

## Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in



An International Journal for Researches in Ayurveda and Allied Sciences



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## Journal of

## Ayurveda and Integrated Medical Sciences

REVIEW ARTICLE

July-Aug 2019

# Role of *Panchakarma* in the management of Migraine (*Ardhavabhedaka*): A Review

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### ABSTRACT

Headache is one among the most common reasons patients seek medical attention, on a global basis being responsible for more disability than any other neurological problem. Migraine is the 2<sup>nd</sup> most common primary headache, also known as 'Hemicrania', means 'half of the head'. It constitutes 16% of the primary headache and affects ~10-20% of general population, i.e. about 15% of women and 6% of men. It is characterized by recurrent episodes of headache that is moderate to severe and pulsatile in nature and lasting for 2-72 hours. Associated symptoms are nausea, vomiting, sensitivity to light, sound, or smell. It is not a lethal disorder but it can disturb patient's life very widely, so its treatment requires more attention and care. Unfortunately, there is no preventive medication for migraine has been stabilized so far, only symptomatic medication are available, which medications have a lot of adverse effects and make dependence. In Ayurveda it can be correlated to *Ardhavabhedaka*. Very elaborative treatment has been given in Ayurvedic *Samhitas*; especially *Panchakarma* offers significant relief in this disease.

Key words: Migraine, Hemicrania, Ardhavabhedaka, Panchakarma.

#### Introduction

Migraine is an extraordinarily prevalent neurological disease, affecting 39 million men, women and children in the U.S. and 1 billion worldwide. Everyone either knows someone who suffers from migraine, or struggles with migraine themselves. It is the 3<sup>rd</sup> most prevalent and the 6<sup>th</sup> most disabling illness in the world. 85% of chronic migraine sufferers are women. Before puberty boys are affected more than girls, but during adolescence, the risk of migraine and its

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Submission Date: 22/07/2019 Accepted Date: 25/08/2019
Access this article online

Quick Response Code

Website: www.jaims.in

Published by Maharshi Charaka Ayurveda Organization, Vijayapur, Karnataka (Regd) under the license CCby-NC-SA severity rises in girls.[1] The current increase in the prevalence of migraine could be related to stress, depression and the development of metabolic syndrome and change in our diet with high intake of fast foods, seafood, fructose sweetened beverages and alcohol, and also the increase in life expectancy. However, the migraine is caused by a genetic abnormality that makes the neurovascular system hyper excitable. Thus, it can be initiated or amplified by various triggers. [2] The pathogenic mechanisms are not well understood, hence the vascular theory holds that initial vasoconstriction or shunting of blood through carotid arteriovenous anastomoses produces cerebral ischemia and starts the attack. The Neurogenic theory considers it to be a spreading depression of cortical electrical activity followed by vascular phenomena. About 15-30% of people in migraine experience migraine with aura and few patients also have episodes without aura. Diagnosis usually made by symptoms during attack and during latent period. The diagnosis of migraine without aura, according to International Headache Society, can be made by criteria given by it.[2] Drug therapy of

migraine has to be individualized. Mild migraine should be treated with simple analgesics/NSAIDs or their combinations and antiemetic. In moderate NSAIDs combinations/a triptan/ergot migraine alkaloids and antiemetic, prophylactic therapy is advised only when attacks are more frequent than 2-3 per month. Severe migraine attack need specific drugs have to be prescribed along with antiemetic, like a alkaloid triptan/ergot plus prophylaxis, propranolol/other beta blockers, amitriptyline / other tricyclic antidepressants, flunarizine / other calcium channel blockers, valproate / topiramate. Prophylactic lasting 6 months or more regimens recommended.[3] The modern drugs have their side effects like drug dependence and drug withdrawal syndrome, relapse of headache within hours and chances of getting chronic headache. The migraine can symptomatically correlated Ardhavbhedaka which has been mentioned under Shiroroga by our Aacharyas. The Ayurveda emphasizes preventative and healing therapies along with various methods of purification (Panchakarma) and rejuvenations. All the Panchakarma procedures are indicated for migraine, offers significant relief. However Nasya Karma play a vital role in disintegrating the pathology of the disease.[4]

#### **Disease Review**

Ardhavabhedaka is one among the 11 types of Shirorogas considered by our Acharyas. The word Ardhavabhedaka has two components viz. Ardha and Avabhedaka. Ardha means half side, Ava suggest bad prognosis, Bhedaka means breaking through, perforating or bursting out type of pain. In this, pain affects half region of the head. Acharya Chakrapani made it clear by saving Ardhavabhedaka means 'Ardha Mastaka Vedana'. [5] Acharya Sushruta considers it as Tridoshaja, Acharya Charaka has explained it as either to be purely Vataja or Vatakaphaja, Vagbhata opines that only Vata Dosha is involved. Similarly in Bhela Samhita, Madhava Nidana, Yogaratnakara, Bhava Prakasha it is considered as either purely Vataja or Vata Kaphaja. Videha of Nimitantra opines it to be Vatakaphaja. [6]

#### Samprapti (Etiopathogenesis)

According to Acharya Charaka from Rooksha Bhojana, Atibhojana, Adhyashana, Vegadharana, Ativyayama, Vata either alone or in combination of Kapha, seizes the one half of head and causes Teerva Vedana (acute pain).<sup>[7]</sup>

Nidana Sevana → Agnimandya → Amotpatii → Srotovarodha → Aggravation of all the three Doshas → Urdhavagaprapti (reach the head) → Manifestation of symptomatology of Ardhavabhedaka.

#### **Rupa** (Clinical Features)

Severe cutting or piercing (*Sashtra-Arninibha*) pain usually half side of head affecting neck (*Manya*), eye brows (*Bhru*), eye (*Akshi*), ear (*Karna*), temporal (*Shankha Pradesha*) and forehead (*Lalata*).<sup>[8]</sup> The disease develops either at the interval of fortnight (15 days) or 10 days<sup>[9]</sup> or a month and subsides its own accord.<sup>[10]</sup>

#### **Upadrava** (Complications)

It has severe complications even it can destroy the sense organs and produce deafness, blindness.<sup>[11]</sup>

#### **Treatment**

The treatment principles according to Acharya Charaka, Chatuh-Sneha Pana, Shira and Kaya Virechana, Nadi Swedana, Jeerna Sarpi, Niruha and Anuvasana Basti, Upanaha, Shirobasti, Dahana and Pratishyayvat Chikitsa.<sup>[12]</sup>

The treatment principles mentioned can be grouped under the following headings

- Anthaparimarjana Chikitsa can be given in the form of Shodhana or Shamana Snehana, Vamana, Virechana, Basti and Nasya.
- Bahiparimarjana Chikitsa includes Lepa, Upanaha, Dhoopana, Swedana and Shirobasti, Shiroabhyanga, Shirodhara.
- Sashatra Pranidhana includes Siravedha and Agnikarma.<sup>[13]</sup>

#### **DISCUSSION**

Ayurveda is a science and art of appropriate living which helps to achieve longevity. The *Panchakarma* therapy provides balanced state of body, mind and consciousness by cleansing of body toxins.

#### Snehana Karma

It can be used as *Abhayantara Snehana / Snehapana* (internal oleation) and *Bahya Snehana* (External oleation) as *Shiroabhyanga*.

#### Snehapana

Sneha acts as a solvent to remove the obstruction by dissolving Doshas in it, resulting in the removal of Srotorodha. After proper Snehana all cells of the body becomes completely saturated with fats. Then the fat material comes out to extra-cellular fluid by osmosis process. Due to the aqueous properties of Sneha and liquefied Mala brought from the tissues, the levels of fatty acids etc. increases in the blood resulting in the high plasma volume. To keep up the equilibrium of the normal plasma level, the extra amount of liquid reaches to the Koshta for excretion. Later on, this increased amount of the body fluids are evacuated through other therapies, like Vamana, Virechana. [14]

#### Shiroabhyanga

During *Shiroabhayanga* different type of mechanical sensation is given to the skin like pressure, rubbing, touches. These impulses are received by respective receptors present on the skin surface and carried to the hypothalamus and provides soothing effect and also stimulates para sympathetic nervous system, thus decreases stress hormones like cortisol and adrenalin and dilates blood vessels. All these factors provide relaxation to the mind and relieves pain. [15]

#### Shirobasti

It is a *Snigdha Swedayukta* procedure. It has dual benefits of both *Snehana* and *Svedana*. The temperature of the *Taila* in *Shirobasti* leads to peripheral vasodilation. This increases the peripheral circulation which nourishes the tissues, hastens phagocytosis and brings about regenerative changes.

Thus *Shirobasti* is a very complex process certainly influencing the *Shareerika* and *Manasika Dosha*.<sup>[16]</sup>

#### Nasya Karma

In Nasya Karma the medicine is put into nostril, moves in the channels upto the Shringataka and spreads to whole of the interior of the head and to the junction place where all the channels related to eyes, ears and throat situated together, thus shows influence on Shiras by removing out the accumulated Doshas localized in Shiras i.e. from all sinuses in the skull, the action known as Shirovirechana. The olfactory nerves entering olfactory mucosa of nose carry the sheaths dura, arachnoids and pia with them. They directly enter into the brain. Olfactory straie are extensively connected to the limbic system stimulation can nourishment of nerve ending through Nasya alters the pathology of migraine. [17]

#### Basti Karma

In *Ardhavabhedaka, Niruha Basti* prepared with *Vatanashaka* drugs should be given first, followed by *Anuvasana Basti* prepared of *Ghrita, Taila* etc.<sup>[18]</sup> *Basti* is being considered as the one of the best therapeutic procedures for the management of migraine. The rectum with its vascularity and venous plexuses provides a good absorbing surface and many soluble substances produce their effect more quickly by entering into systemic circulation. Due to *Achintya Prabhava* of *Basti*, it might have reduced swelling of temporal artery and there by the patient gets relief from symptoms.<sup>[19]</sup>

#### Vamana Karma

The active principle of *Vamana Dravya* taken orally is absorbed from the stomach into circulatory system, where from it is circulated to all over body. On reaching at the site of *Dosha Sanghata*, which is at the cellular level, it breaks the nexus of *Dosha* and brings back the toxic substances thus released into the stomach, where from they are expelled out of the body by the action of vomiting.<sup>[20]</sup>

#### Virechana Karma

Virechana Dravya produced mild irritation in stomach and intestinal mucosa respectively, to cause inflammation, which facilitates quick absorption of

the active principles (*Virya*) of the drug in initial stage. Later on it facilitate the excretion of the morbid matters, which generally are not supposed to be excreted out through the mucosa of gut. It is possible only because of inflammation increases the permeability of the capillaries, which in turn allow the absorption, as well as excretion of such substances.<sup>[21]</sup>

#### Agni-Karma

Provides significant relief in the symptoms of migraine. Acharya Charaka indicated Dahana Karma. It is indicated on Lalata and Shankha Pradesha at two Angula area. As per Ayurveda, 'pain cannot occur without involvement of Vata Dosha'. Agni has Ushna Guna, this Ushna Guna gets transferred to Twak (skin), and normalises Vata and Kapha, helped to reduce Shira-shoola in Ardhavabhedaka.<sup>[22]</sup>

#### Raktamokshana

The vitiated blood can be detoxified by *Raktamokshana* (bloodletting). Removal of toxins balances the *Doshas*. It can remove *Avarana* of *Kapha* or *Pitta Dosha* giving way for *Anulomana* indirectly cures the *Vatika* symptoms along with *Pitta* and *Kapha Dosha* and patient gets immediate relief in pain. [23] In acute migraine attack, *Raktamokshana* from the jugular vein is beneficial. [24]

#### Shirodhara

Involves gently pouring liquids over the forehead. The liquids used in *Shirodhara* can include oil, milk, buttermilk, coconut water or even plain water. Its work by relaxing the hypothalamus in the brain, also normalize the functions of hormones that regulate sleep and emotions. The soothing of *Marma`s* and in turn soothing of Nervous system and endocrine glands as an effect of *Shirodhara* treatment procedure will definitely relax *Prana Vayu*, *Sadhaka Pitta* and *Tarpaka Kapha* in the brain. [25]

#### Dhoopana

It dilates blood vessels and helps in oxidation of blood. It leads to adequate tissue perfusion and oxygenation. Thus, reduces inflammation, pain, itching and eliminates infection.<sup>[26]</sup>

#### **CONCLUSION**

Ardhavabhedaka is Vatakapha Pradhana Shiroroga, the symptoms complex of which very well correlate to that of migraine. Most of the Nidanas which includes Aharaja, Viharaja and Manasika factors etc. are mentioned in our classics go in similarly with migraine triggers, which have active part in diagnosis and in planning first line of treatment i.e. Nidanparivarjana. Panchakarma provides various routes of Deha Shuddhi and also pacifies the Doshas. Thus by particular Panchakarma procedure adopting individual will get better results curing Ardhavabhedaka (migraine).

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How to cite this article: Dr. Sapna Kumari Vishwas, Dr. Sanjay Gupta, Dr. Priyanka Rani, Dr. Parul Sharma. Role of Panchakarma in the management of Migraine (Ardhavabhedaka): A Review. J Ayurveda Integr Med Sci 2019;4:270-274.

**Source of Support:** Nil, **Conflict of Interest:** None declared.

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