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Clinical Evaluation of Bringaraja Swarasa-Ajaksheera Nasya in the Management of Suryavarta

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Abstract:
Background: *Suryavarta* is a *Vata–Pitta* predominant *Shiroroga* presenting with a characteristic diurnal headache. *Nasya Karma* is an important therapeutic approach for such conditions.
Aim: To evaluate the efficacy of *Bhringaraja Swarasa–Aja Ksheera Nasya* in Suryavarta.
Methods: Thirty patients were randomly divided into trial and control groups. The trial group received *Bhringaraja Swarasa–Aja Ksheera Nasya*, while the control group received *Anu Taila Nasya*. Headache severity was assessed using the Verbal Descriptive Scale (VDS).
Result: Both groups showed improvement, but the trial group demonstrated greater reduction in pain intensity.
Conclusion: *Bhringaraja Swarasa–Aja Ksheera Nasya* is an effective and safe modality for the management of Suryavarta.

Keywords: suryavarta, bringaraja, ajaksheera, nasya

Introduction

Suryavartha is a type of shiroroga (disease of the head) described in Ayurvedic classics, characterized primarily by shirashoola (headache). In Ayurveda, Suryavartha is considered as a distinct variety of headache with a specific pattern and clinical presentation. The condition derives its name from its unique feature, wherein the intensity of pain varies in relation to the movement of the sun. Typically, the headache begins mildly in the early morning, gradually intensifies as the sun rises, reaches its peak intensity at midday and subsequently subsides towards evening. This diurnal variation is the hallmark of Suryavarta. The pathogenesis of suryavarta is mainly attributed to the vitiation of Vata and pitta doshas. The aggravated pitta influenced by heat and sunlight, plays an important role in increasing the severity of symptoms during the daytime, while vata contributes to the pain sensation.

Nasya, the nasal administration of drugs, is considered one of the most effective therapeutic procedures in Ayurveda for the management of disorders of the Urdhvajatru (region above the clavicle), particularly the head. Ayurveda emphasize that the nose (nasa) is the gateway to the head (nasa hi shiraso Dwaram) through which medicines can directly reach the cranial structures and exert their therapeutic effects.

Nasya karma performs multiple therapeutic functions depending on the nature of the drug used and the desired clinical outcome. Broadly, its actions can be classified into Shodhana (elimination), Shamana (pacification), and Brimhana (nourishment). Ayurveda describes a wide variety of yogas (formulations) for the management of shirorogas (diseases of the head), including suryavarta. These formulations are

designed based on the principles of dosha, dushya and the specific clinical presentation of the disease. Among the classical references, Bhaishajyaratnavali mentions a therapeutic combination of Bhrigaraja swarasa (juice of Eclipta alba) and aja ksheera (goat's milk) for the management of Suryavarta.

Since ancient times, drugs have been administered via the nasal route for therapeutic and recreational purposes. The interest in, and importance, of the systemic effects of drugs administered through the nasal route, have expanded over recent decades. Intra-nasal administration of drugs offers an interesting alternative for achieving systemic therapeutic effects of drugs that are comparable to the parenteral route, which can be inconvenient at times or oral administration, which can result in unacceptably low drug bioavailability [(1)].

Bringaraja (Eclipta alba) is widely recognized in Ayurveda for its beneficial effects on hair, particularly in promoting keshavardhana (enhancement of hair growth) and kesharanjana (maintenance and improvement of hair colour). Despite its established role in hair care, its efficacy in alleviating headache such as suryavarta requires systematic evaluation. In this context, a classical formulation bringaraja swarasa combined with aja kseera has been selected for the present study to assess its therapeutic effectiveness in suryavarta. For comparative evaluation, Anu taila, a well-established medicated oil commonly used for Nasya karma has been chosen as the control or standard treatment.

The herb Eclipta alba contains many bioactive components such as coumestans i.e. wedelolactone and demethylwedelolactone, triterpenes, flavonoids, steroids, polypeptides, polyacetylenes and thiophene-derivatives. The plant is known to have some important pharmacological activities such as antimicrobial, antinociceptive, analgesic, anti-inflammatory, antiviral, hepatoprotective, immunomodulatory activity, etc. [(2)]

Among various formulations, *Bhringaraja* is a widely available and cost-effective drug known for its *Vata–Pitta shamaka*, *Rasayana*, and *Vedanasthapana* properties. When combined with *Aja Ksheera*, which possesses cooling and nourishing effects, the formulation is expected to provide synergistic action in alleviating the symptoms of Suryavarta. Although *Bhringaraja* is extensively used for hair-related conditions, its role in the management of headache disorders like Suryavarta has not been sufficiently explored. Therefore, this study is undertaken to evaluate the clinical efficacy of *Bhringaraja Swarasa–Aja Ksheera Nasya* and to compare its effect with a standard formulation, *Anu Taila*, thereby providing scientific validation for its use in Suryavarta

Objectives:

1. To assess the effect of combination of Bringaraja swarasa and aja ksheera in the management of Suryavarta
2. To compare the efficacy of Bringaraja swaras nasya with Anu taila in the management of Suryavarta

Materials and methods

1. Bringaraja swarasa, aja ksheera
2. Gokarna (instrument used for nasya), vessels, cotton, towel, stove etc.

Inclusion criteria

1. Individuals presenting with classical signs and symptoms of Suryavarta
2. Patients within the age group of 7 – 80 years
3. Both male and female patients willing to participate in the study.

4. Patients who provide informed consent

Exclusion criteria

1. Those who are contraindicated for nasya karma
2. Patients suffering from serious systemic illness including malignant diseases, uncontrolled hypertension, severe cardiac disorders or other chronic debilitating conditions.
3. Patients with secondary headaches due to identifiable organic causes such as intracranial pathology, trauma, or infections
4. Patients unwilling or unable to comply with the treatment protocol or follow-up schedule.

Methodology:

The study was conducted in the Department of Salakyathantra at Government Ayurveda College Thiruvanathapuram as part of a post graduate thesis. The synopsis was submitted to and approved by the scientific committee and institutional ethical committee of Government Ayurveda College Thiruvanathapuram. A total of thirty cases were selected from the outpatient department based on a predesigned proforma. The selected patients were thoroughly examined. Examination of the eyes, ears, nose, and throat was performed. Headache severity was recorded using the verbal Descriptive Scale (VDS). Pain severity was graded as follows : 0 - No pain, 1 - Mild pain (tolerable without medication), 2 - Moderate pain – relieved with medication, 3 - Severe pain (intolerable even with medication). The patients were alternately allocated into trial and control group. The research drug (a combination of bringaraja swarasa and ajaksheera) in the trial group while anu taila was administered in the control group.

Treatment schedule:

Thirty patients presenting with the signs and symptoms of Suryavarta were randomly selected from the outpatient department of Salakya thantra at Govt. Ayurveda College Thiruvananthapuram, and were subsequently admitted in the Salakya ward. As part of the preoperative procedures (purvakarma), snehana was administered in the form of Indukantha gritha at a dose of 20 gm at bed time for four consecutive days. Along with this Abhyanga (external oleation) and ushmasweda (sudation) were performed daily. Following adequate snehana, Virechana was carried out using Sudha eranda tailam. The dose of the virechana Dravya was individualized based on the patient's age and koshta (bowel nature). After virechana, the patients were advised to take rest on the following day.

On the seventh day morning, prior to the administration of nasya, the patients were under-went preparatory procedures including abhyanga and swedana using ksheerabala taila. Talam (application of medicine on head) was then applied using a combination of ksheerabala taila and rasnadi choorna. Subsequently, nasya was performed, wherein the trial group received the research drug (a combination of bringaraja swarasa and ajaksheera) while the control group was administered Anu taila. The dose of the nasya drug was 4 ml. Following nasya karma, kabala graha (gargling) was carried out using warm water. The entire procedure was conducted in accordance with classical Ayurvedic principles to ensure optimal therapeutic efficacy. The clinical trial was conducted over a period of 3 months. The patients were reviewed at three follow-up intervals: immediately after completion of the trial, after one month, and after two months.

Results

According to the verbal descriptive scale (VDS), the intensity of pain was graded as mild (1), moderate

(2), and severe (3). As the maximum therapeutic effect was observed at the one-month follow-up, this period was considered as the cutoff period for assessment. The difference between pre-treatment scores and scores at one month follow-up was calculated, and the mean difference was derived for each group. The mean difference in pain scores was 2.6 in Group A and 1.4 in Group B, indicating a greater reduction in pain intensity in Group A. This suggests that patients in Group A experienced more significant relief from pain compared to those in Group B.

Table 1: comparison of Mean difference in pain scores between Group A and Group B

Group	Observations	Total	Mean	Median	Variance	SD
A	15	39	2.60	3.00	0.543	0.737
B	15	21	1.40	1.0	0.543	0.737

As the data did not fulfil the assumptions of normality required for the t-test, the non-parametric Mann-Whitney U test, an equivalent alternative, was used for statistical analysis.

Mann –Whitney U test 12.411, df 1, p value 0.000427

By p value maximum significance was found, which show that the result is highly significant. That means Group A treatment was better than Group B in relieving headache.

Effect of intervention on associated complaints

The main associated complaints observed in patients with suryavarta included heaviness and numbness of the head, throbbing sensation, neck stiffness, eye pain, tinnitus, nausea and vomiting. Following the intervention, the changes in these associated symptoms were assessed, and the differences between the two groups were analysed.

Table 2: Effect of Treatment on Associated Symptoms of Suryavarta

Symptom	Group	Number of patients (before intervention)	Number of patients improved (after intervention)	p-value (Fisher's exact test)
Heaviness of head	A	11	8	1.000(NS)
	B	13	9	
Numbness of head	A	9	7	1.000(NS)
	B	9	8	
Throbbing sensation	A	10	8	0.571(NS)
	B	12	11	
Neck stiffness	A	8	7	1.000(NS)
	B	8	8	
Eye pain	A	8	12	1.000(NS)
	B	12	10	
Tinnitus	A	4	4	-
	B	2	2	
Nausea	A	8	8	-

	B	4	4	
Vomiting	A	10	10	-
	B	11	11	

Both interventions were found to be beneficial in alleviating the associated symptoms of suryavarta, with no significant difference between the groups.

Table 3: comparison of Mean difference in associated symptoms scores between Group A and Group B

Group	Observation	Total	Mean	Median	Variance	SD
A	15	252	16.800	16.00	47.171	6.868
B	15	155	10.333	09.00	39.381	6.275

T=2.69, p=0.011, Mann Whitney U =5.726, df- 1

Statistical analysis revealed that Group A had a higher mean score (16.80) compared to Group B (10.33), indicating a greater magnitude of improvement in Group A. The median values (16.0 in Group A and 9.0 in Group B) further support this observation.

The difference between the two groups was analysed using the Mann-Whitney U test yielding a value of 5.726. This indicates that the observed difference between Group A and Group B is statistically significant ($p<0.05$). Therefore, it can be inferred that the intervention administered in Group A was more effective than that in Group B.

Discussion

Suryavarta is a type of shiroroga characterized by a distinctive pattern of headache that varies with the movement of the sun. The gradual increase of pain from morning to midday, followed by relief towards evening, reflects the predominant involvement of pitta along with vata dosha. The aggravation of pitta during daytime, due to heat and sunlight, intensifies the symptoms, while vata contributes to the pain and its variable nature.

The therapeutic approach adopted in this study is nasya karma. *Snehana* and *Swedana* were performed as preparatory procedures to facilitate the elimination of vitiated Doshas. *Virechana Karma* was employed to expel aggravated *Pitta*, which plays a major role in the pathogenesis of Suryavarta. This was followed by *Nasya Karma*, which is considered the most effective route for delivering medication directly to the *Urdhāṅga* (head region).

Nasal administration as a means of delivering therapeutic agents preferentially to the brain has gained significant recent interest. While some substrates appear to be delivered directly to the brain via this route, the mechanisms governing overall brain uptake and exposure remain unclear. Some substrates utilize the olfactory tract and gain direct access to the brain, thus bypassing the blood–brain barrier (BBB). However, most agents of pharmacologic interest likely gain access to the brain via the olfactory epithelium, which represents a more direct route of uptake. [3]

Eclipta alba (synonym is E. prostata), locally known as Kesohraj belonging to the family of Asteraceae, is an evergreen herb of native Asia albeit of its availability in tropical and subtropical regions of the world in rainy season [4]. It is a commonly available medicinal plant, making it easily accessible for therapeutic use. Its wide availability enables the preparation of formulations such as *Bhringaraja Swarasa* without difficulty, even in routine clinical settings. The process of preparation is simple and does not require

complex procedures or expensive equipment. In addition, the raw material is inexpensive, making the formulation highly cost-effective. This affordability, combined with its therapeutic efficacy, makes Bhringaraja-based preparations a practical and economical option for the management of conditions like *Suryavarta*. Thus, the use of Bhringaraja not only ensures accessibility and ease of preparation but also supports cost-effective healthcare delivery. It has been documented to possess hepatoprotective, anti-inflammatory, antioxidant, analgesic, antimicrobial, and neuroprotective activities. These properties support its traditional use in various clinical conditions, including disorders of the liver, skin, hair, and head region. Despite the availability of substantial scientific evidence, research on Bhringaraja is still ongoing. Recent studies continue to explore its potential therapeutic applications, mechanisms of action, and bioactive constituents such as coumestans, flavonoids, and alkaloids. In particular, its role in neurological and pain-related conditions is gaining increasing attention. Diuretic, hypotensive and hypo-cholesterolemic effect of E. alba in mild hypertensive subject were reported by Rangineni V. et al and some other pharmacological activities reported neuropharmacological profile of E.alba (Linn.). Antihyperglycemic activity of E. alba leaf on alloxan-induced diabetic rats and analgesic studies on total alkaloids and alcohol extracts of E. alba have already been documented [(5)].

Conclusion

Suryavarta is a *Vata–Pitta* predominant *Shiroroga* characterized by a typical diurnal headache pattern. The present study demonstrates that both the trial drug (*Bhringaraja Swarasa–Aja Ksheera Nasya*) and the control (*Anu Taila Nasya*) were effective in reducing headache and associated symptoms. However, the trial group showed better improvement in pain relief. Thus, *Bhringaraja Swarasa–Aja Ksheera Nasya* can be considered an effective and safe treatment modality for the management of Suryavarta.

References

1. Ghori MU, Mahdi MH, Smith AM, Conway BR. Nasal drug delivery systems: an overview. American Journal of Pharmacological Sciences. 2015 Dec;3(5):110-9.
2. Bhalerao SA, Verma DR, Teli NC, Murukate VR. Eclipta alba (L): An overview. International journal of bioassays. 2013;2(11):1443-7.
3. Graff CL, Pollack GM. Nasal drug administration: Potential for targeted central nervous system delivery. *J Pharm Sci*. 2005;94(6):1187–1195. doi:10.1002/jps.20318.
4. Stone, Benjamin C. The flora of Guam. Micronesica. 1970; 6: 1-659. [2] Wagner H, Geyer B, Yoshinobu K, Hikino Y, Govind SR. Coumestans as the main active principles of the Liver Drugs Eclipta alba and Wedelia calendulacea. Planta Medica. 1986; 52 (5): 370-374.
5. Thakur VD, Mengi SA. Neuropharmacological profile of Eclipta alba (Linn.) Hassk. J. Ethnopharmacol. 2005. 102: 23-31. [16] Ananthi J, Prakasam A, Pugalendi KV. Antihyperglycemic activity of Eclipta alba leaf on alloxan-induced diabetic rats. J Biol Med. 2003; 76(3): 97-102.