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# A CONCEPTUAL STUDY AND MANAGEMENT OF ARDHAVABHEDAKA WITH SPECIAL REFERENCE TO MIGRAINE

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#### ARSTRACT

Ayurveda is the science of life. The main aim of Ayurveda is to maintain health in healthy individuals and cures diseased persons. Siras is the seat of Pranavata, Aalochaka pitta and Tharpaka kapha. It is described as Uttamanga and important due to the presence of sense organs, central Nervous system and 37 marmas. Our ancient Acharyas described 11 types of siro rogas. Ardhavabhedaka is one among them. Ardhavabhedaka symptoms manifest in the half part of the head. The diet, present life style, irregular diet habits, fermented, pickled foods, baked items, chocolates, dairy products and changes in sleep pattern like awakening in night times due to night duties and sleeping in day time are predisposing factors of Ardhavabhedaka. The treatment modern system of medicine has complications like drowsiness, insomnia, depression, extra pyramidal activities, constriction of blood vessels are predisposes of cardiac problems. The Aim of the present study is to undertake a conceptual and scientific study on preventive and curative aspects of Ardhavabhedaka w.s.r. to Migraine. Treatment principles were Sodhana therapies, Shamana therapies, Rasayana sevana, Brumhana dravya sevana, mainly Nasya karma and preventive measures. The treatment prescribed for Ardhavabhedaka w.s.r. to Migraine in Ayurveda controls secretion of serotonin and proved to be effective in prevention and management of Ardhavabhedaka. Changes in lifestyle, diet, exercise and meditation are important than drugs.

Keywords: Ardhavabhedaka, serotonin, Nasyakarma, Rasayana.

#### INTRODUCTION

Ayurveda is the science of life. Ayurveda is mainly based on the Tridosha theory. The main aim of Avurveda is to maintain health in healthy individuals and cures diseases in diseased persons<sup>1</sup>. The main principle of health according to Ayurveda is equilibrium of tridoshas<sup>2</sup>. Siras is told as Uttamanga. Siras is compared with root of the tree<sup>3</sup>. If we nourish the root, the trees become strong. In the same manner we nourishes the siras, the body will become healthy. If we should treat immediately, diseased complications will occur. Siras is the seat of Pranavata, Aalochaka pitta and Tharpaka kapha. It is important due to the presence of sense organs, central Nervous system and 37 marmas. Prana vaata maintains intelligence<sup>4</sup>, sense organs, heart, mind and blood vessels. Aalochaka pitta is responsible for eye sight. Sadhaka pitta is responsible for the achievement of one's aspiration through his buddhi, medha, abhimana etc. It is responsible for manas and its contact with indrivas making them to perceive the sense objects<sup>5</sup>. Tharpaka kapha nourishes the sense organs and brain<sup>6</sup>. Change in life style, irregular food habits, irregular sleep pattern, the seasonal changes, climatic changes, air pollution, contaminated water, stress and strain have an impact on the equilibrium of doshas in the body. Our ancient Acharyas described 11 types of siro rogas<sup>7</sup>. Ardhavabhedaka is one among them. Ardhavabhedaka is mentioned as one of the siroroga by Acharya Susrutha. But Acharya Vagbhata described it as a bheda of Vataja siroroga. "ardhethu murdha: so ardhavabhedaka:"8 Ardhavabhedaka symptoms manifest in the half part of the head. Ardhavabhedaka is mentioned in siro rogas. Our acharyas mentioned the dinacharya9 (daily regimen) and ruthucharya<sup>10</sup> (season wise regimen) elaborately. But as time passed, now a day's lot of changes taken place, inevitable in life style, social and religious customs and manners has an impact on tridoshas. The diet, present life style, irregular diet habits, fermented, pickled foods, baked items, chocolates, dairy products and changes in

sleep pattern like awakening in night times due to night duties and sleeping in day time are predisposing factors of Ardhavabhedaka. And other important factors are stress and strain are also predisposing factors. The treatment modern system of medicine has complications like drowsiness, insomnia, depression, extra pyramidal activities; constriction of blood vessels are predisposes the cardiac problems.

## Aims and Objectives

The Aim of the present study is to undertake a conceptual and scientific study on preventive and curative aspects of Ardhavabhedaka w.s.r. to Migraine. Objective is to treat by Sodhana and Shamana therapies; and to reduce frequency of attacks, and to improve vitality with simple measures like dina charya, ruthucharya, rasayana sevana.

## Nidana and Samprapthi (Etiology and Pathogenesis)

Ardhavabhedaka is tridoshaja but vitiation of vata and pitta are more. According to Vagbhata this is the one type of vataja shira: shoola manifesting symptoms in one half of the head.<sup>8</sup>

## Ratrijagarana

The aggravated vata and pitta with decreased kapha causes hormonal imbalance and changes in autonomic nervous system.

#### Guru, amla and ruksha diet

Baked food, chocolates, dairy products causes amothpatthi<sup>11</sup>, processed and fermented foods containing MSG-mono sodium glutamate are the trigger factors of Migraine.

#### Avasyaya, Diwaswapna and Seetha sevana

Increase kapha and obstructed vata cause prathishyaya. Nasal blockage in sinusitis or common cold triggers migraine attacks.

#### Vega dharana

Flow of vata is obstructed, so nerve pathways are affected causing disturbance in CNS-neural control of cranial circulation.

## Adhyasana

It creates Ama<sup>11</sup>, digestive disturbances resulting in dhathukshaya and vata prakopa. It impairs metabolism, immunity system causes allergies and allergic reactions. They can't tolerate bright lights, loud noises, and certain odors or perfumes. These are the rasa dhathu kshaya lakshanas.

## Aayasa, vyayama, maidhuna

It results in stress, strain and anxiety causing increased excitability of the cerebral cortex and abnormal functioning of neuro-transmitters.

#### **Migraine-Modern Aspect**

Migraine is an episodic paroxysmal headache, as a triad of paroxysmal headache, and/or vomiting and an 'aura' of focal neurological events. Patients with all 3 of these features are said to have migraine with aura. 12

#### Etiology

Some people who suffer from migraines can clearly identify triggers or factors that cause the headaches, but many cannot. Potential migraine triggers include Physical or emotional stress.

- Changes in sleep patterns or irregular sleep
- Smoking or exposure to smoke
- Skipping meals or fasting
- Alcohol
- Menstrual cycle fluctuations, birth control pills, hormone fluctuations during peri menopausal period.
- Tension headaches

## **Incidence**

Migraine is believed to be a mixture of environmental and genetic factors. About 2/3 cases run in families. Migraine occurs 3 times more in women than men. Globally more than 10% of population is affected by Migraine at some point of life. 45 million Americans suffer from chronic headaches and 28 millions of them are victims of migraine. In global 35% of headaches are of migraines type.

#### **Pathophysiology**

Migraine is neurovascular disorder caused by stress, anxiety, certain odours, perfumes and diet. This is related to intracranial excitability of the cerebral cortex and abnormal control of pain neurons in the trigeminal nucleus of brain stem. Pain originates from intra or peri cranial tissues and is due to depolarization of peri vascular sensory axons i.e. sensory nerves innervating cephalic blood vessels. Local axonal release of vasodilating and permeability promoting peptides cause sterile inflammation in target tissues. Serotonin is a hormone and neurotransmitter, plays role in regulation of mood, sleep and takes part in biochemistry of depression, migraine and anxiety. It probably represents a paroxysmal alteration in cortical modulation pathways from the brain stem (especially seratoninergic projections). It occur in rare genetic disorders associated with mutation in calcium channel genes, suggests the possibility that the aura may be due to paroxysmal changes in the function of neuronal ion channels. The headache is caused by vasodilatation of extracranial vessels and may like the headache following an

epileptic seizure to be a non-specific effect of the disturbance of neuronal function.

#### Serotonin

This is chemically known as 5 Hydroxy Triptamine. A monoamine, neurotransmitter synthesized in serotinergic neurons of CNS, platelets, entero chromaffin cells in gastro intestinal tract and pineal gland. It affects the vascular tone cranial arteries. A lack of 5HT in brain is the cause of migraine attacks.<sup>13</sup>

## **Types of Migraine**

- 1. Migraine without aura
- 2. Migraine with aura
- 3. Opthalmoplegic Migraine
- 4. Retinal Migraine
- 5. Childhood periodic syndromes that may be precursors or be associated with Migraine.
- 6. Migraine with complications including status migrainous and migrainous infarction.

Of these 1 and 2 are common types. The risk is high in people who have migraine with aura. Aura:  $1/3^{rd}$  of people with migraine perceive an aura-warning sign for coming headache. Visual aura is sensitive to bright light, television, sensory aura consists of tingling or numbness of body parts represented in sensory cortex like lips, tongue and upper limb. Cortical spreading depression causes bursts of neuronal activity followed by a period of inactivity and flow to the cerebral cortex.

#### Pain

Pain is due to CNS structures-brain stem and diencephalon. Role of peripheral activation of sensory nerves that surround the blood vessels of head and neck causing vasodilatation is significant.

## Diagnostic criteria

At least 3-5 attacks with-lasting 4-72 hours, unilateral location, pulsating quality, moderate to severe in intensity, aggravation by exercise. During headache nausea/vomiting or photophobia/phonophobia symptoms are present.

## Treatment of Ardhavabhedaka w.s.r. to Migraine

Sodhana therapies, shamana therapies, preventive measures, rasayana sevana, brumhana dravya sevana, nasya karma. <sup>14-17</sup>

## Sodhana therapy

Ghrutha pana with medicated ghee eg. Sukumara ghrutham, Mayura ghrutham. Vamana karma and virechana karma (Inducing vomiting and purgation depending upon doshas).

#### Nasya karma

The best treatment for Ardhavabhedaka is Nasyam, nose is the gate way to brain. The olfactory nerves entering olfactory mucosa of nose carry the sheaths of dura, arachnoid and pia with them. They directly enter into the brain. Olfactory striae are extensively connected to the limbic system. Stimulation and nourishment of nerve endings through nasya alter the pathology of Migraine. Shadbindu thailam, Anu taila, gunja thaila, varanadigana ksheeraghrutham and dashamula thailam are mentioned for nasya in Ardhavabhedaka. Prathimarsha nasya is devoid of complications and strict restrictions are

most beneficial. It is equal effective to nasya karma in long term use.

## Shamana therapies

#### Simple measures

Include consuming sugar with milk, sugar with coconut water, only cold water, ghrutha nasya. **Medicines** are Pathyadi shadanga quath, sira shooladi vazra ras, ardha nareeswar ras, suta sekhar ras, godanthi bhasma, pravala pishti and Cephagrain dual pack (oral and nasal), are trying to bring back the vitiated doshas to normal level on long term use.

#### Lepas

Saribadi, Maricha Bhringaraja is effective to correct extra cranial, neuro-vascular pathways. Take these drugs and made into fine paste and to apply on the affected part. Take equal quantities of vidanga, Krishna tila made into fine paste and to apply on the affected part. And also use avapeedana nasya of these drugs.

**Siro dhara** with dashamoola siddha kshiram.

#### Medhya rasayanas and brumhana dravyas

Guduchi, yashtimadhu, sathavari, brahmi, shankhapushpi, vacha, tagara and aswagandha are best medhya rasayanas. They act as anxiolytic, anti depressant and strengthen CNS by maintaining proper excitatory and inhibitory post synaptic potentials. Meat of wild animals, cereals with milk and ghee, snehapana after food counteract for tentative evidence of benefits for Magnesium, Riboflavin with vitamin B12.

#### **Preventive measures**

- 1. A head ache dairy can help to identify triggers for nidana parivarjana.
- Get up in "Brahmi muhurtha" because serotonin sets biological clock, controlled by thalamus. This is the equilibrium state of doshas and hormones to work right way.
- 3. Dinacharya and Ruthu charya appropriate habit of diet, exercise, meditation and lifestyle which bring physiological function back into balance and hormony, no drug is needed. To follow some of these are Siro abhyanga, pada abhyanga, nasya karma, karna poorana, chatra dharana, etc.
- 4. Adopt suitable measures according to ruthu and dosha. Avoid divaswapna, guru, seetha dravyas in vasantha ruthu. Avoid excessive exercise, pickles in grishma ruthu.

- 5. By worshipping God, elders, repetition of one hundred and eight sacred names of God give positive health and vitality and help in normal secretion of neuro transmitters in CNS
- 6. Following ethical regimen and code of eight conducts give balance and peace to mind. It is necessary for the maintenance of health of community.

#### **CONCLUSION**

Ardhavabhedaka with special reference to Migraine can be cured or aggravated according to individual life style. Following the ethical regimen migraine can be controlled. Ayurveda presents a striking alternative to the biochemical model of modern medicine. The treatment prescribed for Ardhavabhedaka w.s.r. to Migraine in Ayurveda controls secretion of serotonin and proved to be effective in prevention and management of Ardhavabhedaka. Changes in life style, diet, exercise and meditation are important than drugs.

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