

## EFFICACY OF HOMOEOPATHIC MEDICINES IN THE CASES OF 'MIGRAINE' USING VISUAL ANALOGUE SCALE (VAS) SCALE

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### ABSTRACT

**BACKGROUND:** Migraine, the second most common cause of headache. It afflicts approximately 15% of women and 6% of men over a year period. It is the third most prevalent and seventh leading cause of disability worldwide. It is usually an episodic headache associated with features such as sensitivity to light, sound, or movement; nausea and vomiting often accompany with headache. The brain of the migraineur (person suffering from migraine) is particularly sensitive to environment and sensory stimuli. This sensitivity is usually amplified in female during the menstrual cycle. It can also be amplified by various triggers including glare bright light, sound, hunger, stress, physical exertion, hormonal fluctuation during menses, lack or excess of sleep. In the cases of migraine, homoeopathy may have promising result as it treats the person as a whole. For purpose of selection of curative medicine in Homoeopathy, principle of individualization is

considered. For individualization the characteristics symptoms and inner image of the patient is considered. **OBJECTIVE-** To assess efficacy of homoeopathic medicines in the cases of 'migraine' using visual analogue scale (vas) by comparing pre and post scores of VAS. **STUDY DESIGN-** Prospective, interventional clinical trial. **METHODS-** 30 cases of migraine were included from O.P. D/ I.P.D. of Dr. Girendra Pal Homoeopathic Hospital & Research Centre, Saipura, Sanganer, Jaipur, Rajasthan. Individualized Homoeopathic medicines will be selected after analysis, evaluation, and constructing totality of symptoms with repertorization from the Repertory from RADAR 10.0 and final reference from Materia medica. **RESULT-** study conducted on 30 patients. The incidence of migraine was found high

in 15-25 years of age group. Females were more afflicted with migraine. More common in middle socioeconomic status. After receiving Individualised Homoeopathic Medicine shows immense improvement and found very useful. It is very proficient in managing all symptoms and complications of migraine. **CONCLUSION-** In this study the role of Homoeopathic medicine is found very useful and it is very proficient in managing all symptoms and complications of migraine.

**KEYWORDS:** Migraine, Homoeopathy, VAS.

## INTRODUCTION

Migraine is a genetically influenced complex disorder characterized by episodes of moderate-to-severe headache, most often unilateral and generally associated with nausea and increased sensitivity to light and sound.<sup>[1]</sup> The word migraine is derived from the Greek word "hemikrania," later converted into Latin as "hemigranea." The French translation of such a term is "migraine."<sup>[2]</sup>

## EPIDEMIOLOGY<sup>[3]</sup>

Migraine is one of the most common neurological diseases worldwide, with the global prevalence of migraine being estimated to be 1.1 billion [95% uncertainty interval (UI): 0.98–1.3] cases in 2019.

The global prevalence of migraine has increased substantially over the last three decades

The prevalence of migraine was higher in females, than in males, across all age groups. In 2019, the global age-standardized prevalence rate in females and males were 17,902.5 (95% UI: 15,588.3, 20,531.7) and 10,337.6 (95% UI: 8,948.0, 12,013.0) per 100,000 populations, respectively.

The highest incidence rate and number of incident cases of migraine were in the age group 10–14 years, in both females and males. In 2019, while the number of YLDs started increasing from birth, they peaked in the 30–34 age group and then gradually declined for both sexes.

## SYMPTOMS.<sup>[4]</sup>

Migraine headaches often begin in childhood, adolescence or early adulthood. Migraines may progress through four stages, including prodrome, aura, headache and postdrome, though you may not experience all the stages.

**Prodrome**

One or two days before a migraine, you may notice subtle changes that signify an oncoming migraine, including.

- Constipation
- Depression
- Food cravings
- Hyperactivity
- Irritability
- Neck stiffness
- Uncontrollable yawning.

**Aura**

Aura may occur before or during migraine headaches. Auras are nervous system symptoms that are usually visual disturbances, such as flashes of light. Sometimes auras can also be touching sensations (sensory), movement (motor) or speech (verbal) disturbances. Most people experience migraine headaches without aura. Each of these symptoms usually begins gradually, builds up over several minutes, and then commonly lasts for 20 to 60 minutes. Examples of aura include.

- Visual phenomena, such as seeing various shapes, bright spots or flashes of light
- Vision loss
- Pins and needles sensations in an arm or leg
- Speech or language problems (aphasia)
- Less commonly, an aura may be associated with limb weakness (hemiplegic migraine).

**Attack**

When untreated, a migraine usually lasts from four to 72 hours, but the frequency with which headaches occur varies from person to person. You may have migraines several times a month or much less often. During a migraine, you may experience the following symptoms:

- Pain on one side or both sides of your head
- Pain that has a pulsating, throbbing quality
- Sensitivity to light, sounds and sometimes smells
- Nausea and vomiting
- Blurred vision

- Lightheadedness, sometimes followed by fainting.

### Postdrome

The final phase, known as postdrome, occurs after a migraine attack. During this time, you may feel drained and washed out, though some people report feeling mildly euphoric.

### AETIOLOGY.<sup>[4]</sup>

Although much about the cause of migraines isn't understood, genetics and environmental factors appear to play a role.

Migraines may be caused by changes in the brainstem and its interactions with the trigeminal nerve, a major pain pathway.

Imbalances in brain chemicals — including serotonin, which helps regulate pain in your nervous system — also may be involved. Researchers continue to study the role of serotonin in migraines.

Serotonin levels drop during migraine attacks. This may cause your trigeminal system to release substances called neuropeptides, which travel to your brain's outer covering (meninges). The result is headache pain, Migraine headache triggers.

Whatever the exact mechanism of the headaches, a number of things may trigger them. Common migraine triggers include.

- **Hormonal changes in women.** Fluctuations in estrogen seem to trigger headaches in many women with known migraines. Women with a history of migraines often report headaches immediately before or during their periods, when they have a major drop in estrogen.
- Others have an increased tendency to develop migraines during pregnancy or menopause.
- **Hormonal medications,** such as oral contraceptives and hormone replacement therapy, also may worsen migraines. Some women, however, may find their migraines occur less often when taking these medications.
- **Foods.** Aged cheeses, salty foods and processed foods may trigger migraines. Skipping meals or fasting also can trigger attacks.
- **Food additives.** The sweetener aspartame and the preservative monosodium glutamate, found in many foods, may trigger migraines.

- **Drinks.** Alcohol, especially wine, and highly caffeinated beverages may trigger migraines.
- **Stress.** Stress at work or home can cause migraines. Sensory stimuli. Bright lights and sun glare can induce migraines, as can loud sounds. Unusual smells — including perfume, paint thinner, secondhand smoke and others — can trigger migraines in some people.
- **Changes in wake-sleep pattern.** Missing sleep or getting too much sleep may trigger migraines in some people, as can jet lag.
- **Physical factors.** Intense physical exertion, including sexual activity, may provoke migraines.
- **Changes in the environment.** A change of weather or barometric pressure can prompt a migraine.
- **Medications.** Oral contraceptives and vasodilators, such as nitroglycerin, can aggravate migraines.

## RISK FACTORS<sup>[5]</sup>

Several factors make you more prone to having migraines.

- **Family history.** Up to 90 percent of people with migraines have a family history of migraine attacks. If one or both of your parents have migraines, then you have a good chance of having migraines too.
- **Age.** Migraines can begin at any age, though most people experience their first migraine during adolescence. By age 40, most people who have migraines have had their first attack.
- **Sex.** Women are three times more likely to have migraines. Headaches tend to affect boys more than girls during childhood, but by the time of puberty and beyond, more girls are affected.
- **Hormonal changes.** If you're a woman who has migraines, you may find that your headaches begin just before or shortly after onset of menstruation.

They may also change during pregnancy or menopause. Generally, migraines improve after menopause. Some women report that migraine attacks begin during pregnancy, or the attacks may get worse. However, for many, the attacks improved or didn't occur during later stages in the pregnancy.

## COMPLICATIONS<sup>[4]</sup>

Sometimes your efforts to control your pain cause problems.

- **Abdominal problems.** Certain pain relievers called nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil, Motrin IB, others), may cause abdominal pain, bleeding, ulcers and other complications, especially if taken in large doses or for a long period of time.
- **Medication-overuse headaches.** If you take over-the-counter or prescription headache medications more than 10 days a month for three months, or in high doses, you may be setting yourself up for a serious complication known as medication-overuse headache. Medication-overuse headaches occur when medications not only stop relieving pain but also cause headaches. You then use more pain medication, which continues the cycle.
- **Serotonin syndrome.** Serotonin syndrome is a rare, potentially life-threatening condition that occurs when your body has too much serotonin, which is a chemical found in your nervous system. It may occur if you take migraine medications called triptans and antidepressants known as selective serotonin reuptake inhibitors (SSRIs) or serotonin and norepinephrine reuptake inhibitors (SNRIs).

These medications naturally raise serotonin levels. When combined, they cause increased serotonin levels in your system, more than if you were taking one of these medications.

Triptans include medications such as sumatriptan (Imitrex) or zolmitriptan (Zomig). Some common SSRIs include sertraline (Zoloft), fluoxetine (Sarafem, Prozac) and paroxetine (Paxil). SNRIs include duloxetine (Cymbalta) and venlafaxine (Effexor XR). Also, some people experience complications from migraines such as.

- **Chronic migraine.** If your migraine lasted for 15 or more days a month for more than three months, you had a chronic migraine.
- **Status migrainosus.** People with this complication have migraine attacks that last for more than three days.
- **Persistent aura without infarction.** Usually, an aura goes away after the migraine attack. However, some people have an aura that lasts for more than one week after a migraine attack has finished. A prolonged aura may have similar symptoms to bleeding in the brain (stroke). In this condition, though, you have a prolonged aura without signs of bleeding in the brain or other problems.

- **Migrainous infarction.** Some people who have a migraine with aura may have aura symptoms that last longer than one hour. This can be a sign of bleeding in the brain (stroke). If you have a migraine with aura, and your aura symptoms last longer than one hour, you should have it evaluated. Doctors can conduct neuroimaging tests to determine if you have bleeding in the brain.

## TESTS AND DIAGNOSIS<sup>[6]</sup>

If you have migraines or a family history of migraine headaches, your doctor trained in treating headaches (neurologist) will likely diagnose the condition on the basis of your medical history, a review of your symptoms, and a physical and neurological examination.

Your doctor may also recommend a variety of tests to rule out other possible causes for your pain if your condition is unusual, complex or suddenly becomes severe.

### 1. Blood tests.

### 2. Computerized tomography (CT) scan.

### 3. Magnetic resonance imaging (MRI).

MRI scans help doctors diagnose tumours, strokes, bleeding in your brain, infections, and other brain and nervous system (neurological) conditions.

Spinal tap (lumbar puncture). If your doctor suspects an underlying condition, such as infections or bleeding in your brain, he or she may recommend a spinal tap (lumbar puncture). In this procedure, a thin needle is inserted between two vertebrae in your lower back to extract a sample of cerebrospinal fluid for laboratory analysis.

## TREATMENTS AND DRUGS<sup>[7]</sup>

### Pain-relieving medications

For the most effective results, take pain-relieving drugs as soon as you experience signs or symptoms of a migraine. It may help if you rest or sleep in a dark room after taking them. Medications include.

**Pain relievers.** Aspirin, or nonsteroidal anti-inflammatory drugs (NSAIDs).

**Triptans.** Triptans effectively relieve the pain and other symptoms that are associated with migraines.

**Antidepressants** Tricyclic antidepressants may be effective in preventing migraines.

**Anti-seizure drugs.** valproate sodium (Depacon) and topiramate (Topamax), seem to reduce the frequency of migraine headaches.

## HOMOEOPATHIC MANAGEMENT<sup>[8]</sup>

### 1. Bryonia

This remedy can be helpful if a person has a heavy or "splitting" headache, with steady pain that settles over one eye (especially the left) or spreads to the entire head. Pain is worse from any motion, even from moving the eyes, and the person wants to lie completely still and not be talked to or disturbed. Nausea with a heavy feeling in the stomach and vomiting may occur. The person can have a very dry mouth and usually is thirsty.

### 2. Gelsemium

This remedy relieves congestive headaches at the base of the head, as well as headaches around the eye, caused or aggravated by stress.

### 3. Glonoinum

This remedy relieves sudden headaches, with fullness of head and feeling of heat, and aggravated by heat.

### 4. Iris versicolor

Intense migraines with blurry vision and pain that extends to the face and teeth, along with vomiting and a burning feeling in the throat and stomach, can often be relieved with this remedy. The person feels worse from resting and better from motion.

### 5. Natrum muriaticum

Migraines (often on the right) that are worse from grief or emotional upsets, worse from too much sun, or occur just before or after the menstrual period, are likely to respond to this remedy. The headache feels like "a thousand little hammers were knocking on the brain" and is often worse from eyestrain. The person may have numb or tingling feelings in the lips or face before the headache starts, and the eyes are very sensitive to light. The person often feels better lying in the dark and after sleeping.

### 6. Nux vomica

This remedy relieves nausea and digestive troubles associated with over indulgence in food or alcohol.

### 7. Sanguinaria

Right-sided migraines with tension in the neck and shoulder, extending to the forehead with a bursting feeling in the eye, are often relieved with this remedy. Jarring, light, and noise



aggravate discomfort. The headaches improve after vomiting, as well as from burping or passing gas, and are often better after sleep. A person who needs this remedy often comes down with migraines after missing meals, and also has digestive problems and allergies.

### **8. Silicia**

Migraines that come on after mental exertion or near the menstrual period may indicate a need for this remedy—especially in a nervous person who is very chilly. Headaches are usually right-sided, starting in the back of the head and extending to the forehead, and are worse from drafts or from going out in the cold without a hat. The person may feel better from lying down in a dark, warm room and also from covering the head.

### **9. Lachesis**

Left-sided migraines with congested, pulsing pain that is worse from pressure or tight clothing may respond to this remedy. The person's face looks deeply flushed or blotchy. Headaches are often worst before the menstrual period and better once the flow begins. The person feels worse from sleeping (either in the daytime or at night) and is usually worse from heat.

### **10. Spigelia**

Excruciating headaches on the left side of the head, with violent throbbing, or stitching pains above or through the eyeball, may respond to this remedy. Pain may extend through the face and is worse from motion, touch, and jarring.

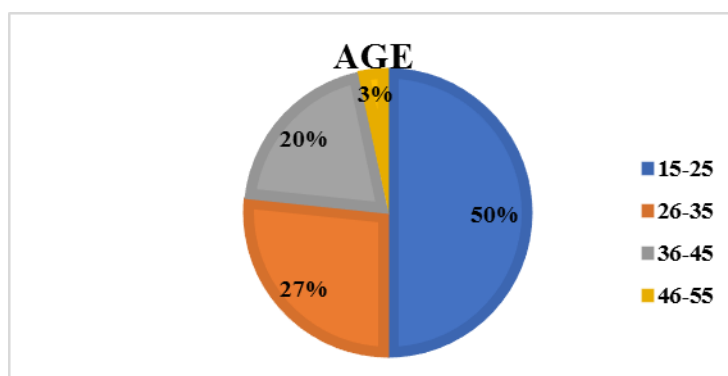
## **MATERIALS AND METHODS**

The present study was conducted at O.P.D./L.P.D. of Dr. Madan Pratap Khunteta Homoeopathic Medical College, Hospital & Research Centre, Homoeopathy University, Saipura, Sanganer, Jaipur. In this interventional study, a total of 50 patients were prospectively analysed. 35 cases met the inclusion and exclusion criteria. Among these, 5 cases were excluded due to irregular follow-up, leaving 30 cases that successfully completed the study, patients were registered in first 3 months so that minimum 6 follow-ups could be obtained from the last case. Diagnosed cases of migraine, taking treatment from other system of medicine, feeling no relief and seeking homoeopathic treatment or undiagnosed cases of suspected migraine seeking Homoeopathic treatment were included in the study. Intervention: Individualized Homoeopathic medicines prescribed after analysis, evaluation, and constructing totality of symptoms with repertorization from the Synthesis Repertory version

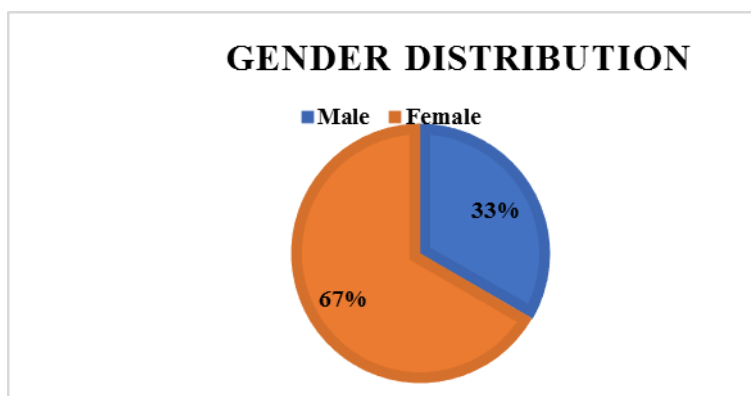
9.0 from RADAR 10.0 with due consultation of Materia medica in any potency 30C, 200C, 1M or 10M, as per the prescribing totality. Change of medicine and/or dosage as per Homoeopathic principles after observing change triggered after administration of first remedy (status quo improvement/deterioration/) and repetition was as per the Hahnemannian guidelines in 5th edition of Organon of Medicine. Patients were advised to avoid all the precipitating causes and aggravating factors. The follow-ups of the cases were done at an interval of 7/14 days, for the duration of minimum 3 months. Statistical analysis: To compare visual analogue scale pre and post treatment score paired t test was applied using IBM SPSS 20.0 version.

## OBSERVATIONS AND RESULT

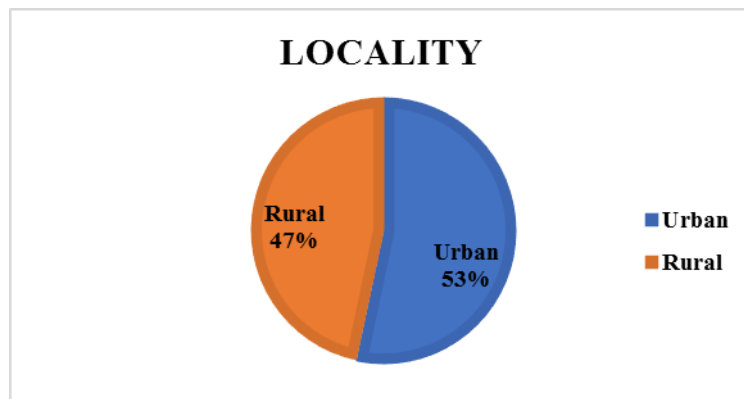
### Distribution of Cases of *Migraine* According to Age Group



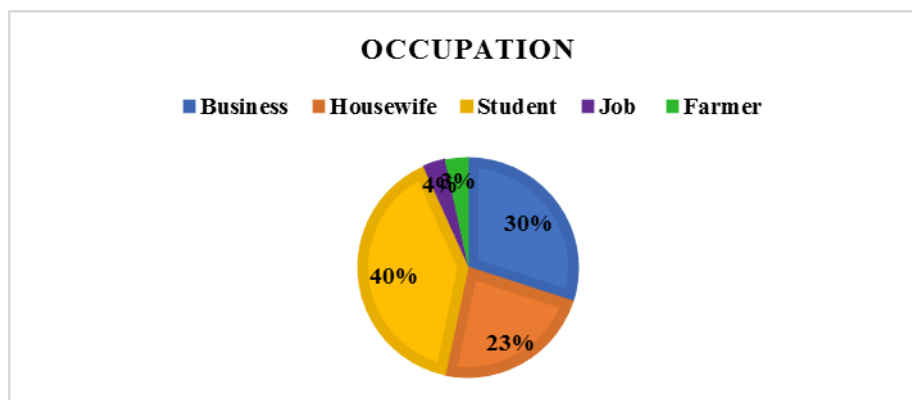
### Distribution of 30 cases of *migraine* according to sex



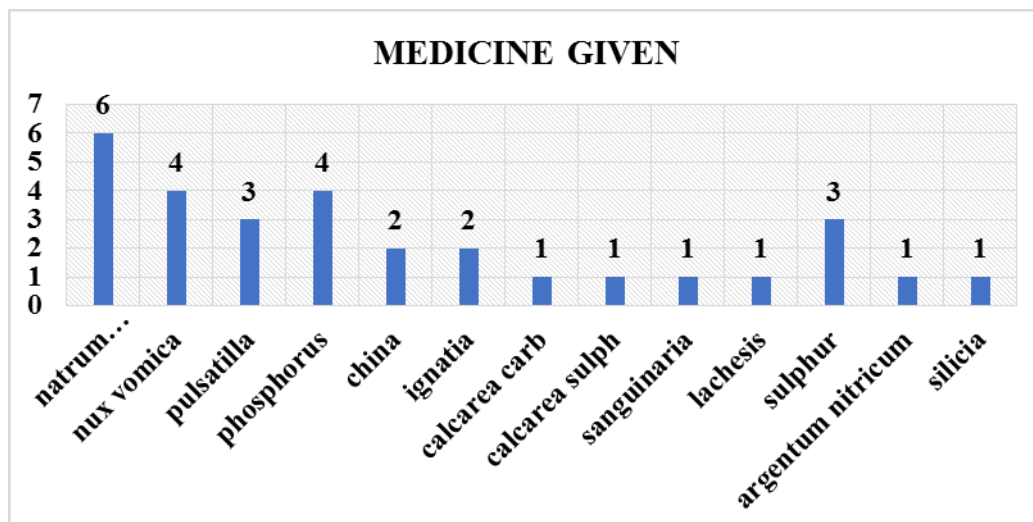
### Distribution of 30 Cases of *Migraine* According to Locality



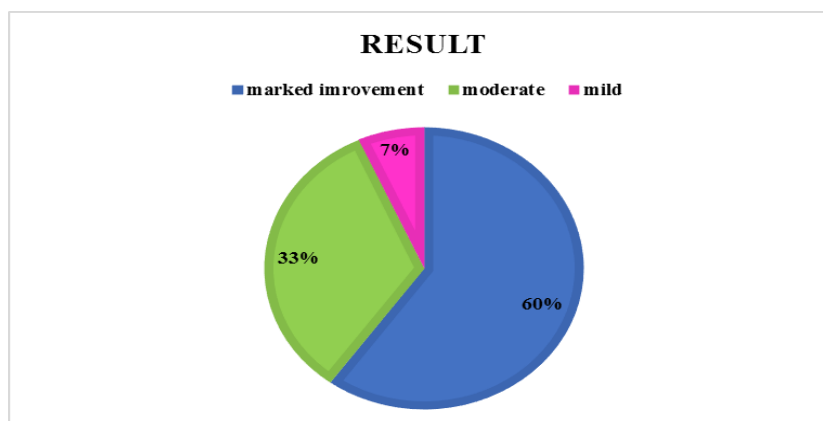
### Distribution of 30 Cases of *Migraine* According to Occupation



### Distribution of 30 Cases of *Migraine* According To Medicine Given



### Distribution of 30 Cases of Migraine According To Result Obtained After Receiving Homoeopathic Intervention



### STATISTICAL ANALYSIS

#### PAIRED SAMPLES STATISTICS

|        |        | Mean | N  | Std. Deviation | Std. Error Mean |
|--------|--------|------|----|----------------|-----------------|
| Pair 1 | Before | 8.23 | 30 | 1.135          | .207            |
|        | After  | 2.07 | 30 | 1.230          | .225            |

#### PAIRED SAMPLES CORRELATIONS.

|        |                | N  | Correlation | Significance |             |
|--------|----------------|----|-------------|--------------|-------------|
|        |                |    |             | One-Sided p  | Two-Sided p |
| Pair 1 | Before & After | 30 | .211        | .132         | .264        |

|        |                |       | Paired Samples Test |                 |   |       |        |    |              |             |
|--------|----------------|-------|---------------------|-----------------|---|-------|--------|----|--------------|-------------|
|        |                |       | Paired Differences  |                 |   |       | t      | df | Significance |             |
|        |                | Mean  | Std. Deviation      | Std. Error Mean | 95% Confidence Interval of the Difference |       |        |    | One-Sided p  | Two-Sided p |
|        |                |       |                     |                 | Lower                                     | Upper |        |    |              |             |
| Pair 1 | BEFORE - AFTER | 6.167 | 1.487               | .272            | 5.611                                     | 6.722 | 22.707 | 29 | <.001        | <.001       |

Paired sample t – test was conducted to assess the effect of homoeopathic medicine in cases of migraine post treatment (M = 2.07, S.D. = 1.230), compared to pretreatment (M= 8.23, S.D. = 1.135) by visual analogue scale (VAS) analysis, Lower the Score indicate cases of migraine improved by homoeopathic medicine, difference of mean= 6.167, t (29) = 22.707, P = <.001. Therefore, Null hypothesis gets rejected. Thus, conclusion can be drawn that

homoeopathic medicine had improved VAS score in migraine and was effective in management of migraine cases.

## DISCUSSION

- In the study, maximum cases of migraine were from age groups of 15-25 years. A higher prevalence in 10–14 years of age has been consistently reported by Indian studies.<sup>[3]</sup>
- In our study, maximum cases of migraine were females which collaborated with various recent studies.<sup>[3]</sup>
- In our study, among 30 cases of migraine prescribed homoeopathic medicine indicated on the basis of totality of symptoms as shown in table was natrum muriaticum in 6(20%) cases, Nux vomica, phosphorous in 4(14%) cases each, pulsatilla and Sulphur 3(10%) cases each, China and ignatia 2(7%) cases each, calcarea carb, calcarea sulph, sanguinaria, Lachesis, argentum nitricum, silicea 1(3%) each cases.
- Among the 30 cases of migraine 60% (n=18) shows Marked improvement, 33% (n=10) cases show Moderate improvement.
- Statistical Analysis: as shown in Table no.1 Paired sample t- test result, Paired sample t- test result, to assess the effect of homoeopathic medicine in cases of migraine post treatment (M = 2.07, S.D. = 1.230), compared to pretreatment (M= 8.23, S.D. = 1.135) by visual analogue scale (vas) analysis, Lower the Score indicate cases of migraine improved by homoeopathic medicine, difference of mean= 6.167,  $t(29) = 22.707$ ,  $P = <.001$ . Therefore, Null hypothesis gets rejected. Thus, conclusion can be drawn that homoeopathic medicine had improved VAS score in migraine and was effective in management of migraine cases.

## CONCLUSION

1. Among 30 cases enrolled in the study, high incidence was found in 15-25 years of age group.
2. Females were more afflicted with migraine.
3. In our study, among 30 cases of migraine prescribed homoeopathic medicine indicated on the basis of totality of symptoms as shown in table was natrum muriaticum in 6(20%) cases, Nux vomica, phosphorous in 4(14%) cases each, pulsatilla and Sulphur 3(10%) cases each, China and ignatia 2(7%) cases each, calcarea carb, calcarea sulph, sanguinaria, Lachesis, argentum nitricum, silicea 1(3%) each cases. Thus, the following medicine found to be effective in the order of hierarchy **natrum muriaticum**, **Nux**

**vomica, pulsatilla, phosphorus, China, ignatia, calcarea carb, calcarea sulph, sanguinaria, Lachesis, sulphur, argentum nitricum, silica**

4. Among the 30 cases of migraine 60% (n=18) shows Marked improvement, 33% (n=10) cases show Moderate improvement.

**Conflict of Interest** Not available

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Not available

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