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COMPARATIVE CLINICAL STUDY OF AYURVEDIC TREATMENT AND CONVENTIONAL STANDARD TREATMENT IN THE MANAGEMENT OF *ARDHAVABHEDAKA* (MIGRAINE)-A RANDOMIZED CONTROLLED TRIAL

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ABSTRACT

Background: *Ardhavabhedaka*-hemicranial headache is a common disease that affects millions of individuals worldwide. The pain may be very bad and hurt so much that a person may have a hard time doing anything. 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. *Ardhavabhedaka* is a *Tridoshaja* and *Vata kaphaja* dominant disease according to *Acharya Sushrut* and *Acharya Charak* respectively. Its diagnosis is based on mainly clinical history. **Material and Methods:** In this study, eligible 107 patients were selected and randomly divided in two groups through computer generated randomization. *Laghu Sutashekhara Rasa* orally and *Brihat Dashmoola Taila Nasya* were given in trial group and Tab. Flunarizine was given in control group for 60 days. The primary outcomes measured were percentage changes in chief complaints, associate complaints and MIDAS of *Ardhavabhedaka* in comparison to both groups. **Results**: Regarding effect of therapy on Chief complaints in trial group, 83.21% relief was found in severity of headache, 82.53% in duration of headache and 82.06% in frequency of headache. In control group, 83.02% relief was found in severity of headache,

82.61% in duration of headache and 82.29% in frequency of headache. In MIDAS, 64.14% and 48.04% improvement was found in trial group and control group respectively. No any adverse drug reaction was found during whole study. **Conclusion**: Overall assessment of the therapy showed that administration of *Laghu Sutashekhara Rasa* and *Nasya* with *Brihat Dashamoola Taila* provided statistically significant improvement on subjective and MIDAS criteria.

KEYWORDS: *Ardhavabhedaka, Brihat Dashamoola Taila, Laghu Sutashekhara Rasa, Migraine*.

INTRODUCTION

Ardhavabhedaka is mentioned as one of the *Shiroroga* by Acharya Sushruta[1] and Acharya Vagbhata described it as a *Bheda* of *Vataja Shiroroga*.- "*Ardhetu Murdha: So Ardhavabhedaka*.[2] Symptoms of *Ardhavabhedaka* includes *Bhedatodavat Ardhaparshwa Shirahshoola* (severe tearing pain in one half of the head) having periodic attacks and with *Prakasha Shabda asahishnuta* (Photophobia and Phonophobia) are almost similates with the condition of Migraine attack i.e. heightened sensitivity to light and sound (sonophotophobia), nausea, auras (loss of vision in one eye or tunnel vision), difficulty of speech and intense pain predominating on one side of the head. *Ardhavabhedaka* is a *Tridoshaja*[3] and *Vata kaphaja*[4] dominant disease according to *Acharya Sushruta* and *Acharya Charak* respectively. Its diagnosis is based on mainly clinical history. In this study, 107 patients were selected and randomly divided in two groups through computer generated randomization. *LaghuSutashekhara Rasa*[5] orally and *Brihat Dashamoola Taila Nasya*[6] were given in Group A and Tab. Flunarizine was given in Group B for 60 days. For the present study, an attempt has been made to compare the Ayurvedic treatment with conventional standard treatment in the management of *Ardhavabhedaka*.

MATERIALS AND METHODS

The study was approved by Institutional Ethics Committee (No.Ethics approval no. – PGT/7-A/Ethics/2015-16/2625) and CTRI registration was also done (CTRI/2016/02/006598). Patients were selected from the O.P.D. of Dept. of Shalakyatantra and referred from other dept. of institute. Patients' written informed consent was taken before starting the treatment. Patients were selected using 'Simple random sampling method'. The study was conducted in 107 subjects. Both the drugs, *Laghu Sutashekhara Rasa* and *Brihat Dashamoola Taila* were

procured from the Pharmacy, IPGT & RA, Jamnagar and authenticated in the Pharmacognosy and Pharmaceutical Laboratory, IPGT & RA, Jamnagar.[7]

Criteria for inclusion: Age Control group between 18 to 60 years and having sign and symptom of *Ardhavabhedaka* (Migraine) According to *Ayurvedic* Classics as well as Modern science.

The diagnosis of the disease was done on the basis of clinical manifestations like recurrent attacks of headache, mostly unilateral in site, variable in intensity, frequency and duration with or without nausea, vomiting, aura and GI tract symptoms.

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 18 & above 60 etc. were excluded from the study.

Sample Size[8]: 107

Grouping

Group A-Trial group

(1) *Brihat Dashamoola Taila Nasya:* *Nasya* was done in the dose of 6 drops in each nostril for 4 sittings of seven days with the interval of 07 days after each sitting. Total duration was 60 days.

(2) *Laghu Sutashekhara Rasa Vati*: *Vati* was given in the dose of 500 mg three times a day before meal with warm water for 60 days.

Group B- Control group

Flunarizine Tab 10mg OD at night after meal was given for 60 days.

Follow up

After completion of the treatment, the patients were followed for one month at the interval of 15 days.

Investigations

Routine hematological (Hb%, TC, DC, ESR), urine analysis (Routine and micro examination) and RBS were carried out before treatment to rule out any systemic diseases.

Scoring pattern[9,10,11]

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 adoptedfor 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 attentionto it.

2 = Moderate headache, can ignore at times.

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

4 = Excruciating headache, can't do anything.

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

0 = Nil

1 = ≥ 20 days

2 = 15 days

3 = 10 days

4 = ≤ 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 MIDAS criteria.[12]

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 and Wilcoxon Signed Rank test.

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*, there are total 107 patients registered, and were randomly distributed into two groups i.e. Group A and Group B. Among them 74 patients were registered in Group A and 33 patients in Group B. 04 patients were drop out in Group A and 03 patients were drop out in Group B. The general observations are shown in Figure 1

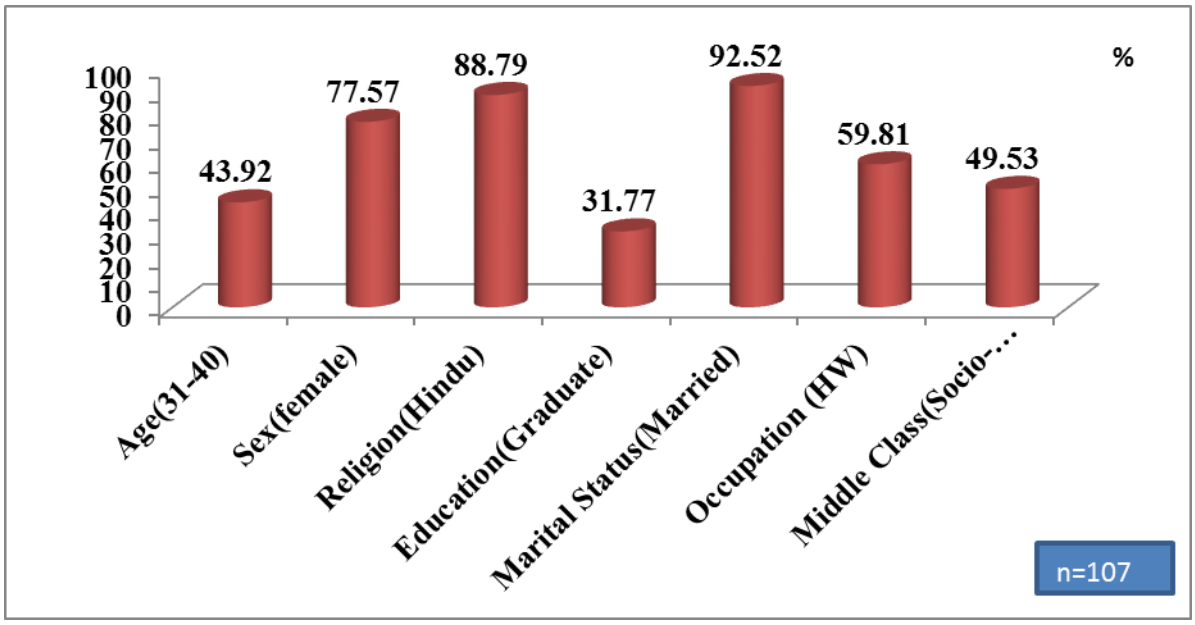

Figure 1: General Observation.

Observation reveals that, regarding the chief complaints 100% patients were having *Shirah-Shoola* (headache), followed by *Hrillas* (nausea) and *Chhardi* (vomiting) 85.05% and 39.25% respectively, *Bhrama* (vertigo) 51.40%, and Aura 36.45%, which are identical to the textual *Lakshana* (symptoms) of *Ardhavabhedaka* and migraine.

Regarding the associated symptoms 85.04% patients were having Photophobia, 76.64% patients were having Phonophobia, 49.53% were having Heaviness of eyes, 45.79% were having Supra orbital pain, 43.92% patients had Blurring of vision, 40.18% patients had Lacrimation, 38.32% patients had Stiffness of neck followed by other symptoms, which tally with textual *Lakshanas* of *Ardhavabhedaka* and migraine.

Regarding the *Shirah-Shoola*, Maximum (68.22%) patients were having unilateral headache, that also particularly more in temporal and occipital region i.e., 71.02% and 55.14% respectively, nature of pain was *Tivra* (sharp) in 98.13% patients. Regarding the quality of headache, maximum patients (59.81%) were having *Shankhanistoda*, *Shirogaurava* (49.53%), *Ghatasambheda* (33.64%) followed by others. The intensity of headache was excruciating in 68.22% of patients. Maximum patients (52.33%) were having chronicity of >5 years. Maximum patients (65.42%) were having gradual onset of headache. The duration 6-12 hours of headache was seen maximum i.e., 57.94%. Regarding frequency, the episode at an interval of 10 days was seen maximum i.e., 60.75%. Maximum patients (85.98%) 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 *Diwaswapna* (day sleeping) (79.44%), *Vegadharana* (holding natural urges) (49.53%) *Lavana Rasa Pradhana Aahara* (dominancy of salty taste in food) (46.73%), *Adhyashana* (intake food in high quantity) (48.60%), *Amla Rasa PradhanaAhara* (dominancy of sour taste in food) (39.25%) followed by *Ratri Jagarana* (awakning in night) (23.36%) and *Atisheeta Jala Sevana* (drinking very cold water) (26.17%). 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* (poor digestion) and *Tridosha imbalance*, 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 (42.99%) and Hyperchlorhydria (67.29%), which was observed by

patients at the time of migraine headache. These findings also suggest involvement of *Vata-Pitta Dosha.*

Similarly *Ratrijagarana* and *Diwaswapa* aggravate *Vata* and *Kapha Dosha* respectively. Also disturbed sleep was observed in maximum patients i.e., 26.17%. 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 *Atapa* (sunlight) (34.57%), *Dhuli* (dust) (13.08%) causes the *Atiyoga* of *Indriyas* and serves as a triggering factor. Emotional natures of females, the responsibilities of the family were the cause of mental factors such as *Chinta* (stress) (47.66%), *Krodha* (anger) (64.48%), *Bhaya* (fear) (30.84%), *Shoka* (grief) and *Vishada* (depression) (14.95%).

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 (83.21%), duration (82.53%) and frequency (82.06%) of headache was obtained in trial group (Group A), followed by statistically highly significant (<0.001) improvement in severity (83.02%), duration (82.61%) and frequency (82.29%) of headache in Group B. Table 1

Table 1: Effect of therapy on Chief complaints.

Group A									
Headache	**n**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**t**	**W**	**P**
		B.T.	**A.T.**						
Severity	70	03.64	00.57	83.21	00.75	00.09	2485.00	2485.00	<0.001
Duration	70	03.27	00.73	82.53	00.81	00.10	2485.00	2485.00	<0.001
Frequency	70	03.18	00.57	82.06	00.82	00.10	2485.00	2485.00	<0.001
Group B									
Headache	**n**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**t**	**W**	**P**
		B.T.	**A.T.**						
Severity	30	03.53	00.60	83.02	00.91	00.17	465.00	465.00	<0.001
Duration	30	03.07	00.53	82.61	00.86	00.16	465.00	465.00	<0.001
Frequency	30	03.20	00.57	82.29	00.67	00.12	465.00	465.00	<0.001

Effect of therapy on associated complaints showed that in trial group 95.43% relief in Nausea, 100% in Vomiting, 97.56% in Vertigo and 93.75% in Aura was obtained, which was

statistically significant. While in Control Group, Nausea was relieved by 89.47%, Vomiting by 92.86%, Vertigo by 89.47% and Aura by 90.00% which were statistically significant. This shows that trial group therapy was more effective than control group therapy on chief complaints. Table 2.

Table 2: Effect of therapy on associated complaints.

Group A									
Symptoms	**N**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**t**	**W**	**P**
		B.T.	**A.T.**						
Hrillas (Nausea)	59	02.81	00.13	95.43	01.40	00.17	1770.00	1770.00	<0.001
Chhardi (Vomiting)	31	00.66	00.00	100	00.93	00.11	496.00	496.00	<0.001
Bhrama (Vertigo)	34	01.21	00.03	97.56	00.57	00.09	595	595	<0.001
Purvabhasa (Aura)	29	01.10	00.07	93.75	00.63	00.12	378	378	<0.001
Group B									
Symptoms	**N**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**t**	**W**	**P**
		B.T.	**A.T.**						
Hrillas (Nausea)	27	02.81	00.30	89.47	01.09	00.21	378.00	378.00	<0.001
Chhardi (Vomiting)	09	01.55	00.11	92.86	00.73	00.24	45.00	45.00	<0.05
Bhrama (Vertigo)	19	01.00	00.10	89.47	00.31	00.07	153.00	153.00	<0.001
Purvabhasa (Aura)	10	01.00	00.10	90.00	00.32	00.10	45.00	45.00	<0.05

The other associated symptoms like Blurring of vision, Photophobia, Ocular pain, Eyelid oedema, Phonophobia were relieved by 97.14%, 91.50%, 96.00%, 91.30%, 90.20% in Group A and 94.94%, 91.11%, 93.33%, 87.50% and 86.84 in Group B respectively, which were statistically highly significant (<0.001). The other associated symptoms like Hyperchlorhydria and Constipation were relieved by 96.96% and 93.55% in Group A and 47.06% and 46.67% in Group B respectively, which were statistically significant in Group A and insignificant in Group B. This shows that trial group therapy was more effective than control group therapy on associated symptoms. Table 3.

Table 3: Effect of therapy on other associated complaints.

Group A									
Associated complaints	**n**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**T**	**W**	**P**
		B.T.	**A.T.**						
Ocular complaints									
Blurring of vision	32	01.09	00.03	97.14	00.35	00.06	496.00	496.00	<0.001
Transient loss of vision	10	01.00	00	100	00.35	00.04	55.00	55.00	<0.001

Lacrimation	26	01.03	00.03	96.29	00.28	00.05	325.00	325.00	<0.001
Eyelid oedema	21	01.09	00.09	91.30	00.32	00.07	210.00	210.00	<0.001
Ocular pain	23	01.09	00.04	96.00	00.37	00.08	253.00	253.00	<0.001
Supra orbital pain	28	01.14	00	100	00.36	00.07	406.00	406.00	<0.001
Heaviness of eyes	33	01.06	00.06	94.11	00.36	00.06	465.00	465.00	<0.001
Photophobia	63	01.68	00.14	91.50	00.76	00.10	1770.00	1770.00	<0.001
Burning sensation	17	01.00	00.06	94.11	00.24	00.06	136.00	136.00	<0.001
Ear complaints									
Phono phobia	60	01.70	00.17	90.20	00.77	00.10	1596.00	1596.00	<0.001
Tinnitus	12	01.08	00.08	92.31	00.43	00.12	66.00	66.00	<0.001
Hearing loss	08	01.00	00.12	87.50	00.35	00.12	28.00	28.00	<0.05
Earache	18	01.00	00.11	88.89	00.32	00.07	136.00	136.00	<0.001
Nasal complaints									
Rhinorrhoea	07	01.00	00.28	71.42	00.49	00.18	15.00	15.00	>0.05
Burning sensation	21	01.05	00.05	95.45	00.32	00.07	210.00	210.00	<0.001
GIT complaints									
Constipation	29	01.07	00.07	93.55	00.38	00.07	378.00	378.00	<0.001
Hyperchlor Hydria	52	01.26	00.04	96.96	00.51	00.07	1326.00	1326.00	<0.001
Other complaints									
Sleep disturbance	20	01.60	00.25	84.37	00.59	00.13	190.00	190.00	<0.001
Mood swings	47	01.04	00.11	89.79	00.38	00.06	903.00	903.00	<0.001
Stiffness of neck	25	01.16	00.20	82.75	00.45	00.09	253.00	253.00	<0.001
Loss of memory	12	01.00	00.08	91.67	00.29	00.08	66.00	66.00	<0.001
Fear	15	01.00	00.07	93.33	00.26	00.07	105.00	105.00	<0.001
Group B									
Associated complaints	**n**	**Mean**		**% of relief**	**S.D. (±)**	**S.E. (±)**	**T**	**W**	**P**
		B.T.	**A.T.**						
Ocular complaints									
Blurring of vision	14	01.28	00.07	94.94	00.43	00.11	105.00	105.00	<0.001
Lacrimation	16	01.19	00.19	84.21	00.52	00.13	105.00	105.00	<0.001
Eyelid oedema	16	01.00	00.13	87.50	00.34	00.08	105.00	105.00	<0.001
Ocular pain	15	01.00	00.07	93.33	00.26	00.07	105.00	105.00	<0.001
Supra orbital pain	20	01.05	00.10	90.48	00.39	00.09	171.00	171.00	<0.001
Heaviness of eyes	18	01.17	00.11	90.48	00.54	00.13	136.00	136.00	<0.001
Photophobia	25	01.80	00.16	91.11	00.70	00.14	325.00	325.00	<0.001
Burning Sensation	10	01.20	00.10	91.67	00.74	00.23	45.00	45.00	<0.001
Ear complaints									
Phonophobia	19	02.00	00.26	86.84	00.65	00.15	190.00	190.00	<0.001
Tinnitus	09	01.00	00.11	88.89	00.33	00.11	36.00	36.00	<0.05
Earache	05	01.00	00	100	00	00	15.00	15.00	>0.05
Nasal complaints									
Burning sensation	05	01.00	00.40	60.00	00.55	00.24	06.00	06.00	>0.05
GIT complaints									
Constipation	15	01.00	00.53	46.67	00.52	00.13	28.00	28.00	>0.05
Hyperchlor Hydria	17	01.00	00.71	29.41	00.47	00.11	15.00	15.00	>0.05

Other complaints									
Sleep disturbance	09	01.56	00.22	85.71	00.87	00.29	36.00	36.00	<0.05
Mood swings	13	01.23	00.15	87.50	00.49	00.14	78.00	78.00	<0.001
Stiffness of neck	08	01.12	00.25	77.78	00.64	00.23	21.00	21.00	>0.05
Fear	09	01.11	00.11	90.00	00.50	00.17	36.00	36.00	<0.05

Regarding effect of therapy on MIDAS (Migraine Disability Assessment Score), both the group showed significant results. Table 4.

Table 4: Effect of therapy on MIDAS.

Group	n	Mean		% of relief	S.D. (±)	S.E. (±)	t	W	P
		B.T.	A.T.						
Group A	70	03.58	01.28	64.14	00.62	00.07	2485.00	2485.00	<0.001
Group B	30	03.40	01.77	48.04	00.56	00.10	465.00	465.00	<0.001

Total effect of therapy: The overall effect of therapy showed that in Group A 41.43% patients had complete improvement, followed by marked improvement in 52.86% and moderate improvement in 5.71%. In control group i.e., Group B complete and marked improvement was seen in 43.33% and 43.33% respectively; and 6.67% had moderate improvement. Not a single case was noted unchanged in any of the groups. Figure 2.

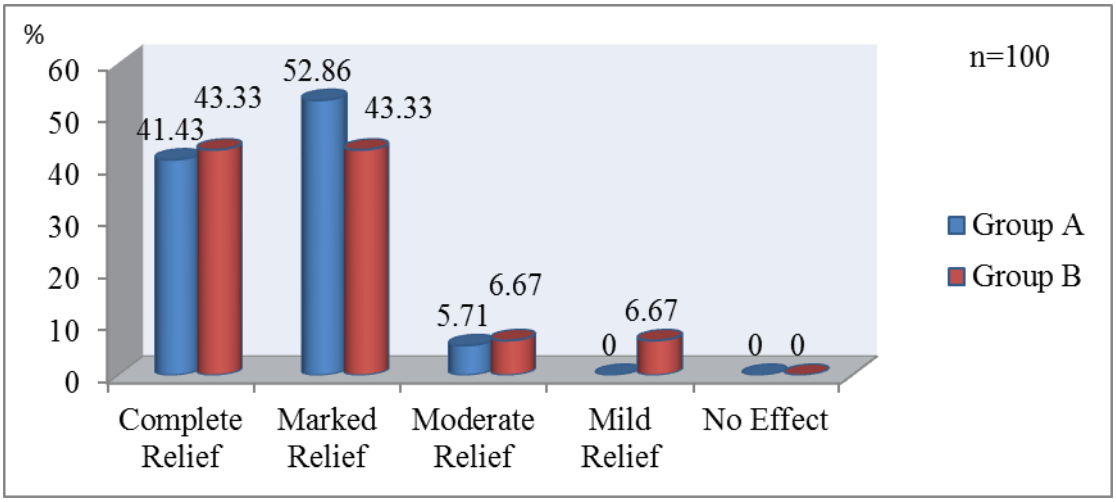

Figure 2: The overall effect of therapy.

Recurrence of Chief Complaints in Follow up Period in Group A & Group B

Regarding follow up period, mostly patients in Group B i.e., Flunarizine Group, had recurrence of disease while in Group A i.e. *Laghu Sutashekhara Rasa* and *Brihat Dashamoola Taila Nasya*, only 30.00% patients had complaint of *Shirahshoola*, 11.43% patients complaint of *Hrillas*, 01.42% patients had *Chhardi* while *Bhrama* and *Purvabhasa*

was observed in 04.28% and 01.42% patients respectively. It also proves *Ayurveda* therapy is better than modern management.

DISCUSSION

In *Shiroroga*, *Ardhavabhedaka* is found to be the most common complaint after *Vatika Shirahshoola*. The disease *Ardhavabhedaka* is characterized by paroxysmal and unilateral headache, which may be severe in nature. All the three *Doshas* are involved in the pathogenesis of the *Ardhavabhedaka* with the predominance of *Vata* or *Vata-Kapha* along with *Rakta Dushya*. The disease may not be fatal but if not managed properly then it may damage eyesight or hearing. *Ardhavabhedaka* can be scientifically correlated with Migraine due to its cardinal feature "half sided headache" which is also explained by commentator *Chakrapani* as "*Ardha Mastaka Vedana*"[13] and also due to its paroxysmal nature. Moreover, the symptoms nausea, vomiting and giddiness are also seen, which shows the involvement of *Pitta Dosha*, which can be explained as under: Vomiting & burning sensation symptoms are seen when *Prana Vata* combines with *Pitta*.[14] *Udana Vayu* with *Pitta* results in *Murcha*, *Daha*, *Bhrama* and *Klama*.[15] The symptom *Bhrama* is due to *Rajoguna* and *Pitta – Vata Dosha* involvement.[16] On studying the etiology and symptoms, the disease *Ardhavabhedaka* can be realized as *Vatika* or *Vata-Kaphaja* disorder. Preliminary *Vata* alone or combined with *Kapha* may be the pioneer *Dosha*s for *Ardhavabhedaka* but due to nature of disease it may assume *Sannipatika* appearance swiftly.[17]

In this clinical trial both group's viz. Trial Group and Control Group were able to bring statistically highly significant improvement on Intensity, Duration, and Frequency of headache and on almost all the Chief Complaints viz. Nausea, Vomiting, Vertigo and Aura. The associated symptoms like Blurring of vision, Photophobia, Ocular pain, Eyelid edema and Lacrimation were relieved by statistically significant in both the groups. In comparison of MIDAS criteria of both groups Ayurvedic group showed more significant results than control group. In follow up period recurrence of *Shirahshoola*, *Hrillas*, *Chhardi*, *Bhrama*, *Purvabhasa* observed more in control group than Ayurvedic group. This shows that Group A showed more effective result in follow up period than Group B. Earlier one clinical study also showed significantly good results in Ayurvedic group than control group.[18]

Probable Mode of action of *Laghu Sutashekhara Rasa*

Taking a lead from the modern patho-physiology of migraine i.e. vascular theory; the in flowing tissue i.e. blood (*Rakta*) seems to be the targeted pathological tissue (*Dushya*) in its

origin. *Rakta* being the similar factor of *Pitta* (on physiological & pathological grades); *Pitta* seems to be a major contribution pathological human in the origin of *Ardhavabhedaka* and it is also *Vata* dominance headache hence *Tridosha Shamaka* dominantly *Vata-Pitta Shamaka* line of treatment is taken here. *Laghu Sutashekhara Rasa* containing *Rasaushdhi* as well as herbal drugs indicated for *Ardhavabhedaka* described in *Rasatarangini,* which is having digestive, anti-oxidant, anti-inflammatory properties and *Vata-Pittahara* quality.

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

Probable mode of action of *Brihat Dashamoola Taila Nasya*

There are various modalities for the alleviation of *Shirahshoola*. According to *Acharya Charaka, Nasyakarma* is the best treatment for the *Shiroroga*[19], 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 Dashmoola Taila* used for *Nasya* for treatment of *Ardhavabhedaka*. *Brihat Dashamoola Taila* is mentioned in *Bhaishajya Ratnavali* in *Shirorogadhikara* chapter with special indication to *Ardhavabhedaka*. Also in a clinical study, the effect of *Dashamoola* in the management of sensory and motor disorders pertaining to sympathetic and parasympathetic outflow amongst the patients presenting with primary neurological disorders have been investigated significant improvement in nerve conduction velocity.[20] So, *Brihat Dashamoola Taila* was taken for *Nasya* therapy.

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 *Vata-Kapha* dominantly *Tridoshaja Vyadhi*. Patients from 31-40 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 *Laghu Sutashekhara Rasa* along with *Brihat Dashamoola Taila Nasya* is given; was showing better results in *Ardhavabhedaka* (Migraine) than Control group (Flunarizine).

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