

## REVIEW ARTICLE

# Role of Ayurveda in the Management of *Ardhav bhedak* W.S.R to Migraine – A Review

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### ABSTRACT

**Background:** The most frequent neurological condition for which patients seek medical care is headache, which globally causes more disability than any other neurological condition. Migraine, commonly referred to as “Hemicrania,” which means “half of the head,” is the second most frequent primary headache. Vomiting, nausea, and sensitivity to scent, light, or sound are all associated symptoms. Although it is not a fatal condition, it can seriously disrupt the patient’s life, necessitating greater care and attention throughout therapy. Unfortunately, only symptomatic drugs, many of which have significant side effects and can lead to dependence, have been stabilized for migraine prevention to date.

**Materials and Methods:** The information employed in the current analysis came from both primary and secondary sources, specifically literature studies of important ayurvedic scriptures and Samhitas as well as frequently read research articles.

**Results:** Some medication that is mentioned in the ayurvedic classics has been gathered to treat this disease.

**Discussion:** In Ayurvedic texts there are several types of Shiro Rogas (head disorders) described by Acharyas. Amongst them the clinical features of *Ardhavabhedaka* are very much similar to Migraine. This review demonstrates how effective ayurveda is in treating migraines without a lot of negative effects.

## 1. INTRODUCTION

One of the *Urdhvajatrugata rogas* that has been scientifically linked to migraine is *Ardhavabhedaka*, which is referenced in ancient Ayurvedic texts. One of its signs is a unilateral, half-sided headache with accompanying vertigo, nausea, photophobia, and phonophobia complaints. The most sensitive migraine diagnostic criteria include a headache that becomes worse with exercise, stress, and fatigue.<sup>[1]</sup> According to the vascular hypothesis of the brain, activation and sensitization of the central trigeminal system are thought to result from the desensitization of peripheral perivascular nerve terminals as well as possible consequences of dilated meningeal blood vessels.<sup>[2]</sup> About 16–20% of the population in India has migraine cases that have been documented.<sup>[3]</sup> The World Health Organization lists migraine as one of the disorders whose specific cause is unknown and further

claims that it is one of the most incapacitating medical conditions in the world. It typically happens during the second and fifth decades of life, at the prime stage of life and is 3 times more common in women than in males.<sup>[4]</sup> This typically has a detrimental impact on social and professional activity. According to modern medicine, there is no adequate standardized course of treatment for the management of migraine. As a result, acute migraine symptoms are typically treated with over-the-counter drugs; however, chronic illnesses are typically more common and challenging to cure. As a result, medication and non-pharmacological therapeutic methods are used. Among the non-pharmacological techniques include the recognition of triggers, mindfulness meditation, relaxation exercises, and psychotherapy. The most often utilized medications in the pharmacotherapy technique include aspirin, paracetamol, ibuprofen, and diclofenac.<sup>[5]</sup> As the *Shira* (head), also known as the *Uttamanga* (superlative organ), is regarded as the primary seat of knowledge and the controller of the entire body, it is specifically mentioned in Ayurvedic writings on *Urdhvajatrugata roga* and how to treat them.<sup>[6]</sup> One of the 11 varieties of *Shiroroga* described by Acharya Sushruta is *Ardhavabhedaka*

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(migraine), which manifests as a paroxysmal unilateral headache accompanied by dizziness and pain of varied intensities.<sup>[7]</sup> The diet, current lifestyle, inconsistent eating patterns, fermented, pickled foods, baked goods, chocolates, dairy products, and variations in sleep patterns, such as waking up at night for nighttime tasks and resting during the day, are risk factors for *Ardhavabhedaka*. Stress and strain are also predisposing factors, which are crucial additional considerations.<sup>[8]</sup> In along with *Pancha karma*, *Sarvanga abhyanga*, *Swedana*, *Nasya karma*, and *Shamana chikitsa*, Ayurveda provides a number of different treatments.

### 1.1. Aims and Objectives

Reviewing a conceptual study on the disease *Ardhavabhedaka* W.S.R. to migraine is the aim of the present study.

## 2. MATERIALS AND METHODS

Material related to mental health and *Ardhavabhedaka* (migraine) is collected from Ayurvedic text and text book of modern medicine, respectively. The index, non-index medical journals have also referred to collect information of relevant topic.

## 3. REVIEW OF LITERATURE

### 3.1. Definition of *Ardhavbhedaka*

Acharya Sushruta said that after a fortnight or 10 days, if one side of the head suddenly begins to experience acute tearing and pricking pain, giddiness, and piercing pain. This needs to be identified as *Ardhavbhedaka*, which all three doshas contributed to.<sup>[9]</sup> Acharya Vagbhatta defined *Ardhavbhedaka* as a headache on one side of the head. Painful episodes occur every 15 days or 1 month, and they go away on their own. The condition may potentially affect how well the eye and ear work if it worsens.<sup>[10]</sup>

### 3.2. Migraine

Recurrent attacks of moderate-to-severe throbbing and pulsing pain on one side of the head are the hallmark of the headache type known as a migraine. The three layers of membranes that surround and protect the brain and spinal cord, known as the meninges, contain nerve fibers that are activated by blood arteries in the brain.<sup>[11]</sup>

### 3.3. Nidana of *Ardhavbhedaka*

- The “*Kiyantah shirasiyadyaya*” of Sutrasthana contains an etiology of *Shirorogas* that was mentioned by Acharya Charaka. *Sandharana* (Suppression of natural urges specially of *Mutravega*, *Purishavega*, *Kshavathuvega* and *Nidravega*), *Divaswapana* (day sleeping), *Ratrijagrana* (overnight awakening), *Mada* (Alcohol intake), *Uccha bhashana* (excessive talk), *Avashyaya* (due to excessive exposure to fog), *Pragvata* (Exposure to eastern winds), *Atimaitihuna* (Excessive sexual indulgence), *Asatmya gandha* (Bad odor), *Raja*, *Dhuma*, *Hima* and *Atapa* (Excessive exposure to dust, smoke, cold weather, and sun rays), *Guru Ahara*, *Amla Ahara*, and *Harita Dravya* (Excessive intake of heavy, sour food and rhizomes etc. These etiological variables cause the *Vatadi doshas* to become more severe, which vitiates *Rakta Dhatu* in the *Shirah* and causes *Shiro roga* to appear.<sup>[12]</sup>
- According to Acharya Vagbhata and Yogaratnakara, the causes of *Shirorogas* include *Utsveda* (excessive sudation), *Krimi* (worms), *Upadhana dvesa* (avoidance of pillows), *Abhyanga dvesa*

(aversion to massages), and *Prateteshana* (continuous seeing).<sup>[13]</sup>

- *Shirahshoola* is expressly referenced in the *Harita Samhita* under the heading of *Karmaja Vyadhi*.<sup>[14]</sup>

### 3.4. Purvarupa of *Ardhavbhedaka*

Even though there are no specific *Purvarupas* for *Ardhavbhedaka* mentioned in the Ayurvedic classics, there is a reference to *Purvarupas* of *Shiroroga* in Vaidya Vinod, which states that *Shiroroga* that is *Kapha* dominant may have restricted head movements, such as extension and flexion, as well as heaviness in the head.

### 3.5. Rupa of *Ardhavbhedak*

- The symptoms of *Ardhavbhedaka*, according to Acharya Charaka, include intense discomfort on one side of the head, especially in the neck, eyebrows, temporal region, ear, eye, and forehead. It hurts like being cut by something sharp or being pierced by something in nature.<sup>[15]</sup>
- Acharya Sushruta described a severe tearing and piercing pain in one side of the brain that was accompanied by giddiness. These characteristics can show up every 10 days, every 2 weeks, or at any moment.<sup>[16]</sup>

### 3.6. Symptoms of Migraine<sup>[17]</sup>

#### 3.6.1. Prodrome

For roughly 60% of migraine sufferers, the following symptoms appear hours or days before a headache:

- Being sensitive to light, sound, or smell
- Fatigue
- Food cravings or lack of appetite
- Mood changes
- Severe thirst
- Bloating
- Constipation or diarrhea.

#### 3.6.2. Aura

Neurological system is the source of these symptoms, which frequently affect your vision. They often begin gradually, last between 5 and 20 min, and are shorter than an hour.

- See black dots, wavy lines, flashes of light, or things that are not there (hallucinations)
- Have tunnel vision
- Not be able to see at all
- Have tingling or numbness on one side of your body
- Not be able to speak clearly
- Have a heavy feeling in your arms and legs
- Have ringing in your ears
- Notice changes in smell, taste, or touch.

#### 3.6.3. Attack

A migraine headache frequently starts off as a throbbing sensation before becoming dull. Usually, it gets worse as you exercise. The pain may be in the front of your head, travel from one side of your head to the other, or feel as though it is affecting your entire head. A headache and nausea are experienced by roughly 80% of persons, and about half of them vomit. The average duration of a migraine attack is 4 h, although more severe cases can continue up to 3 days. Two to four headaches per month are typical. While some people only experience migraines once or twice a year, others may experience them frequently.

### 3.6.4. Postdrome

After a headache, this phase can linger for up to a day. The symptoms include:

- Feeling tired, wiped out, or cranky
- Feeling unusually refreshed or happy
- Muscle pain or weakness
- Food cravings or lack of appetite.

## 4. MANAGEMENT OF ARDHAVBHEDAKA

### 4.1. General Management of Shiroroga

The following preventive steps should be performed for all types of headaches:

- *Nidana parivarjana*: The etiological variables that cause headaches should be avoided from a therapy perspective. Rest stay away from *Vegavarodha*, manage your thoughts, etc. In addition, stay away from other *Aharaja* and *Viharaja Hetus*.<sup>[18]</sup>
- *Samshodhana chikitsa*: In all of the *Urdhavajatrugata rogas*, *N. karma* has been recommended as the primary form of treatment.<sup>[19]</sup>
- *Samshamana chikitsa*: According to “*Samanya Vishesh Sidhanta*” and the predominance of the exhibiting Dosh, the vitiated Doshas should be returned to their natural state with the aid of *Nidana parivarjana* as well as medication.<sup>[20]</sup>

### 4.2. Some Ayurveda Medicines use in Ardhavbhedaka

#### 4.2.1. Single medicine

- *Bala* – Headaches that start in the temples and spread to the center of the head respond well to *bala* treatment. This happens as a result of pitta dosha-related imbalances in the stomach and intestines, which include indigestion, heartburn, hyperacidity, and rage or irritation.<sup>[21]</sup>
- *Guduchi* – Due to its general tonic, anti-spasmodic, anti-inflammatory, anti-arthritis, hepatoprotective, anti-allergic, and anti-diabetic characteristics, *guduchi* is frequently employed in ayurvedic medicine. The plant is used as “*Rasayanas*” in ayurveda medicine to strengthen the immune system and increase the body’s resistance to infections. Due to its ability to treat a variety of illnesses, it is also known as the miracle herb.<sup>[22]</sup>
- *Nimba* – Due to its *Ama pachana* and *Pitta hara* properties, *Nimba* (*Azadirachta indica*) is beneficial for headaches.<sup>[23]</sup>
- *Dhamasa* – The anti-microbial and analgesic properties of the ethanol and aqueous extracts of *Fagonia indica* leaves are assessed by Sharma *et al.* *Fagonia indica* leaf extracts (25, 50, and 100 mg/mL) were examined for their antimicrobial properties using Gram-negative and Gram-positive bacterial strains and the zone of inhibition. *Escherichia coli* (ATCC 25922), *Staphylococcus aureus* (ATCC 29213), *Pseudomonas aeruginosa* (ATCC 27853), and *Bacillus cereus* (ATCC 6633) were the microbes employed in this investigation. Rats were used in the tail flick method to examine the analgesic efficacy of different solvent extracts (200 and 400 mg/kg) of *Fagonia indica*. Regression analysis was used to statistically analyse the results. The analysis revealed that the ethanol extract significantly inhibited all bacterial strains, but that it had the greatest inhibitory effect on *Bacillus cereus* and the least against *pseudomonas aeruginosa*. Both extracts (ethanol and water) demonstrated considerable ( $P = 0.05$ ) analgesic effectiveness in the analgesic activity.<sup>[24]</sup>

#### 4.2.2. Compound medicine

- *Sitopaladi churn* – The acid-alkali balance may have been restored by *Sitopaladi churna*’s controlled lifestyle and food,

which also may have strengthened or repaired the digestive system’s functionality. The frequency of migraines may have decreased due to an improved acid-alkali balance in the body.<sup>[25]</sup>

- *Praval pisthi* – According to Ayurveda, migraines are brought on by elevated *Pitta* and *Vata*. *Pravala pisti* can help balance these two doshas extremely effectively. In addition, it helps to lessen the nausea and vertigo associated with migraines.<sup>[26]</sup>
- *Saptamrit lauh* – The combined impact of *Triphala* and *Mulethi* in *Saptamrit lauha* is *Tridosh shamak*, which corrects the *Doshik* imbalance.
- *Bala tail- N. karma* with *Bala Tail* was injected into both nostrils with the expectation that its special mode of action through *Sringatakamarma* would strengthen the essential functioning of the sense organs. The unique *Kriyakalpa* treatment known as *Sthaniya khavaigunya* (location of sickness) helps to open the *Vatavahasrotas* and lighten the head.
- *Til tail-* The body is relaxed and the gases that cause head pressure are eliminated by sesame oil. The nostrils, the temples, or steam inhalation are all possible applications for these oils. A popular alternative treatment for those in pain is acupressure.

## 5. DISCUSSION

Nearly every Acharaya in *Shiro-roga* mentions *Ardhavabhedaka*. In the Uttar Tantra, Acharaya Sushruta lists 11 different forms of *Shiro-roga*. One of these, called *Ardhavabhedaka*, is characterized by paroxysmal unilateral headaches, vertigo, and pain of variable intensities. Due to its defining characteristic, a “half-sided headache,” *Ardhavabhedaka* can be scientifically associated with migraine. Maximum *Nidanas* demonstrate *Vatadosha*’s predominance. *Vata* is triggered by an addiction to dry goods, an excessive diet, or overeating. The power of digestion determines how much food should be consumed. Even a mild food item, if consumed in excess, can cause *Agnimandhya* and *Amarasa* development, which clogs the channels and exacerbates the three Doshas. Another factor is exposure to eastern wind, which causes headaches by narrowing the blood vessels due to *Vata*’s *Sheeta Guna*. Similar to this, suppressing natural desires prevents *Vata* from moving freely. Inversely, excessive sexual enjoyment causes *Dhatu* degeneration. In addition, many varieties of pain, such as *Toda* and *Bheda*, point to the “*Vishama*” nature of the *Vata* dosha. Maximum *Nidanas* demonstrate *Vatadosha*’s dominance. *Vata* is triggered by an addiction to dry goods, an excessive diet, or overeating. The first and most effective treatment for preventing and treating *Ardhavabhedaka* is *Nidana parivarjana*. Regular analgesic use for migraine headaches may cause unwanted side effects, such as gastrointestinal irritation and other problems, which could make the migraines worse and more frequent. Since ayurvedic medicine not only relieves symptoms, but also prevents them from returning and getting worse, it should be used to treat migraines.

## 6. CONCLUSION

For the *Sharira* and *Manas doshas*, *Ardhavabhedaka* required *Shamana Chikitsa*. *Ardhavabhedaka* can be successfully treated with ayurveda. Disease recurrence can be avoided or have its effects reduced.

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## 11. CONFLICTS OF INTEREST

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## 11. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

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