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A Comparative Clinical Study To Evaluate The Effect Of Nasya With Rasnadi Taila And Balahatadi Taila In Vatika Shirashoola W.S.R. To Tension Headache

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ABSTRACT:

In Ayurveda, *Shirashoola* (headache) is both a symptom of various diseases and a primary disorder categorized under *Shirorogas*. Acharya Charaka emphasized the significance of the head, declaring it the most vital organ. Among the causative factors, *Vata* dosha predominance is notably associated with *Shirashoola*, particularly aligning with the symptoms of modern tension-type headaches (TTH). TTH is the most prevalent form of primary headache, affecting nearly 90% of headache sufferers. In 2013, approximately 1.6 billion individuals (20.8% of the global population) were reported to have TTH. According to the WHO, about 50% of adults suffer from current headache disorders globally.In Ayurvedic management of *Vatika Shirashoola*, therapies such as *Snehana* (oleation), *Swedana* (sudation), and *Nasya* (nasal administration of medicated oils) are advocated. *Nasya* is a Panchakarma procedure aimed at treating head-related disorders. Rasnadi Taila, as mentioned in *Charaka Chikitsa*, and Balahatadi Taila from *Sahasrayogam*, are two medicated oils used for *Nasya* in treating *Shirashoola*, both containing *Vata-shamaka*

and nourishing (*Brimhana*) ingredients.This comparative clinical study aimed to evaluate the efficacy of Nasya with Rasnadi Taila versus Balahatadi Taila in treating *Vatika Shirashoola*. A minimum of 40 patients, meeting the diagnostic criteria, were randomly divided into two groups: Group A received Rasnadi Taila and Group B received Balahatadi Taila Nasya for 7 days. Assessment was done before, during, and after treatment using symptom grading, and statistical analysis was performed using paired and unpaired t-tests. **Results** showed that both treatments provided statistically significant relief in symptoms. However, **Group A** (Rasnadi Taila) exhibited greater improvement with a **49.16%** efficacy compared to **Group B** (Balahatadi Taila) with **42.56%** efficacy. Thus, Rasnadi Taila Nasya was found to be more effective in managing *Vatika Shirashoola*.

Key words: Nasya, Rasnadi taila, Balahathadi taila, Vatika Shirashoola

INTRODUCTION

The human race, since its origin is running breathlessly behind his endless and ever-growing desires. The lifestyle is far from what the natural anatomy and physiology of human body permits. Irregular and unnatural food habits, suppression of natural urges, lack of proper sleep and less time for relaxation are the inseparable parts of our routine which enervate body and finally lead to the disease. In Ayurved, Shirashoola (headache) has been given as a symptom of many diseases. Ayurvedic texts also describe Shirashoola as primary disorders as Shirorogas[1]. Head has been given utmost importance by Charaka who has declared it as the most important organs of the body [2]. In any type of shoola, Vata predominance is a main factor. In Madhav Nidana there are 11 types of Shiroroga [3], while in Charaka 5 types of Shiroroga are described [4].

In Samhita detail description of causative factors of Shiroshoola has been mentioned. They are almost similar to the causative factors which are found during the study. The prevalence of headache is increasing worldwide at a shocking rate in developed and developing countries. Persistent stress, fast growing competition, irregular sleeping pattern, habit of unwholesome eating, unconscious towards daily regimen (Dinacharya) and seasonal regimen (Ritucharya) are main causes of headache. [5] Though headache is the hallmark symptom of most of the Shirorogas, majority of the symptoms of tension headache show some correlation with Vatik Shirashoola. [6] Tension headache, also known as tension-type headache, is the most common type of primary headache. The pain can radiate from the lower back of the head, the neck, eyes, or other muscle groups in the body typically affecting both sides of the head. Tension-type headaches account for nearly 90% of all headaches. [7] In 2013 about 1.6 billion people (20.8% of the population) are affected by Tension Headache, out of which women are found to be more commonly affected than men(23% to 18% respectively).[8] Headache causes the most frequent human discomforts or it also leads to quality of life. Its significance is often may signal serious disease or represent only tension of fatigue. Fortunately, in most instances it reflects the latter, and only exceptionally it does warn of an intra-cranial abnormality. The terms headache should encompass all aches and pains located in the region of head. The brain tissue itself is not

sensitive to pain as it lacks pain receptors. Rather the pain is caused by disturbance of the pain- sensitive structures around the brain.

Majority of the drugs employed in modern medicine for this disease are almost limited to suppress the symptoms. A repeated and long term use of such drugs is found to cause serious side effects like memory loss, gastro - intestinal disorders, weight gain etc. and tend to be habit forming. Therefore, search for a safer management is of great importance.

Vatika Shirashool, its principle of management consists of snehana (Oleation therapy), Swedan(Sudation) and Nasya (Nasal administration of drug) [9]. Nasya is a part of panchakarma therapy and includes instillation of herbal medication through nose. For Nasya, Rasnadi Taila from Charaka Chikitsa[10] and Balahatadi Taila from Sahasrayogam[11] are mentioned in the management of Shirashoola. According to WHO, it has been estimated that the prevalence among adults of current headache disorder is about 50%[12].

Both formulations contains Vata shamak and Brihan (nourishing) Dravyas. For the search of cure of the disease sometimes referred as symptom 'Shirashool', many researchers have been carried out. So this study is an attempt to find a better solution for the treatment of Vatika Shirashool.

OBJECTIVES

1. To evaluate the effect of Rasnadi Taila Nasya in the management of Vatika Shirashoola.
2. To evaluate the effect of Balahathadi Taila Nasya in the management of Vatika Shirashoola.
3. To compare the efficacy of both Rasnadii Taila and Balahathadi Taila Nasya in management of Vatika Shirashoola.

MATERIALS AND METHODS

Study Design and Participants

A total of 44 patients diagnosed with *Vatika Shirashoola* (tension-type headache) were selected from the OPD of an Ayurvedic hospital, regardless of gender. Patients were randomly allocated into two groups using the lottery method. Prior to participation, informed written consent was obtained from all patients. Four patients (2 from each group) discontinued the trial due to loss of follow-up, resulting in 40 patients completing the study.

- **Group A (n = 20):** Treated with *Nasya* using **Rasnadi Taila**
- **Group B (n = 20):** Treated with *Nasya* using **Balahatadi Taila**

Each patient received *Nasya Karma* for 7 consecutive days. The treatment was administered in the evening via the nasal route. Follow-up assessments were conducted on the 0th, 7th, and 21st days.

Therapy	**Group A**	**Group B**
No. of Patients	20	20
Time (Kāla)	Evening	Evening
Route	Nasal	Nasal
Drug Used	Rasnadi Taila	Balahatadi Taila
Duration	7 Days	7 Days
Follow-up Days	0th, 7th, 21st Day	0th, 7th, 21st Day

Diagnostic Criteria

Diagnosis was based on classical signs and symptoms of *Vatika Shirashoola*:

- Nishakala Ati Vedana
- Animitta Shiroruja
- Shankhanistoda
- Bhrumadhya Vedana eva Lalat Tapana
- Shiroghurna
- Prakasha Akshamata

Inclusion Criteria

- Age 20–60 years
- Clinical features resembling *Vatika Shirashoola* (Tension-type headache)
- Symptoms persistent for ≥6 months
- Patients suitable for *Nasya Karma*
- Consent to participate in the study

Exclusion Criteria

- Other primary/secondary headaches (e.g., migraine, cluster)
- Systemic illnesses (e.g., HIV, TB, malignancy)
- Head trauma, cervical spondylosis, dental issues, febrile infections
- Patients on chemotherapy

Withdrawal Criteria

- Serious adverse effects
- Non-adherence to follow-up
- Patient's withdrawal from study

Dosage

The administered dose for *Nasya* was **6 bindu** of medicated oil per sitting.

Assessment Criteria

Assessment was based on changes in key clinical symptoms before and after treatment. Each symptom was graded on a 0–4 scale (0 = absent, 4 = very severe). Symptoms included:

- *Shankhanistoda* (Bitemporal headache)
- *Ghatasambheda* (Occipital pain)
- *Bhrumadhya Vedana* (Frontal burning)
- *Swanataha Shrotre* (Tinnitus)
- *Nishkrushata Eva Akshini* (Eye pressure)
- *Shiroghurna* (Giddiness)
- *Sira Jala Sphurana* (Vein pulsations)
- *Nishkala Ati Vedana* (Night pain)
- *Animitta Shiroruja* (Unexplained headache)
- *Ghrana Srava* (Nasal discharge)

Statistical Analysis

Data collected through symptom scoring were presented using tables, graphs, and charts. Statistical analysis was carried out using:

- **Wilcoxon Signed-Rank Test** for within-group comparisons (pre- and post-treatment)
- **Mann-Whitney U Test** for between-group comparisons

These non-parametric tests were suitable due to the ordinal nature of data and lack of normal distribution. Results were interpreted to determine the comparative efficacy of the two treatment protocols.

RESULTS

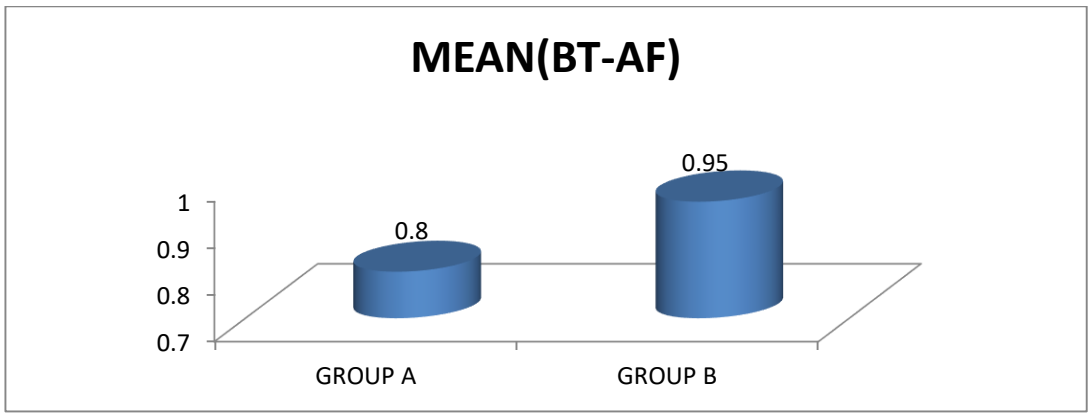
To compare the effectiveness of the treatment procedure between the two groups, the statistical analyses is done by using Un-paired t-test, by assuming that the mean effect treatment procedures is same in both the groups after treatment procedure.

Following clinical data elements were included in the study.

1. Shankhanistoda
2. Ghatasambheda
3. Bhrumadhya Vedana
4. Shiroghurna
5. Nishakal Ati Vedana
6. Animitha Shiroruja

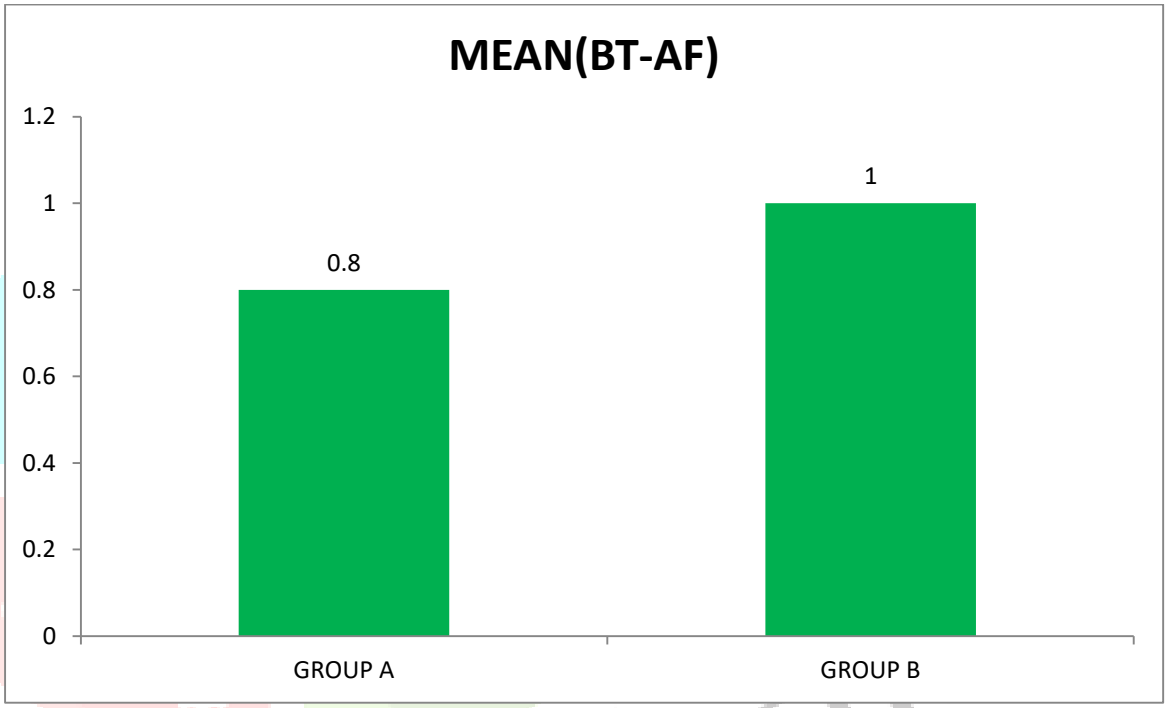
1. SHANKHANISTODA -

PARAMETER	GROUP	Mean (BT-AF)	% of improvement	SD	T-Value	P-Value	Remarks
Shankhanistoda	**A**	**0.8**	**35.5**	**0.523**	**1.14**	**>0.05**	**NS**
	B	**0.95**	**40.4**	**0.223**			



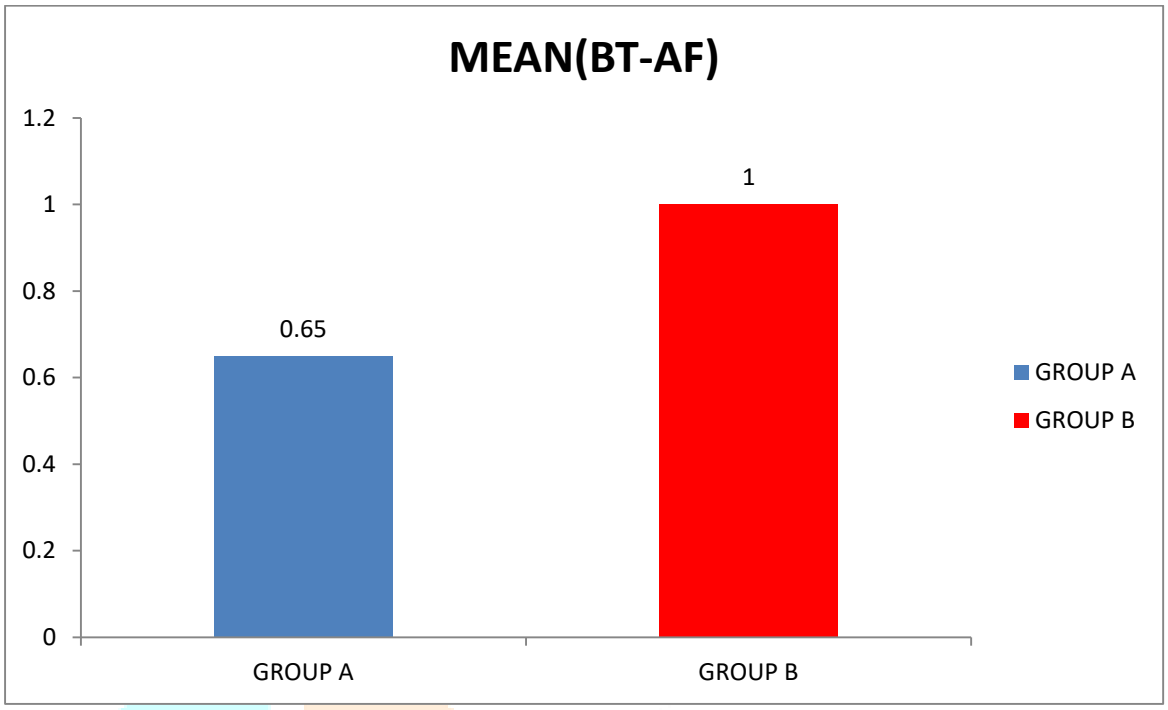
2. GHATASAMBHEDA

PARAMETER	GROUP	Mean BT-AF	% of improvement	SD	T-Value	P-Value	Remarks
Ghatasambheda	A	0.8	45.71	0.52	1.16	>0.05	NS
	B	1	45.94	0.45			



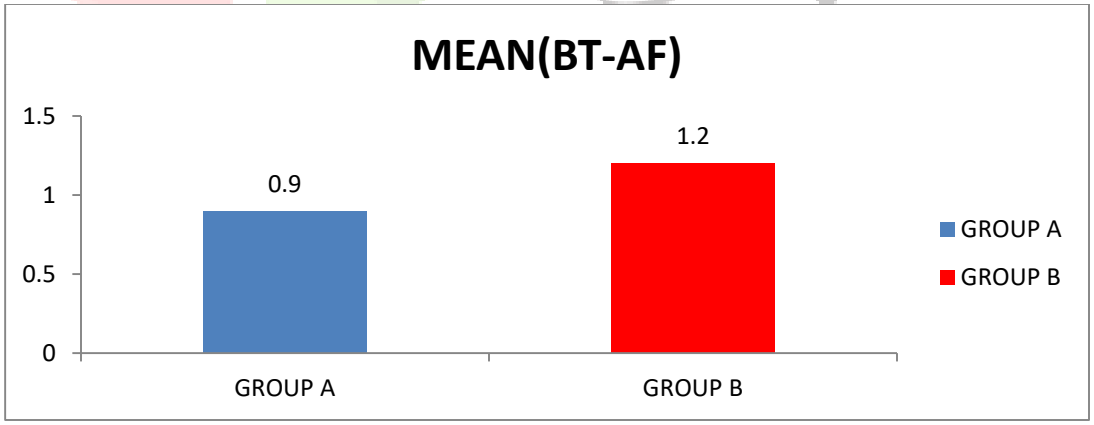
3. BHRUMADHYA VEDANA

PARAMETER	GROUP	Mean BT-AF	% of improvement	SD	T-Value	P-Value	Remarks
Bhrumadhya Vedana	A	0.65	44.82	0.48	1.92	>0.05	NS
	B	1	52.63	0.56			



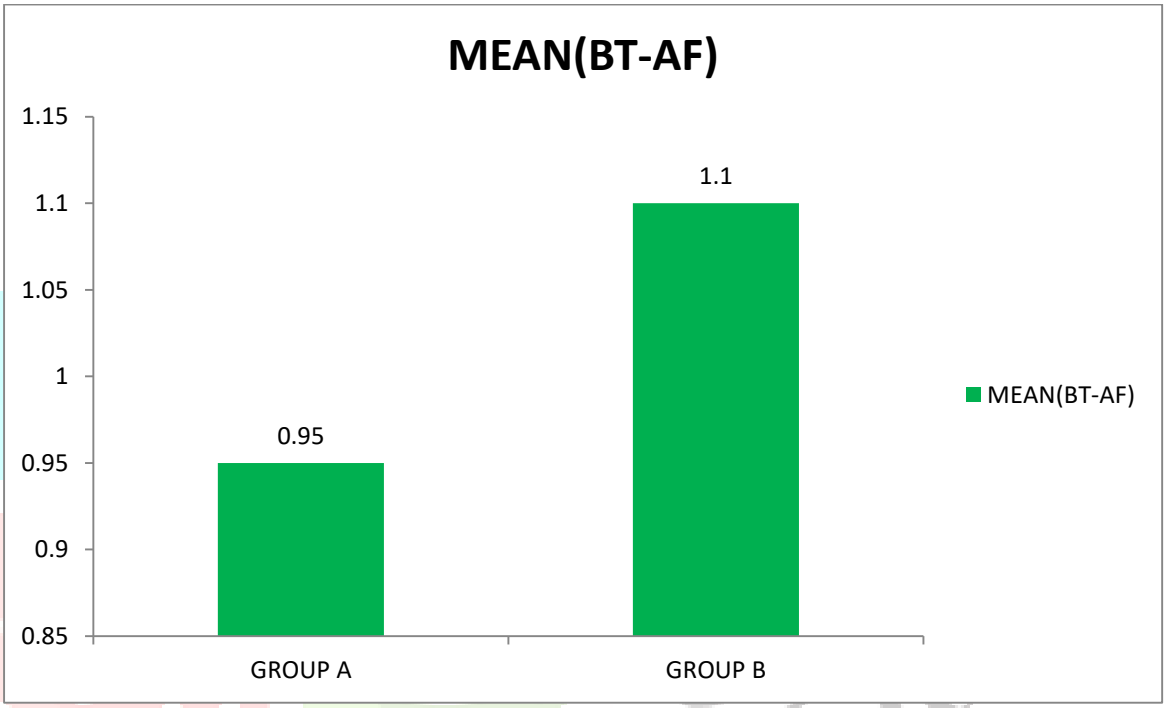
4. SHIROGHURNA

PARAMETER	GROUP	Mean	% of improvement	SD	T-Value	P-Value	Remarks
Shiroghurna	A	0.9	54.5	0.64	2.04	>0.05	NS
	B	1.2	52.17	0.41			



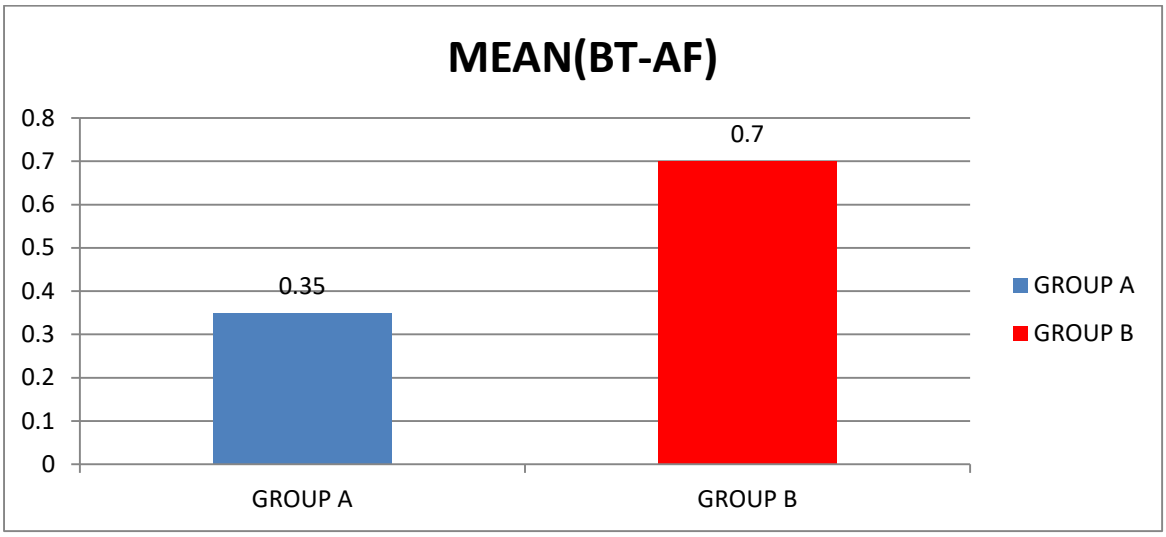
5. NISHAKAL ATI VEDANA

PARAMETER	GROUP	Mean	% of improvement	SD	T-Value	P-Value	Remarks
Nishakal Ati Vedana	A	0.95	45.23	0.60	0.718	>0.05	NS
	B	1.1	50	0.55			



6. ANIMITHA SHIRORUJA

PARAMETER	GROUP	Mean (BT-AF)	% of improvement	SD	T-Value	P-Value	Remarks
Animitha Shiroruja	A	0.35	29.6	0.48	2.10	<0.05	S
	B	0.7	53.84	0.47			



Comparison Between Group A and Group B

PARAMETER	GROUP	Mean	% of Improv.	T-Value	P-Value	Remarks
Shankhanistoda	**A**	0.8	35.5	1.14	>0.05	**NS**
	B	0.95	40.4			
Ghatasambheda	**A**	0.8	45.71	1.16	>0.05	**NS**
	B	1	45.94			
Bhrumadhya Vedana	**A**	0.65	44.82	1.92	>0.05	**NS**
	B	1	52.63			
Shiroghurna	**A**	0.9	54.5	2.04	>0.05	**NS**
	B	1.2	52.17			
Nishakal Ati Vedana	**A**	0.95	45.23	0.71	>0.05	**NS**
	B	1.1	50			
Animitha Shiroruja	**A**	0.35	29.6	2.10	>0.05	**NS**
	B	0.7	53.84			

For comparison between Group A and Group B, Un paired t test is used. From above table we can observe that P-Values for all parameters are more than 0.05. Hence we conclude that statistically there is no significant difference between Group A and Group B in the management of Vatika Shirashoola.

Further we can observe that Average percentage of improvement of Group B is 49.16% which is greater than Average percentage of improvement of Group A- 42.56%. Hence we conclude that effect observed in Group B is more than Group A.

DISCUSSION

In the present study, the clinical efficacy of Rasnadi Taila Nasya and Balahathadi Taila Nasya was evaluated in 40 patients of *Vatika Shirashoola* (tension-type headache). Both groups demonstrated statistically significant improvements across all clinical symptoms assessed, with P-values < 0.05, confirming therapeutic efficacy.

Among the cardinal symptoms:

- Shankhanistoda showed 17.7% improvement in Group A (Rasnadi Taila) and 35.5% in Group B (Balahathadi Taila), indicating better response with Balahathadi Taila.
- Ghatasambheda, Bhrumadhya Vedana, Shiroghurna, Nishakala Ati Vedana, and Animitta Shiroruja showed significant relief in both groups, reflecting the overall effectiveness of Nasya therapy.

Both formulations possess Vatahara, Vedanasthapana, and Medhya properties. Their action is explained by classical principles where *Nasya* is the preferred therapy for *Urdhvajatrugata Vata Vyadhi*. The use of Madhyama Matra (6 Bindu) of medicated oil, preceded by *Snehana* and *Swedana*, ensured optimal absorption and drug delivery via the nasal mucosa into the CNS. The lipophilic nature and *Sukshma* Guna of Taila allowed rapid systemic circulation and deeper tissue penetration, helping dissolve *Dosha-Dushya Samurchchhna*.

From a pharmacological perspective, the constituents of Rasnadi Taila—notably *Rasna*, *Shalparni*, *Prishnaparni*, and *Brihati*—exhibit anti-inflammatory, analgesic, nervine tonic, and muscle relaxant effects, aligning well with the needs of tension-type headaches. Balahathadi Taila, similarly, contains neuroprotective and Vata-pacifying herbs, which support both somatic and psychosomatic relief.

In conclusion, while both therapies significantly alleviated symptoms of *Vatika Shirashoola*, Balahathadi Taila Nasya showed slightly superior symptomatic relief. The mode of action involves both physical and psychological components of Vata vitiation, making Nasya a holistic and effective intervention in managing tension-type headaches.

CONCLUSION

The head is regarded in Ayurveda as the principal center of control for all physiological and psychological functions. Any pathological disturbance affecting the head can therefore disrupt systemic homeostasis. *Vatika Shirahshoola*, a condition characterized by predominant *Vata* vitiation, often corresponds to modern clinical presentations of tension-type headache (TTH), which is frequently triggered by emotional stress,

travel, improper dietary habits (e.g., consumption of *Amla Rasa*), and suppression of natural urges (*Vega Vidharana*).

In the present clinical study, *Nasya* therapy was evaluated using **Rasnadi Taila** and **Balahathadi Taila** in patients diagnosed with *Vatika Shirahshoola*. Both treatment modalities showed statistically significant improvement across all clinical parameters. Specifically:

Rasnadi Taila Nasya resulted in an average improvement of **49.16%**.

Balahathadi Taila Nasya achieved an average improvement of **42.56%**.

While intra-group analysis using paired *t*-tests showed significant improvement in both groups ($p < 0.05$), the inter-group comparison using unpaired *t*-test revealed no statistically significant difference ($p > 0.05$) between the two therapies. However, from a clinical standpoint, **Rasnadi Taila Nasya demonstrated relatively greater efficacy** in alleviating symptoms of *Vatika Shirahshoola*.

These findings reaffirm the effectiveness of Nasya therapy in the management of tension-type headache and highlight the therapeutic potential of Ayurvedic formulations with *Vatahara*, *Vedanasthapana*, and *Medhya* properties.

Suggestions for Future Research

Given the high prevalence of tension-type headache in the modern population due to chronic stress and lifestyle disturbances, further research on *Vatika Shirahshoola* is both relevant and necessary. Future studies may consider:

- Larger sample sizes for greater statistical power.
- Longer duration of therapy for chronic and severe cases.
- Comparative studies with placebo or standard modern treatments.
- Objective assessments using imaging or biochemical markers.
- Such studies will help in refining the Ayurvedic understanding and management of tension headaches and contribute toward developing integrative, evidence-based approaches for chronic cephalalgia.

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