

Migraine and its ayurvedic treatment

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ABSTRACT: Migraine headache is one of the most sever type of headache. A large percentage of patients fail pharmaceutical treatment for acute migraine attacks or preventing measures. Migraine sufferers can benefit from alternative therapies [biofeedback, acupuncture, supplement, massage therapy, relaxation therapy]If they do not respond to conventional therapy, develop unwanted side effects or are reluctant to take allopathic medications. Unlike the western allopathic approach of one-side-fits-all, Ayurveda treat the root cause of imbalance by addressing each patient's unique constitution and illness. Headache in Ayurveda are classified based on Doshic involvement [body mind spirit]. Migraine is mostly a vata-pitta dosha or tridoshic condition but it can also be triggered by any one of the individual doshas. Ayurveda believes in treating the disease at its root cause from within. Therefore treatment focus on balancing the vitiated dosha [s] in the digestive and nervous system. This can be achieved by avoiding triggers and prescribing doshic – specific diet, stress management [meditation, relaxation technique breathing exercise, yoga and mantra], herbal formulas, lifestyle modification, panchakarma and other holistic modalities to create a balanced physiology. This state of complete balanced in healing the body and mind, can allow the illness to resolve and symptoms disappear.

I. INTRODUCTION:

Headache disorder, characterized by recurrent by headache, are among the most common disorders of the nervous system. Headache itself is painful and disabling feature of small number of primary headache disorders, namely migraine, tension type headache, and cluster headache. Amongst these, the migraine headache is ubiquitous prevailing, disabling and essentially treatable but still under estimated and under treated.

Migraine is common headache disorder characterized by recurrent attacks lasting 4-72 hours, of pulsating quality, moderate and sever

intensity aggraded by routine physical activity and associated by nausea, vomiting, photophobia

It has been termed seventh disabler due to its considerable impact on quality of life of patient it is most frequent cause of headache in children and adolescents. The study of migraine in pediatric population is critical because of burden on children and their families and the diagnostic and therapeutic difficulties determined by varying phenotype and possible differentia, diagnosis.



Migraine diagram

SYMPTOMS OF MIGRAINE:

Migraines, which often begin in childhood ,adolescence or early adulthood , can progress trough four stages: prodrome, aura, attack and post-drome .Not everyone who has migraines goes through all stage .

Prodrome

One or two days before a migraine ,you might notice subtle changes that warn of an upcoming migraine ,including:

- Constipation
- Mood changes, from depression to euphoria
- Food cravings
- Neck stiffness
- Increased thirst and urination
- Frequent yawning



AURA

For some people, aura might occur before or during migraines. Auras are Reversible For some People, aura might Occur before or during migraines.

Auras are reversible symptoms of the nervous System. They're usually Visual, but can also include Other disturbances. Each symptom usually begins gradually, build up over several minutes and lasts for 20 to 60 minutes.

Examples of migraine aura include:

- Vision Loss
- Pins and needles sensations in an arm or leg
- Weakness or numbness in the face or one side of the body
- Difficult speaking



Attack

A migraine usually lasts from four to 72 hours if untreated. How often migraines occur varies from person to person. Migraines might occur rarely or strike several times a month.

During a migraine, you might have:

- Pain usually on one side of your head, but often on both sides
- Pain that throbs or pulses
- Sensitivity to light, sound, and sometimes smell and touch
- Nausea and vomiting



Post-drome

After a migraine attacks, you might feel drained, confused and washed out for up to a day. Some people report feeling elated. Sudden head movement might bring on the pain again briefly.



CAUSES OF MIGRAINE:

A migraine headache generally results from genetics or certain environmental factors. The exact root cause of migraine headaches is not entirely known. However, doctors believe they are related to the enlargement of blood vessels and the release of specific chemical which produce the headache. For instance, the chemical serotonin and dopamine are considered to be associated with migraine headaches. They are found in the brain and control the blood vessels to act normally, except when they appear in abnormal concentrations.

Pain regulation in nervous system is controlled by serotonin, thus the reduction of the chemical during migraine attacks.

- Family history of migraine headaches (70-80%)
- Medications (birth control pills, vasodilators)
- Fatigue or emotional stress
- Specific foods or alcohol and caffeine

- Exertion
- Lack of sleep
- Noise, light, diet

A. Foods

Migraines can be triggered by certain foods such as, aged cheeses, chocolate, aspartame, and nuts. Certain chemicals present in food such as monosodium

B. Stress:

Elevated levels of emotional or physical stress might trigger the onset of migraine headaches.

C. Sleeping pattern changes

Changes in sleeping patterns such as, inadequate sleep are possible triggers for migraine headaches.

D. Medication

Some medicines can intensify migraine attacks. At the end of the birth control pill cycle, women may experience migraine due to the cessation of metabolism of oestrogen components in the pills.

II. TYPES OF MIGRAINE:

The classification of migraine is closely related to the symptoms they cause. There are symptoms specific to each type and are usually known by the body part they affect. The two most common types of migraine are migraine with aura [classic migraine], and migraine without aura [common migraine]. The next section explains the type of migraine in detail.

A. Migraine with aura [classic migraine]

Aura is a visual disturbance which occurs in approximately 20% of migraine attacks. It is known as a neurological disturbance that presents with random flashes of light. Hallucination, blind spots, zigzag figures of light, and photophobia, which means sensitivity to light. Generally, it starts 5-30 min before the actual onset of the migraine headache. It makes the person see a glow around objects or at the margin of the vision area. In addition, it is reported that patients have blurred vision, and difficulty focusing [appendices 1 and 2].



Migraine with aura

B. Migraine without aura [common migraine]

As the name suggests, migraine without aura, presents itself with symptoms similar to that of migraine with aura, such as vomiting, nausea, sensitivity to light and noise, but does not present with aura. It often occurs unilaterally or bilaterally.



Migraine without aura

C. Hemiplegic migraine

There is generally a family history of hemiplegic migraine in patients of these types of migraine. This is a rare but extreme type of migraine with a presentation aura. Hemiplegic migraine usually starts with short-term numbness on one side of the body. These symptoms are followed by the headache itself when the headache presents itself, the early neurological symptoms may recede.



Hemiplegic migraine

D. Ophthalmoplegic migraine

An ophthalmoplegic migraine causes pain around the eyeballs and the paralysis of the optical muscles and also results in the dropping of eyelids. This type of migraine, although very rare, can last from a few days to a few months in some bad cases.



Ophthalmoplegic migraine

E. Basilar artery migraine [Bickerstaff's syndrome]

It is more prevalent amongst young adult women. In this type of migraine the circulation of blood at the back of the brain or neck is affected. Other associated symptoms include dizziness, loss of balance, disorientation, slurred speech, vertigo, double vision, vomiting, nausea such migraines may last for a few hours to a few days.



Basilar artery migraine

F. Abdominal migraine

This type of migraine is generally observed in children who have a family history of migraine. As the pain is felt in the abdomen the recognition of migraine is difficult. This pain is not caused by gastrointestinal problems.



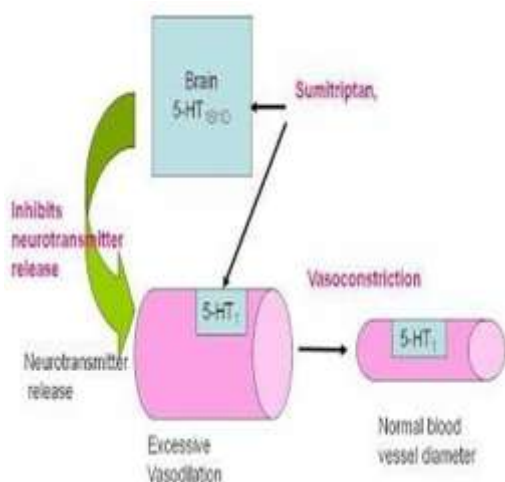
Abdominal migraine

PHARMACOLOGY OF MIGRAINE:

Migraine may be tentatively regarded as a hereditary, paroxysmal, vasoregulative instability, and is characterized by episodes during which there is often a phase of intra-cerebral arterial constrictions and a phase of extra cerebral arterial dilatation. The two phases often occur sequentially, but also commonly appear concurrently

Although substantial data have been generated describing the vascular alteration that characterized migraine attacks, the mechanism by which these phenomena occur remain enigmatic.

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 8h sleep, 30-60 min morning or evening walk and abstention from smoking/drinking.



TREATMENT OF MIGRAINE:

Treatment for migraine helps to stop migraine symptoms and it also helps to prevent future attacks. To treat migraine many medications have been designed.

Medications used to combat migraine falls under two broad categories such as pain -relieving medication, preventive treatment and complementary treatment.

Pain-Relieving medication/treatment: It is also called as acute treatment. It is the treatment which is generally used to stop an attack when it begins.

Drugs for acute treatment

Pain killer or pain relievers are commonly used for Migraine but most of these drugs are only available in prescription strength. These drugs are non-steroidal anti-inflammatory drugs which help in relieving pain and reducing inflammation [NSAIDS]. drugs specifically for migraine or headaches in general combine with small amount caffeine, which helps the drugs to make them work more quickly and more effectively; especially in case of mild migraine headaches.



Drug for acute treatment

Triptans

Triptans are newer class of drugs which increases the serotonin level in brain . These medication are often used in treating migraines. Triptans helps to constrict the blood vessels and block the pain pathway in brain, which effectively relieve pain and other symptoms associated with migraines. These available in pills , nasal spray, injections and tablets which dissolve under tongue and work quickly to stop migraine.



Triptan

Ergotamines

Ergotamine’s were the first class of drugs used specifically for migraines.

These drugs help in causing blood vessels around the brain to contract and relieve migraine within few minutes. Ergotamines are available in tablets that dissolve under tongue, pills, suppositories, nasal spray and injections. Ergotamines are generally taken at a first sing of headache symptoms, and some have the option to take additional doses every 30 minutes if the headache continues.



Ergotamines

opoids

If migraine patient do not respond to other pain killers and the patient can’t take ergotamine or triptans, doctors may prescribe opoids. Opoids are more powerful than painkiller. Most of migraine drugs are combination of painkillers and opoids. Some examples of opoids are as follows: Codeine, Meperidine (pemerol), morphine and

oxycodone.



Opioids

Anti-Nausea Drugs

These drugs help in reducing vomiting and nausea that accompany severe migraines. These drugs are usually taken along with pain-killers as these medications do not reduce pain. Some examples of anti-nausea drugs are as Maetaclopramide, prochlorperazine(compazine), promethazine(phenargan). These drugs produce side effects such as drowsy, less alert or dizzy.



Anti-Nausea drug

Drugs for Preventive Treatment:

If a patient experiences migraines frequently, to reduce the intensity of migraines doctor may prescribe a preventive drug. These drug are usually taken on a regular basis, usually daily and one may be prescribed alone or in combination with other drugs. These drugs show their effect within several weeks or months. Drugs used for preventive treatment are Beta-blocker, Calcium channel blockers, Anti-depressants, Anti-convulant.



Drug for preventive treatment

Beta Blocker:

Beta Blocker are usually prescribe for the patient suffering from high blood pressure, beta blocker help in decreasing the effect of stress hormones on heart and blood vessels. These drugs also help to reduce not only the frequency but also intensity of migraine Some of the beta blocker are: atenolol(tenormin), metaprolol(toprolIXL), nadolol (Iorgard)49 These drugs show some side effect such as: Fatigue, Dizziness, Insomnia, Nausea and Depression.



Beta blocker

Calcium Channel Blockers:

Calcium channel blocker drugs are drugs related to blood pressure which moderate the contraction and dilation of blood vessels, which play an important role in migraine pain. Diltizem(cardizem, cartiaXT, dilacor), Nimodipine (nimotop) and verapamil (verelan, covera, calan). Side effect of calcium channel blockers are as below: Low blood pressure, Weight gain, Dizziness, Constipation.



Calcium channel blockers

Anti-Depressants:

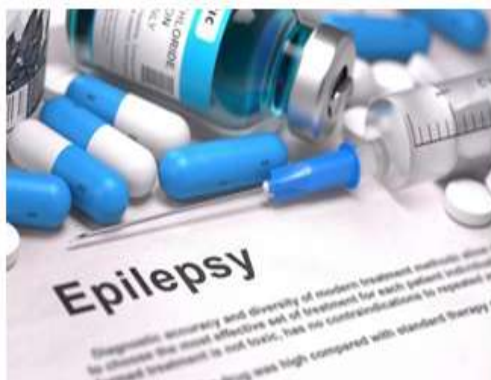
Serotonin and various brainchemical level are affected by anti-depressants. Increase in level of serotonin can constrict blood vessel and reduce inflammation which helps to alleviate migraines. Some anti-depressants are as follows: Amiripyline (Elavil, endep), Fluoxetine (prozac, sarafem), Imipramine (tofranil), and sertraline (Zoloft). Side effects of anti-depressants include weight gain and decreased libido.



Anti-depressants

Anti-convulsants:

These drugs help in preventing seizures caused by epilepsy and other conditions. These drugs alleviate migraine symptoms by calming overactive nerves in brain. Some anti-convulsants are: Divalproen sodium (depakote), levetiracetam (keppra), gabapentin (neurontin), Zonisamide (zonegran). Side effects due to anti-convulsant drugs are nausea, vomiting, diarrhoea, sleepiness, blurred vision, weight gain, and dizziness.



Anti-convulsant

Preventive medications/Treatment:

It is a therapy which is used to lessen the intensity of pain, reduce the number of attacks and to prevent onset of future attacks. These drugs are usually taken often daily, regularly to reduce frequency of migraines. Treatment strategy for migraine depends upon frequency and severity of headache. Some medications aren't recommended if the patient is breast-feeding or pregnant.

Complementary treatment: It is non-drug therapy which is used mostly for prevention. In some patients, life-style changes and other complementary treatments can prevent the triggering of migraine attacks.



Preventive medications/treatment

Vascular Theory:

In 1940s and 1950s vascular theory was proposed to explain the pathophysiology of migraine headache. According to Wolff we believe that ischemia induced by internal vasoconstriction is responsible for the aura of migraine and that the succeeding rebound vasodilation and activation of perivascular nociceptive nerve results in headache. This theory was based on following observation, extracranial vessel become expanded or swollen and pulsatile during a migraine attack. Headache is induced in an awake person is due to stimulation of intracranial vessel. Vasoconstrictors such as ergots lessen headache, whereas vasodilators such as nitroglycerine induce headache.

However, this theory associated features and prodrome. Because of new imaging technologies researchers found intracranial blood flow pattern was inconsistent. Flow changes had been identified. There is bilateral decrease in regional cerebral blood flow, beginning at occipital cortex and spreading anteriorly. More recently, paracetamol has shown, migraine has been identified by cardiac autonomic

dysfunction. Because of these anomalous, researchers, finding vascular theory was replaced by neurovascular theory.

Neurovascular Theory:

Neurovascular theory holds that a complex series of vascular and neural events begins migraine. This theory states that migraine is primary and neurological process with secondary changes in cerebral cortex, especially in occipital cortex. This had been found in studies of transcranial magnetic stimulation and with functional magnetic resonance imaging (MRI).

PHYSIOTHERAPY OF MEDITATION:

There are nine popular types of meditation:

- Mindfulness meditation.
- Guided meditation.
- Yoga meditation.
- Movement meditation.
- Mantra meditation.
- Transcendental meditation.
- Progressive relaxation.
- Loving-kindness meditation.

1. Mindfulness meditation:

Maintain a moment-by-moment awareness of our thoughts, feeling, bodily sensation, action and surrounding environment. Living in the moment and awakening to experience.

Observe thoughts and feelings from a distance, without judging them good or bad.



2. Guided meditation:

Guided meditation is, in great part, a modern phenomenon. It is an easier way to start, and you will find guided meditation based on several of the above traditions.

The practice of meditation requires some dose of determination and will power. In the past, people that were in to meditation were more committed to it, and also had strong ideals fuelling there

motivation. There life was more simple, with less distractions.



3. Yoga meditation:

There is not one type of meditation which is “yogic meditation”, so here it is meant the several meditation types taught in the yoga tradition. Yoga means “union”. Tradition goes as far as 1700 B.C, and as its highest goal spiritual purification and self-knowledge.



4. Mantra meditation:

A mantra is a syllable or word, usually without any particular meaning, that is repeated for the purpose of focusing your mind. It is not an affirmation used to convince your self of something.

Some meditation teachers insist that both the choice of word, and its correct pronunciation, is very important, due to the “vibration” associated to the sound and meaning, and that for this reason an initiation into it is essential.



5. Loving-kindness meditation:

Living under such conditions being impossible, the monks went to the master and information him of there difficulties. There on the Buddha instucted them in the Metta Sutta and advised their return equipped with this Sutta for their protection.

AYURVEDIC TREATMENT FOR MIGRAINE

There are a number of ways that Ayurveda can bring balance to life and treat the root cause of headache and migraine in particular. In addition to specific treatment option for each type of headache, we can use other modalities to treat migraine headaches.

1. Diet modification:

A. Dosha specific nutrition: Depending on the dosha[s] involving in headache and aslo the patient constitution, the patient must be instucted to eat a diet that pacifies the aggravated dosha.

Table-1: Dosha pacifying nutrition for Vata,pitta,kapha

Food list	Vata pacifying diet	Pitta pacifying diet	Kapha pacifying diet
Fruits	Have more: sweet fruits, grapes Have less: raw fruits, watermelon.	Have more: dark grapes, melons Have less: papaya, pineapple.	Have more: apples, berries Have less: lemon, pineapples.
Seeds	All seeds in maderation.	No seeds except sunflower.	No seed except sunflower.
Dairy foods	All dairy products in morderation.	More: ghee, milk Less: butter milk, yogurt.	No Dairy products except ghee, goat milk.

Oils	All oils are good particularly olive, ghee.	More:coconut, sunflower Less: almond,corn.	No oils except almond,corn in small amounts.
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B. Avoiding or minimizing migraine trigger foods: Migraine trigger foods can be different in every individual and finding these

trigger foods can help to minimize migraine headaches. This confirms the Ayurvedic perspective of dosha specific diet for each individual.

Table-2: Law Tyramine Headache Diet.

Food group	Allowed	Use with caution	Avoid
Dairy	Milk,cheese.	Buttermilk,sour cream.	Aged cheese: blue, brie, mozzarella.
Fats, oils, miscellaneous	All cooking oils and fats, white vinegar,commercial salad dressing with allowed.	Wine, apple or other fermented vinegars.	

2. Lifestyle modification:

Migraine and other type headaches can be prevented by schedule,eating routing and working habits and avoiding migraine triggers can reduce the frequency and severity of migraine headache.

3. Yoga for haedache:

Stress is an important factor in creating both migraine and tension headaches, yoga can without doubt help in preventing these types of headaches.Yoga can also help with tension in the muscle of the neck,back and head which contribute to headaches.Yoga helps to realease tight muscles and improve blood circulation in that region.

4. Meditation:

Stress is a major contributor to both tension and migraine headaches.AH-OM Breath maditation can reduce stress.In this meditation,sit in comfortable position.There are many types of types of meditations are available.

5. Pranayama (Breathing exercise):

Different types of breathing exercises have different effects of the body,mind and spirit.Breathing practices purify nadis.If the headache is due to vata vitiation,one can benefit from alternate nostril breathing.If the headache is due to pitta vitiation,doing lunar and shitali pranayama can help and if due to kapha dosha vitiation,solar and kapalabhati pranayama can be beneficial.

6. Soothing nose drops:

Putting about 5 drops of brahmi ghee in each nosril can alleviate the pain of migraine headache. In vata -type headaches, placing 3-5 drops of warm ghee in each nostril can heip to calm down the headache.

7. Color and gem therapy :

In Ayurveda,the energetic qualities of colors can be used in healing headache Therefore,one with vata-type headache can use more orange,yellow,green,gold,brown and purple.The person with pitta-type headache can focus more on using blue,white,brown and violet.Kapha-type headache patients can add more yellow,green,gold,blue,white and violet.

8. Herbal pastes for headaches:

A mixtureof herbal essential oils can help to alleviate headache Peppermint essential oil in massage oils and balm can with help with migraine. Combine the following essential oils in a base oil (almond, coconut or sesame oil) for quick relief of headache:5 parts ecalyptus oil, 1 part menthol crystals, 1part camphor. Dr Lad in the book The Complete Book Of Ayurvedic Remedies, suggests making a paste by adding 1/4 teaspoon nutmeg powder to some water and applying it to the forehead and leaving it for 30 minutes. For pitta-type headache a cooling paste can be made by mixing sandalwood powder with water. One can apply this paste to forehead and temples and leave it on the skin for half to one hour before rinsing.

9. Aromatherapy:

Essential oils can enter the body through the skin, nasal passages, bronchioles, lungs and gastrointestinal tract.

A. Vata-type headaches require essential oils which have the qualities of wet, heavy, calming and warming. This is due to the blight, dry, mobilke and cold nature of the vata dosha. If vata is due to obstruction of channels of the body, pungent essential oils can help. These include:

a) Heating alteratives to remove the accumulation of toxins and purify blood. (e.g. clary sage, sandalwood, etc.).

b) Heating carminatives help to normalize and move the obstructed vata in the digestive tract. (cumin, cinnamon, ginger).

c) Mild warming diaphoretics induce sweating, eliminating toxins, increasing circulation and reducing muscle tension and aching joints (camphor, oregano, eucalyptus).

d) Heating nervines to strengthen the nervous system and improve mental health (lemon balm, myrrh, nutmeg, etc.).

e) If vata is caused by deficiency, nutritive herbs need to be given to build tissues such as emmenagogues (pennyroyal) and nutritive aphrodisiacs (aloe).

B. Pitta-type headaches: Due to the hot and wet nature of pitta, it can be treated with cooling, heat dispelling, drying, nutritive and calming oils. These include

a) Cooling diaphoretic oils to dispel heat and inflammation (chrysanthemum, yarrow).

b) Astringent oils reduce discharge and tighten the tissues or stop bleeding (calendula, yarrow).

c) Cooling alternative purify the blood and fight infection (spearmint, immortelle).

d) Bitter tonics destroy toxins (aloe vera, neem).

e) Colling carminative are aromatic spices (fennel, Peppermint).

f) Cooling emmenagogues to regulate female cycle (carrot seed, jasmine). g) Cooling nervines are calming to the mind (gotu kola, Sandalwood).

h) Nutritive tonics (neroli, spikenard).

I) Rejuvenatives renew the body and mind (brahmi, rose). J) Antipyretics reduce pitta's fire (neem).

C. Kapha-type headaches: They can be treated with warming, drying, lightening and stimulating

therapy.

a) Diuretics to reduce water (coriander, parsley).

b) Diaphoretic oils to eliminate water through sweating (eucalyptus, cloves).

c) Cooling diaphoretics (peppermint, spearmint). d)

) Heating nervines (basil, calamus).

e) Astringent oils to reduce water and congestion (sage). f) Expectronant to clear out bronchioles

(bay, camphor).

III. CONCLUSION:

Migraine is a common cause of headache, early diagnosis and prompt treatment of migraine enhances the quality of life; prevent conversion of episodic migraine to chronic migraine. As there is growing interest in pathophysiology, new armarium targeting the different pathways are being discovered.

Migraine is a disabling disease. Migraineurs are usually prescribed multiple preventive and acute therapy medication to deal with recurrent headaches.

Migraine sufferers are seeking alternative [nonpharmacologic] therapies to alleviate migraine headaches. The healing science of Ayurveda opens new doors for treatment of migraine and other types of headaches.

REFERENCES:

- [1]. World Health Organization. WHO Fact sheet, 2016; 1-2.
- [2]. World Health Organization. Neurological disorders: a public health approach. Neurological Disorders: public health challenges, 2006; 41-176.
- [3]. Rogawski MA. Common pathophysiologic Mechanisms in Migraine and Epilepsy. Arch Neurol, 2008; 65(6): 709-14.
- [4]. Mallaoglu M. Trigger factors in migraine patients. J Health Psychol 2012; 18(7): 984-94.
- [5]. William EM et al. Guidelines for the nonpharmacologic Management of migraine in clinical practice. Can Med Assoc, 1998; 159[1]: 47-54.
- [6]. Tepper ST et al. Mechanism of Action of the 5-HT_{1B} Antagonist. Arch Neurol, 2002; 59: 1084-8.
- [7]. Parsekian D. Medicine cabinet. West J Med. 2000; 173: 341-5.
- [8]. Tso ARI GP. New targets for migraine therapy. Curr Treat Options Neurol, 2014; 16 [11]: 318.
- [9]. Chan KI MA. Glutamate receptor antagonists in the management of Migraine. Drugs, 2014; 74(11): 1165-76.
- [10]. Khan S1, Schoenrrn J AM. Sphenopalatine



- ganglion Neuromodulation in migraine: what is rationale? *Cephalgia*, 2014; 34(5): 382-91.
- [11]. Belam J, Harris G, Kernick D, et al. A qualitative study of migraine involving patient researchers. *Br J Gen Pract*. 2005;55:87-93.
- [12]. Busch V, Gaul C. Exercise in migraine therapy - is there any evidence for efficacy? A critical review. *Headach*, 2008,48:890-899.
- [13]. Chaibi A, Tuchin PJ, Russell MB. Manual therapies for migraine : a systematic review. *J Headache pain* 2011;12(12):127-133.
- [14]. Darling M. Exercise and migraine. *J. Sports Med. Phys Fitness*, 1991;31: 294- 302.
- [15]. 15. Davis RC. Chronic migraine and chiropractic rehabilitation: a case report. *Chiropr Med*,2003;2(2): 55-59.