

Looking at migraine as complex neurological disease

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Understanding triggers is one of the most powerful tools for managing migraine



As we observe World Migraine Day on September 12th each year, it is important to understand that migraine is much more than “just a headache.” It is a debilitating and complex neurological disease that impacts millions of people each year around the globe, and can drastically disrupt personal and professional lives and overall quality of life. The Global Burden of Disease (GBD) study showed that migraine has consistently ranked as the second overall cause of disability globally. Disturbingly, it affects more than 1.1 billion people around the world, which includes more than 213 million people in India each year, making it one of the most common neurological diseases recorded.

As a neurologist, I frequently see the silent struggle of my patients. They often feel misunderstood, neglected, and their pain dismissed as “just a headache” by friends and family members. It is important to shed light on what migraine truly is and developments in this field.

Because of how much migraine can impact lives, not just in India but around the world, one might ask: what causes and drives this widespread condition? What constitutes the foundation of migraines? Knowing these realities, can help with early recognition and early prevention and likewise empower people to seek out viable options to engage with their health.

Leading Cause of Disability: According to the Global Burden of Disease (GBD) study, migraine ranks as the **second leading cause of years lived with disability (YLDs)** globally. Among people aged 15-49, it's the leading cause. This highlights its significant impact on a person's ability to work, study, and engage in daily life

Gender Disparity: Migraine is overwhelmingly more common in women. Women are approximately **two to three times more likely** to experience the condition than men. This disparity is believed to be linked to hormonal fluctuations.

Peak Age: The prevalence of migraine is highest during the most productive years of life, typically **between the ages of 25 and 55**. This is a major reason for its substantial societal and economic impact

A typical migraine attack often unfolds in four distinct phases, though not everyone experiences all of them:

1. **The Prodrome (The Warning Signs):** This phase can begin a day or two before the headache. Patients may notice subtle changes like mood swings (from irritability to euphoria), food cravings, neck stiffness, frequent yawning, or increased urination. This is your body's early warning system.
2. **The Aura (The Visual Disturbance):** About a quarter of migraine sufferers experience an aura. This is a temporary sensory disturbance that happens just before or during the headache. The most common aura is visual, with symptoms like seeing zigzag lines, shimmering lights, or blind spots. An aura can also manifest as tingling on one side of the face or body, or even difficulty speaking.
3. **The Headache (The Attack):** This is the main event. The headache is often described as a throbbing or pounding pain, usually on one side of the head, but it can be on both. This pain is often accompanied by other debilitating symptoms such as:
 - Nausea and vomiting
 - Extreme sensitivity to light (photophobia)
 - Extreme sensitivity to sound (phonophobia)
 - Sensitivity to smell (osmophobia)
- **The Postdrome (The Migraine "Hangover"):** After the main pain subsides, many people feel drained, exhausted, or "hungover." They might have difficulty concentrating, feel a dull head pain, or experience neck stiffness. This phase can last for another 24 to 48 hours.

Triggers: The Cues that Start the Storm

Understanding your triggers is one of the most powerful tools for managing migraine. A trigger is rather a factor that can initiate an attack in someone who is already susceptible. The good news is that there are more treatment options available today than ever before.

Let's work together to move beyond the stigma and toward a world where every migraine patient is heard, understood, and effectively treated. Most investigations done to evaluate migraine will be normal.

Treatment Options: A Modern Approach to Management

Managing migraine is a personalised journey, and what works for one person may not work for another. The good news is that we have a wider range of effective treatments than ever before. These can be broadly divided into two categories:

Acute treatments, which stop an attack once it has started, and **Preventive treatments**, which are taken regularly to reduce the frequency and severity of attacks.

1. **Acute Treatments (Stopping the Storm):** These are medications you take at the first sign of a migraine attack to relieve pain and other symptoms.
 - **Over the Counter (OTC) Medications:** For mild to moderate attacks, many people find relief with nonsteroidal anti-inflammatory drugs (NSAIDs) like ibuprofen or naproxen. Caution is advised to prevent "medication overuse headaches."
 - **Triptans:** For years, Triptans have been the gold standard for moderate to severe migraine. They act by narrowing blood vessels and blocking pain pathways in the brain. They are available in various forms, including pills, nasal sprays, and injections.
 - **Gepants:** This is a newer class of oral medications. They work by blocking the CGRP (calcitonin gene-related peptide) receptor, a protein known to play a key role in migraine pain. Gepants offer an alternative for patients who cannot take triptans due to cardiovascular risks or for whom triptans are not effective.
 - **Ditans:** Lasmiditan (Reyvow) is a new oral medication that relieves migraine pain without causing blood vessel constriction, making it a viable option for patients with cardiovascular risk factors or those who cannot tolerate triptans.
2. **Preventive Treatments:** They are taken regularly, whether daily or monthly, to reduce the number of migraine days and make attacks less severe. **CGRP Monoclonal Antibodies (mAbs):** This is a major breakthrough in migraine treatment. These targeted therapies, are highly effective and are typically administered as self-injections once a month

or once every three months.

Botox (Botulinum Toxin): Botox injections into specific areas of the head and neck can be highly effective. The injections work by blocking the release of chemicals that activate pain pathways.

Oral Medications: Several oral medications originally developed for other conditions have proven effective for migraine prevention. These include:

- **Beta-blockers** (e.g., propranolol, metoprolol)
- **Antidepressants** (e.g., amitriptyline, venlafaxine)
- **Anti-seizure drugs** (e.g., topiramate)
- **Gepants** (e.g., rimegepant and atogepant have been approved for preventive use)

Neuromodulation Devices: These devices use electrical or magnetic stimulation to change nerve signals and prevent or treat migraine. Some are worn as a headband or armband and can be used to treat an acute attack or for daily prevention.

3. Lifestyle and Behavioural Strategies:

1. **Consistent Routines:** Maintaining a regular sleep schedule, eating meals at consistent times, and staying hydrated can significantly reduce the frequency of attacks.
2. **Stress Management:** Since stress is a major trigger, techniques like meditation, yoga, biofeedback, and mindfulness can be invaluable.
3. **Regular Exercise:** Consistent, moderate-intensity aerobic exercise has been shown to reduce migraine frequency and severity.
4. **Trigger Avoidance:** Identifying and avoiding personal triggers—be it certain foods, bright lights, or strong smells—is a powerful non-pharmacological strategy.

On this World Migraine Day, it is advisable to see migraine as a complex neurological disease that demands our attention, understanding, and effective treatment. It is not "just a headache". Understand your triggers, recognise the phases of an attack, and know that you have more treatment options than ever before. Partner with a specialist, build your management plan.

For those who live with it, your pain is real, and for those who support them, your empathy is a powerful form of care.

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