Management of Arddhavabhedka or Migraine in Ayurveda

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INTRODUCTION
Migraine is now recognized as a chronic illness, the second most common cause of headache, not simply as a headache. Worldwide, migraines affect nearly 15% or approximately one billion people. It is more common in women at 19% than men at 11%. During adolescence migraines become more common among women¹ and this persists for the rest of the lifespan, being two times more common among elderly females than males². The word migraine is derived from the Greek word hemicrania, meaning “half of the head” because the pain of migraine often occurs on one side. Pain also sometimes spreads to affect the entire head. The term "migraine" refers to a syndrome of vascular spasms of the cranial blood vessels. It is usually an episodic headache that is associated with certain features such as sensitivity to light, sound or movement; nausea and vomiting often accompany the headache³.

In Ayurveda migraine is found to be identical to Arddhavabhedaka characterized by pain in half side of head⁴. Vagbhatra’s statement regarding arddhavabhedaka runs as follows: “Arddhe tumoordhanah sosarddhavabhedaka”. Vedana in half of the portion of the head is called arddhavabhedaka. A paroxysmal disorder characterized by visual and / or sensory phenomena in an aura associated with or followed by unilateral headache and vomiting. While this definition is satisfactory for ‘classical’ migraine, there are many patients who never experience an aura and in whom the headache is always bilateral. The single most characteristic and constant feature is that headaches occur in attacks, separated by intervals of freedom. If the condition becomes aggravated, it may even impasse the functions of the Nayana (eye) and Shrota (ear)⁵. In this present review we have tried to sum up the classical ayurvedic solution for arddhavabhedaka or migraine.

ETIOLOGY
Cerebral: Cerebral ischaemia followed by hyperaemia (spasm of blood vessels followed by dilation)
Ocular : Refractive errors
Allergy : Proteins, tobacco, chocolate, pollen
Psychological : Mental fatigue, anxiety
Endocrine : Serotonin
Age & Sex : Middle age / females

Other etiological factors:
- Rooksha ahara sevana (over indulgence of dry foods)
- Atiahara sevana (excessive intake of food)
- Vishamasanam (frequent & irregular intake of food)
- Pravata sevana (exposure to direct breeze)
- Avasya sevana (exposure to snow fall)
- Atimaithuna (excessive sexual indulgence)
- Vegadharana (superssion of physiological urges)
- Ativyayama (over exercising)
- Uchiarbhashana (loud speech)
- Seetamaruta sevana (exposure to cold air)
- Unwanted repetition of vamana and virechana karmas
- Atibhaya and krodha (Excessive fear and anger)

**PATHOLOGICAL CONDITIONs:**
The general pathology for migraine according to are over exposure to sun, snow, wind, inadequate sleep, suppression of natural urges, indigestion, looking continuosly in one object, keeping head in one direction more much time and too much loud speaking.

**Modern Explanation:**
There is a migraine "pain centre" or generator in the brain. A migraine begins when hyperactive nerve cells send out impulses to the blood vessels, causing them to clamp down or constrict, followed by dilation (expanding) and the release of prostaglandins, serotonin, and other inflammatory substances that cause the pulsation to be painful.

**Ayurvedic Explanation:**
The hyper action of the nerve cells and expansion and dilation of blood vessels are caused because of the Vata vitiation due to the above factors. This further vitiates Pitta and Kapha which causes the inflammatory process. People with migraines may inherit the tendency to be affected by certain migraine triggers, such as fatigue, bright lights, weather changes, and others.

Migraines seem to be triggered by external factors are:
- Emotional stress:
- Sensitivity to specific chemicals and preservatives in foods:
- Caffeine: Excessive caffeine consumption or withdrawal from caffeine
- Alcohol: Excessive caffeine consumption or withdrawal from alcohol
- Changing weather conditions:
- Other factors: Menstrual periods, excessive fatigue, skipping meals, changes in normal and sleep pattern.

**MIGRAINES: RISK AND CO-EXISTING CONDITIONS:**
There are some medical conditions that are more commonly associated with migraines, including Asthma, Chronic fatigue syndrome, Hypertension, Raynaud's phenomenon (occurs when blood vessels narrow causing pain and discoloration usually in the fingers), Stroke and sleep disorders.

**SYMPTOMS OF ARDDHAVABHEDKA:**
- Pain in arddhavabhedaka will be severe as though cutting by a sharp weapon or churning by a churner. Pain (toda, bheda, bhrama) is felt in half of sira. A pounding or throbbing headache that often begins as a dull ache and develops into throbbing pain. The pain is usually aggravated by physical activity. The pain can shift from one side of the head to the other, or it can affect the front of the head or feel like it's affecting the whole head.
- Sensitivity to light, noise, and odours
- Nausea and vomiting, stomach upset, abdominal pain
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- Loss of appetite
- Sensations of being very warm or cold
- Paleness
- Fatigue
- Dizziness
- Blurred vision
- Diarrhoea
- Fever (rare)

Most migraines last about 4 hours although severe ones can last up to a week. The frequency of migraines varies widely among individuals. It is common for a migraine sufferer to get 2-4 headaches per month. Some people, however, may get headaches every few days, while others only get a migraine once or twice a year.

Other syndromes causing arddavabhedaaka like symptoms which are described in ayurvedic classics:
1. Anyatovata (Netrarogal Eye disease): Pain in manya akshi and sankha regions. According to Susruta severe pain is felt at karna, manya, hanu, greeva,netra and bhrur regions.
2. Vataparyayam (Netrarogal Eye disease): (a) Severe pain is left in pakshma, akshi and bhrur regions. (b) Drishtinasa is seenas complication.
3. Adhimantha (Netrarogal Eye disease): Headache is a predominant symptom especiallyis vataja type adhimantha. (a) Siroantarvedana, (b) netravedana, c) karmanada, bhrama and lalta bhrur vedana, (d) Sankha/danta, kapola, kapalasthi ruja are seen in raktaja adhimantha.
4. Vataja ahishyanda (Netrarogal Eye disease): (a) Nistoda, stambhana, romaharsha, sirobhitapa. (b) Pain is felt at sankha, lalta bhrur and akshi.
5. Ardhitavata (Vatarogal Disorder of nervous system): Pain is felt inhalf of the portion of face and head with other associated symptoms.

TREATMENT:
Treatment approach in Ayurveda is different from other medical systems. Ayurvedic treatment is not for the disease but it is for the particular condition of disease of the individual. Treatment and preparation will change according to the disease condition and individual. Internal preparations, external treatments and Panchakarma (purification) treatments are adopted for treating Migraine. This is done after a detailed diagnosis according to Ayurvedic methods. History of the disease with duration, previous disease history, mental state, pattern of sleep, appetite, foodhabits, activities, analysing the sense organs, analysing the pulse, character of stool and urine, menstrual history, etc are examined in detail. This helps to get knowledge regarding the involvement of Dosha and the intensity of the disease. Treatment is done according to these two factors.

Internal preparations:
Various herbal preparations as decoctions, powders, tablets, tonics are administered if the disease is not chronic. These preparations act directly on the upper part of the body especially in the head. This action is due to the special Ayurvedic properties like Rasa, Guna, Veerya, Vipaka and Prabhava. Study shows the combined effect of ShadbindutaNasya along with Shamana Yogas i.e; Abhrakabhasma, Prawalapishti, Godantibhasma, Shirahshuladvajrara Rasa, Pathyadi Kwatha in the management of Ardhuvaahedaka. Another combination found significant result: Narikela Lavana, Sootashkhara Rasa, SitopaladChurna, Rason Vati and Godanti Mishran; treatment should be continued for 3 months. Significant relief was found in associated symptoms, and good improvement in stress was also seen.

External treatments and panchakarma:
External treatments along with the internal preparations are very effective in chronic conditions. Various kinds of paste over the forehead help for the sudden relief from the ache. The preparations help to normalize the hyper action of the nerve cells and regulates the blood circulation towards the brain. Special treatments like Sirodhara, Thalam, Sirovasty, Talapodichil, etc which is developed from Kerala helps to nourish the nerve system and there by the action of Vata is normalised. Involvement of other systemic disorder is also taken into account and treatment is done.

In chronic Migraine toxic materials will be deposited in the head and affects the function of sense organs. Due to this perception of sense organ is affected causing sensitivity to light, sound, odour and mood changes. Panchakarma helps to remove these toxins and help to strengthen the nerve system. Nasya (application of herbal preparations through nostrils) is one of the treatments which directly acts on the nerves and removes the toxins accumulated in the sinuses. Mucus coating inside the nostrils are one of the areas where numerous
nerve endings are exposed. The medicated oils applied through Nasya directly acts on these nerve endings and help to pacify Vata. The special preparations used for Nasya drains the mucus deposited in the sinuses there by the pressure in this area is relieved. Other Panchakarma treatments like Vasti (enema), Virechana (purrgation) also helps to put the toxins out from the body.

After the purification treatment special preparations called Rasayana (immuno regulatory) is administered. Rasayana preparations improve the immune system further improving the perception of sense organs. Migraine due to other systemic involvement like psychological problems, digestive problems, blood pressure, ophthalmic problems, immune problem, improper menstruation, etc will be relieved when treated according to the specific treatment told for these diseases.

**Yogic treatment:**
Yoga and meditation is very important factor for management of migraine. As it facilitates the blood circulation throughout the body; enhances the flow of oxygen in blood, and helps to maintain a good body physiology and mental consciousness. Yoga helps to manage stress positively, some important postures are illustrated in Fig. 3.

Fig 3: Important yogic postures for the management of migraine

**OTHER ACTIVITIES FOR CONTROLLING MIGRAINE:**

Improper activity can trigger or aggravate Migraine. Proper knowledge about activities helps to reduce intensity during the attack. It is advises to find methods to relax mind and body. Hearing music, meditation, talking with likeminded persons, other deeds which help to relax should be adopted. Exposure to excess wind, cold, sunlight, etc are not advisable. Smoking and usage of alcoholic beverages are not preferable. Taking head shower in cold water, not drying the hair in a proper way, exposing head to warm weather or sunlight without proper drying and immediately after taking shower, taking cold water shower after coming from warm temperature, taking shower before digesting the food, etc can create the pathology. Staying is less oxygenated room, working with computers for long duration, continuous work which produce strain to the eyes and brain, recurring thoughts, etc should be reduced or avoided.

**SOME CLINICAL STUDIES:**
(1) An Ayurvedic Treatment Protocol (AyTP) comprising five Ayurvedic medicines, namely Narikel Lavan, Sootshekhar Rasa, Sitopaladi Churna, Rason Vati and Godanti Mishran along with regulated diet and lifestyle modifications such as minimum 8 h sleep, 30-60 min morning or evening walk and abstention from smoking/drinking, was tried for migraine treatment. The duration of the therapy was 90 days. Out of 406 migraine patients who were offered this AyTP, 204 patients completed 90 days of treatment. Complete disappearance of headache and associated symptoms at completion of AyTP was observed in 72 (35.2%); mild episode of headache without need of any conventional medicines in 72 (35.2%); low intensity of pain along with conventional medicines in 50 (24.5%); no improvement in seven (3.4%) and worst pain was noted in three (1.4%) patients, respectively. In 144 (70.5%) of patients marked reduction of migraine frequency and pain intensity observed may be because of the AyTP.

(2) A combination of five classical ayurvedic formulations (Narikela Lavana, Sootashekhara Rasa, Sitopaladi Churna, Rason Vati and Godanti Mishran) has been employed as prophylactic remedy for migraine. These ayurvedicformulations (AYFs) contain certain Bhasma and plant materials. An investigation was initiated to evaluate
safety profile of these AYFs in Sprague Dawley rats and Swiss Albino mice following OECD guidelines. Acute toxicity studies were done after ingestion of 5 g/kg of AYFs in a day in both the animal species. Sub acute toxicity studies were carried in five different groups in which AYFs was administrated in various doses ranging from 1.47 – 6.48g/kg for mice and 0.7 – 7.45 g/kg for rats. The highest dose were 10 times higher that the recommended human dose. Detailed hematological, biochemical, necropsy and histopathological evaluation of organs was performed for all animals. The AYFs was well tolerated and no toxic manifestations were seen in any animal. Mortality observed in high dose groups; 4% in rats and 6% in mice was not related to treatment. The AYFs was found to be safe in animals. However, chronic toxicity studies are required to know the long term safety of these AYFs.

(3) A clinical study was conducted on 30 cases presented with classical features of ardhavabhedaka (migraine) to evaluate the effect of nasyakarma with along with internal medications of results were highly encouraging. Nasya karma with from Devdali Churna (Luffa Echinata) to inhale in each nostril for seven days. A formulation of Lavandula stocohas, Coriandrum sativim and Piper nigrum in powder form was given before sunrise at an interval of 30 days. Complete relief was found in 25% cases, marked relief in 15% cases, moderate relief in 10% cases, mild relief in 30% cases and no relief was observed in 20% cases. Results were highly encouraging and free from adverse effects.

(4) The objective of the study was to assess the combined effect of Shadbindutaila Nasya for 7 days, along with shamanaya yoga selected for the study i.e abhrakabhasma- prawalapishthi-godantibhasma, Shirashuladivajrarasa, Pathyadishadangakwatha in the management of Ardhavabhedaka. 50 patients were assigned in a single group and the intervention was for a period of 48 days. Data was collected before commencement of treatment after Nasya karma. On 21st day, 35th day and on 48th day of the study period. Results were statistically analyzed before and after the treatment. Significant results were obtained on severity and duration of headache and frequency of attack. Significant relief was found in associated symptoms, and good improvement in stress scores was established at the end of treatment. Overall assessment showed complete relief in 24 patients, marked relief in 21 patients and 5 patients got moderate improvement. The Treatment modality adopted was highly effective on Ardhavabhedaka. Most of the patients experienced maximum benefits at the end of the treatment schedule.

CONCLUSION:

Migraine has become a challenging problem to the present day physician. Ayurveda believes in cleaning the body from within and eradicating the disease from its roots. Ayurvedic treatment of migraine therefore is centered on the pacification of Pitta Dosha, and restoration of digestive function in the body. Along with selective ayurvedic medications and panchakarma therapy, ayurveda also considers following as key factors to control migraine:

- Balancing the nervous system activity
- Use of diet to prevent Tridosha imbalance
- Stress management
- Selective yogic exercise
- Meditation

REFERENCE: