



## **Management of Migraine with Ayurvedic Intervention - A Case Report**

**Kumari Archana<sup>1\*</sup> and D. B. Vaghela<sup>2</sup>**

<sup>1</sup>Department of Shalaky Tantra, IPGT and RA GAU Jamnagar, Gujarat, 361008, India.

<sup>2</sup>IPGT and RA GAU Jamnagar, Gujarat, 361008, India.

### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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**Case Study**

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### **ABSTRACT**

Migraine is a common episodic neurological disorder with a multifaceted pathophysiology that displays as recurrent attacks of headache that are typically throbbing and unilateral/bilateral and often severe with concomitant symptoms such as photophobia, phonophobia stimuli. Similar disease condition with its cardinal feature is well describe as *Shirah Shoola* in Ayurveda caused by vitiated *Tridosha*. About 15% of the population suffers migraine. Prevalence of migraine is approximately 5.7% in men and 17.0% in women and accounts 2% years of life lost due to a disability in women of all ages. Modern science enforced several medications to manage migraine but fails to deroot it, additionally these drugs have adverse effects like GI upset, hypotension, lack of concentration etc. In contrast Ayurveda approach rather safe in use could be promising strategies that can pacify the characteristics of various *Shirah Shoola* as well as its associated disability. *Laghu Sutasekhara Rasa* orally and *Brihat Dashmoola Taila Nasya* is mentioned in *Rasatantrasara* and *Siddhayogasangraha* book with special indication to *Shiarh Shoola*. So an attempt has been made to assess the efficacy of these two drugs in the management of migraine in this single case study. Considerable improvement was seen in the clinical features of Migraine.

**Keywords:** *Brihat Dashmoola Taila; Laghu Sutasekhara Rasa; migraine; Shirah Shoola.*

\*Corresponding author: E-mail: [archana06bly@gmail.com](mailto:archana06bly@gmail.com);

## 1. INTRODUCTION

The World Health Organization has identified migraine among the world's top 20 leading causes of disability [1]. Migraine is a neurological disorder characterized by recurrent attacks of pulsatile headache usually unilateral or bilateral widely variable in intensity, frequency and duration [2]. Migraine headaches are occurs due to combination of blood vessel enlargement and the release of chemicals from nerve fibers around these blood vessels causes inflammation, pain and further enlargement of the artery [3].

*Shiro Roga* includes the diseases that occur mainly in *Shiras* (head). As per Ayurveda Acharyas, *Shirah Shoola* is the main symptom in all *Shiro Roga*. According to *Madhavacharya*, *Shirah Shoola* is not only mentioned as symptom of various diseases but also considered as an independent disease itself [4].

*Acharya Sushruta* mentioned 11 types of *Shiro Roga* in *Uttara Tantra* in which each *Shiro Roga* differ according to the character of pain, intensity, site, time of onset, frequency, duration, precipitating factors, relieving factors etc. [5]. *Shirah Shoola*, which is characterized by varying intensity of pain, similar to the cardinal feature of migraine in modern literature.

Even though all type of *Shiro Roga* has *Tridosha* involvement depending upon *Dosha* predominance characters of *Shirah Shoola* also varies [6]. In ayurvedic classics, there are various drugs has been mentioned for the management of *Shirah Shoola*. Among them oral administration of *Laghu Sutasekhara Rasa* [7] and external administration through *Nasya* (*Nasal drops*) of *Brihat Dashmoola Taila Nasya* [8] has been mentioned with special indication to *Shirah Shoola*. An attempt had been made to find out the synergistic effect of *Laghu Sutasekhara Rasa* and *Brihat Dashmoola Taila*. The MIDAS (Migraine Disability Assessment) questionnaire was introduce to measure the impact of headaches on patient's life [9]. The total effect of therapy was assessed considering the overall improvement in symptoms and MIDAS score.

## 2. PRESENTATION OF CASE

A patient of 22 year age came to the hospital on 18/04/2019, OPD no-23104. She suffered from continuous rhythmic, unilateral headache with visual aura, mostly in temporal side which becomes severe at noon (acute onset) and it is

associated with nausea, vomiting, vertigo, since 3 years, annually seasonal course. She develops ptosis, eyelid edema, supra orbital pain, heaviness of eyes, photophobia, phonophobia during and after episode of headache. She experiences severe constipation and acidity since 2 year. She experiences disturbed sleep, recurrent mood swings, memory loss, unsatisfactory awakening. She experiences irregular menstrual history. She often took allopathic medicine (painkillers) for the headache which acts as symptomatic relief treatment. On general examination patient was conscious, alert, oriented to time, place and person. Height (5.4 feet) and Weight (55 kg) Blood Pressure - 120/80mm of Hg, Pulse Rate - 78 b/min, Respiratory rate- 14/m, Temperature- 98.4<sup>o</sup> F were noted. During her visit she was advised blood investigation in which Hb% was 11.4gm%, TLC was 7800/Cumm, DLC (N-56,L-26,E-14,M-04,B-0)% was within normal limits, ESR was 26 mm/hr, Urine examination (routine & microscopic) was normal, Biochemical investigation (Random Blood Sugar) was 97 mg/dL, Impression of MRI brain report showed no obvious cranial abnormality (Fig. 1). After evaluation patient was advised to continue medication for two months. She had habit of *Samshana* (improper diet pattern), habit of *Vegdharana* (holding natural urges), *Diwaswapna* (day sleeping), *Ati Vyayama* (excessive physical work), *Dhoopa Sevana* (exposure to sunlight). She had observable headache triggering factor –stress, sunlight, coffee, fermented eatables, cheese and journey. Alleviating factors- sleep, head massage. On the basis of examination and assessment of clinical feature, history and clinical reports available the case was diagnosed as Migraine. Ayurveda treatment regimen was followed for 2 months .which included 2 different medicines, 1 was in tablet form (1 tab thrice a day) and 1was in oil form for *Nasya* in morning hour. *Nasya* will be done, in 4 sittings, each sitting of 7 days at the interval of 1 week. The details of *Nasya* procedure following classical recommended guidelines has been presented in Table 1. She was advised to report after every 15<sup>th</sup> day. The details of posology are mentioned in Table 2. Improvement seen during treatment period in chief and associated complaints as well mentioned in Table 3. Improvement was assessed on the basis of symptoms before and after the treatment through a special MIDAS scoring scale mentioned in Table 4. Then in the follow up period one month, headache relieved in terms of frequency, duration and intensity with

relief in associated symptoms like nausea, vomiting, vertigo. She didn't consume any medicine in follow up period.

After oral administration of *Laghu sutashékara Rasa* along with Nasal administration of *Brihat Dashmoola Taila* for 2 month, improvement was found in

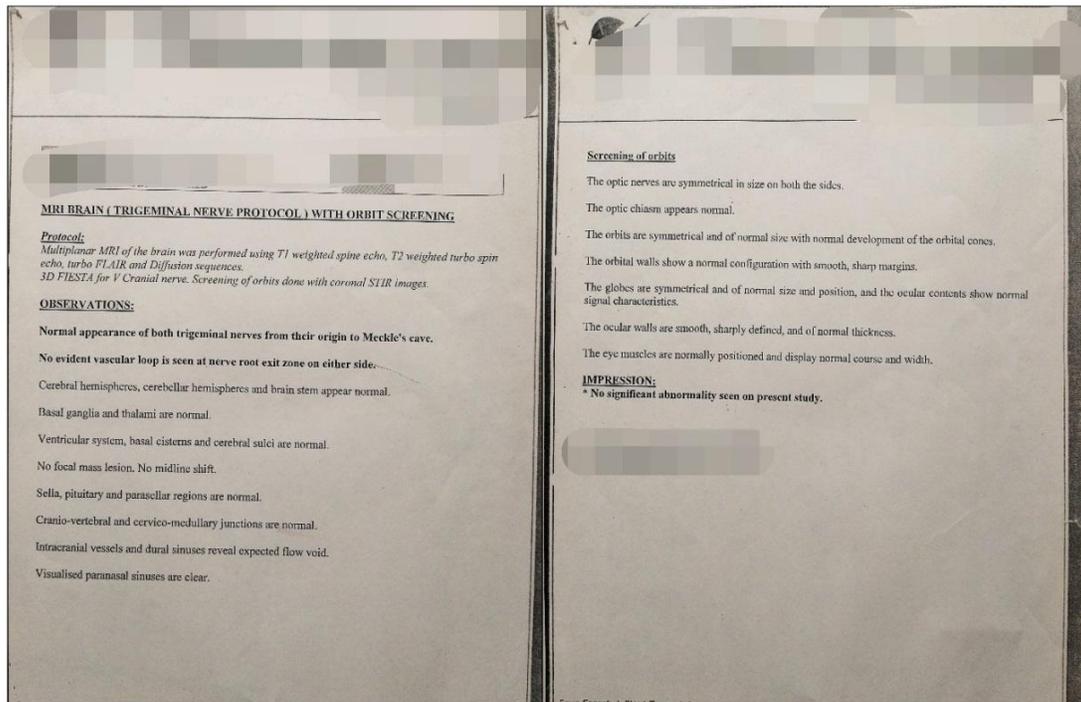
almost all considering clinical features of migraine which are summarized in Table 1. Intensity of the headache was reduced, duration of the headache was reduced as well as frequency of the headache was decreased considerably. There was also improvement in symptoms like photophobia and phonophobia.

**Table 1. Procedure of Nasya Karma**

Drug/Instruments	Dropper
<i>Purva-Karma</i> (pre procedure)	Arrangement of materials and Equipments, Counselling of the patient and taking informed consent.
<i>Pradhana-Karma</i> (main procedure)	Patient should lie in supine position on <i>Nasya</i> table with head lowering position. After covering the eyes with clean cotton cloth, the physician should raise the tip of the patient's nose with his left thumb and with the right hand the luke warm medicine should be instilled in both the nostrils alternately in proper way.
<i>Pashchata-Karma</i> (post procedure)	Gargles with luke warm water is advised to expel out the residue mucus lodged in <i>Kantha</i> (throat).

**Table 2. Posology of case study**

Drug	Dose	Duration	Time	Route	Form
<i>Laghu Sutasekhara Rasa</i>	500mg TDS.	2 month	After meal with luke warm water.	Orally	Tablet
<i>Brihat Dashmoola Taila</i>	6 - 8 drops (0.3- 0.4 ml) in each nostril.	2 month	4 sittings, each sitting of 7 days at the interval of 1 week.	Nasal	Oil



**Fig. 1. MRI report of brain**

**Table 3. Effect of therapy on symptoms of migraine**

Chief complaints	0 day	15 days	30 days	45 days	60 days
1. Headache	Persist for 7 times in a week continuously	4 times in a week continuously	4 times in a week but not continuous	2 times in a week. It was intermittent	Not a single episode
2. Nausea	Happens everytime with episode	Happened 3 times with episode	Not happened	Happened once with episode	Not happened
3. Vomiting	Everytime during episode	3 times with episode	Not occurred	Not occurred	Not occurred
4. Vertigo	Not usual	One time during episode	One time during episode	Not occurred	Not occurred
5. Aura	Everytime before episode	Everytime before episode	Everytime before episode	Everytime before episode	Not occurred

**Table 4. Effect of therapy on MIDAS score**

MIDAS score	BT	AT
	3	2

treatment of *Shirah Shoola* [13]. *Snehana Nasya* with medicated oil has been selected here to pacify the *Tridosha* mainly *Vata Dosh* by virtue of its *Snehana Guna* [14].

Both interventions works as *Doshapratynika* and *Vyadhipratynika Chikitsa* in *Shirah Shoola*. In present era due to high level of stress, there is imbalance in the hormonal level. So it should be treated carefully.

### 3. DISCUSSION

Migraine is a disabling medical illness. Migraine is the condition nearer to *Shirah Shoola*, which has been explained as *Tridoshaja Vyadhi* by *Acharyas*.

As indigestion along with constipation and acidity (*amlapitta*) is one of the causative factor of *Shirah Shoola* [10]. *Vata* imbalance arises due to improper metabolism, mental and physical stress, sleeplessness, etc. *Pitta* causes dilation of the blood vessels, which causes the onset of a migraine attack [11]. Treatment plan of migraine was therefore centered on the pacification of *Pitta Dosh*, and restoration of digestive function in the body. Ingredient of *Laghu Sutasekhara Rasa* has *Katu*, *Tikta Rasa*, *Ushna veerya*, *Deepana-Pachana* (appetizer- digestive) properties, which causes *Amapachana* and thus provides proper metabolism and ultimately balances the *Agni* which ultimately regulates excessive *Pittotpatti*.

*Nasa* (nose) is considered as therapeutic gateway of *Shirah* (head). Thus medicine administered through *Nasya Karma* can affect the vitiated *Doshas* in *Shirah* (head). So systematically performed *Nasya Karma* cures almost all the diseases of *Urdhwajatrugata* (supra clavicular region) [12]. Ingredients of *Brihat Dashmoola Taila* having *Katu*, *Tikta*, *Madhura Rasa*, *Laghu*, *Ruksha Guna*, *Ushna Virya*, *Katu Vipaka*, posses *Tridosha Shamaka* properties, has been in use as *Nasya* for

#### 3.1 Do's & Don't's

- Advised to avoid *Nidana* (causative factor) of migraine (*Shirah Shoola*).
- Advised to avoid skipping meals and keep amounts consistent.
- Advised to follow the proper diet regimen.
- Advised to avoid caffeine, alcohol etc.
- Advised to avoid stress, anxiety, depression.

### 4. CONCLUSION

This case study was done to manage migraine by using *Laghu Sutasekhara Rasa* orally and *Brihat Dashmoola Taila Nasya*. By this single case study it may be concluded that the drug *Laghu Sutasekhara Rasa* found effective not only in relieving the cardinal features but also helps in relieving constipation and acidity. However to generate more effective conclusion in this regard study needs to be conducted on a larger sample.

### CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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