (Vomiting)	12	1. 83	0. 08	95. 45	0. 87	0. 25	7. 00	<0. 001
<i>Bhrama</i> (Vertigo)	09	1. 67	0. 44	73. 33	0. 97	0. 32	3. 77	<0. 05
<i>Purvabhasa</i> (Aura)	09	1. 00	0. 44	55. 55	0. 58	0. 18	3. 16	0. 01



**TABLE-05: EFFECT ON ASSO. COMPLAINTS IN 15 PATIENTS IN TRIAL GROUP**

Associated complaints	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
<b>Ocular complaints</b>								
Blurring of vision	03	1.50	00	100	0.71	0.50	3.00	>0.05
Lacrimation	04	1.25	00	80.00	0.50	0.25	5.00	<0.05
Eyelid oedema	06	1.50	0.17	88.89	0.52	0.21	6.32	0.001
Ocular pain	05	2.20	0.20	90.91	1.23	0.55	3.65	<0.05
Supra orbital pain	03	1.67	0.33	80.00	0.58	0.33	4.00	<0.05
Heaviness of eyes	04	2.50	0.25	90.00	1.29	0.63	3.57	<0.05
Photophobia	11	2.63	0.09	96.55	0.82	0.25	10.29	<0.001
Burning sensation	03	2.00	0.50	75.00	0.71	0.50	3.00	>0.05
<b>Ear complaints</b>								
Phonophobia	11	2.64	0.09	96.55	0.82	0.25	10.29	<0.001
<b>GIT complaints</b>								
Constipation	04	1.50	00	100	0.58	0.29	5.20	<0.01
Hyperchlorhydria	09	1.56	0.11	92.85	0.53	0.18	8.22	<0.001
<b>Other complaints</b>								
Sleep disturbance	03	1.00	1.00	80.00	00	00	+inf	<0.001
Mood swings	07	1.14	0.28	75.00	0.69	0.26	3.28	<0.01
Stiffness of neck	06	1.33	0.50	62.50	0.98	0.40	2.08	>0.05
Loss of memory	04	1.00	0.25	75.00	0.50	0.25	3.00	<0.05
Fear	03	1.00	00	100	00	00	+inf	<0.001

**TABLE -06: EFFECT ON ASSOCIATED COMPLAINTS IN 15 PATIENTS OF ARDHAVABHEDAKA IN CONTROL GROUP.**

Associated complaints	n	Mean		% of relief	S. D.	S. E.	T	P
		B. T.	A. T.					
<b>Ocular complaints</b>								
Blurring of vision	06	1.83	0.50	72.72	0.52	0.21	6.32	0.001
Lacrimation	03	1.67	00	100	0.58	0.33	5.00	<0.05
Eyelid oedema	04	1.75	0.25	85.71	0.58	0.29	5.19	<0.05
Ocular pain	04	1.25	0.25	80.00	00	00	+inf	<0.001
Photophobia	08	2.12	0.25	88.23	0.64	0.23	8.27	<0.001
<b>Ear complaints</b>								
Phonophobia	09	2.11	0.22	89.47	0.60	0.20	9.43	<0.001
Earache	05	1.50	00	100	0.58	0.29	5.19	<0.05
<b>GIT complaints</b>								
Constipation	03	1.67	0.67	60.00	00	00	+inf	<0.001
Hyperchlorhydria	11	1.42	0.92	35.29	0.52	0.15	3.32	<0.01

Other complaints								
Sleep disturbance	05	1. 14	0. 29	75. 00	0. 69	0. 26	3. 29	<0. 05
Mood swings	09	1. 11	0. 11	90. 00	00	00	+inf	<0. 001
Stiffness of neck	09	1. 22	0. 22	81. 81	0. 50	0. 17	6. 00	<0. 001
Loss of memory	04	1. 25	0. 50	60. 00	0. 50	0. 25	3. 00	>0. 05
Fear	05	1. 40	0. 40	71. 42	0. 70	0. 32	3. 16	<0. 05

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