

Migraine attacks sometimes increase in frequency over time. Headache experts conceptualize this process with a model that envisions transition into and out of four distinct states: no migraine, low-frequency episodic migraine (<10 headaches per month), high-frequency episodic migraine (10-14 headaches per month), and chronic migraine (CM, ≥ 15 headaches per month). Transitions may be in the direction of increasing or decreasing headache frequency and are influenced by specific risk factors.

According to ICHD-III beta criteria for chronic migraine.

A. Headache (tension-type-like and/or migraine-like) on ≥ 15 days per month for >3 months.

B. Occurring in a patient who has had at least five attacks fulfilling criteria for migraine without aura and/or migraine with aura

C. On ≥ 8 days per month for >3 months, fulfilling any of the following:

Criteria B-D for “migraine without aura”.

Criteria B and C for “migraine with aura”.

Believed by the patient to be migraine at onset and relieved by a triptan or ergot derivative.

D. Not better accounted for by another ICHD-3 diagnosis.

Due to CM headache is often mild or moderate and comparatively rare associated with photophobia, phonophobia, nausea, or vomiting and sometimes resembles a combination of migraine and tension-type headaches with periodic severe migraine type headaches.

CM is a disabling illness with substantial impact on the patient’s ability to perform routine daily activities and on their professional activity. Chronic migraine’s prevalence rate in general population is 2-4%. Overall, population studies estimate that patients who have low-frequency episodic migraine or high-frequency episodic migraine will transition to CM at the rate of about 2.5% per year.

The pathophysiology of chronic migraine is unclear up to now. Mechanisms of migraine chronification are likely to be multifactorial and involve more than one level of the CNS. However, the most important factor of CM development is sensitization of trigemino-thalamic pathways. Central sensitization might occur during repeated migraine attacks via impaired descending inhibition and/or facilitation of ascending nociception.

The risk of migraine chronification depends on both modifiable and non-modifiable factors. Non-modifiable risk factors include older age, female gender, Caucasian ethnicity, low educational level, low socioeconomic status, and genetic predisposition. There are also a number of potentially modifiable risk factors for CM onset – high frequency of migraine attacks, obesity, smoking, snoring and sleep apnea, medication abuse, caffeine overuse, major stressors,

depression, anxiety, somatic co-morbidity (arterial hypertension, hyperlipidemia, diabetes mellitus, chronic obstructive pulmonary diseases, so on), temporal-mandibular joint dysfunction, head and neck traumas, chronic pain syndromes.

Only 33 percent of patients with CM use preventive drug treatment. The primary goals of preventive therapy in patients with chronic migraine are to reduce the frequency and severity of attacks, to reduce reliance on acute medications, and to improve the quality of life.

Until 2007, evidence on the efficacy and safety of preventive medications used in the treatment of CM had been limited to case studies and open-label trials. The paucity of randomized controlled trials in this field can be explained by the lack of consistent diagnostic criteria for CM.

Only two drugs – topiramate and botulinum toxin type A have shown modest but significant efficacy as prevention treatment of CM in placebo-controlled trials. Other preventive drugs for migraine have not been adequately studied for use in CM.

Topiramate is drug of choice for CM because its effectiveness was confirmed in several studies. Topiramate (100 mg a day) is well tolerated and significantly reduced the mean number of monthly migraine days, even in the presence of medication abuse.

The efficacy of onabotulinumtoxin A was demonstrated in the Phase 3 Research Evaluating Migraine Prophylaxis Therapy (PREEMPT) trials (onabotulinumtoxin A was administered to 31 sites in seven head and neck muscles). The PREEMPT study results demonstrated significant improvements at the population level in multiple measures of headache symptoms, as well as improvements in patients' functioning, vitality, psychological distress, and overall health related quality of life, in response to treatment with botulinum toxin type A. Onabotulinumtoxin A inhibits sensitization of central trigeminovascular neurons, which are believed to be an integral factor in the development, progression, and maintenance of migraine-type headaches.

Pregabalin, flunarizine, memantine have been considered alternatives for the treatment of CM, but evidence for their efficacy is still lacking.

In cases of refractory CM to preventive pharmacological therapy (it means lack of effect on the use of at least three drugs of different pharmacological groups in appropriate dosages, at least for three months, and in the absence of abusive factor), after exclusion of psychiatric pathologies expedient to use transcranial magnetic stimulation, acupuncture, occipital nerves stimulation.

Thus, CM is important clinical and social problem that requires appropriate approaches for its early recognition and effective management.