



## Acute treatment of severe migraine: a literature review

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### Introduction

Migraine is a neurological, genetic, and chronic disease that profoundly affects people's quality of life. It is characterized as a generally pulsating, unilateral pain aggravated by physical activity and lasting between 4 and 72 hours. It is estimated that acute migraine attacks are responsible for 1.2 million visits to the emergency department every year in the USA. Treatment for these attacks is being studied with the aim of advancing therapeutic efficacy and safety.

### Objective

the purpose of this review is to assess which drug therapy has been most beneficial in stopping acute severe migraine attacks.

### Methods

this is a review of the literature, which evaluated studies on the recommended therapies for the management of severe migraine attacks. Pubmed, Medscape, and Embase were used as databases, and papers published in the last five (5) years were analyzed using the descriptors "Migraine headache", "acute treatment", and "severe migraine attack".

### Results

the abortive treatment of severe migraine attacks aims to quickly and safely stop the pain symptom and associated manifestations such as nausea, the sight of scotomas, photophobia, and phonophobia. However, despite the high availability of therapies, it can be difficult to achieve this goal. Triptans, 5-hydroxytryptamine-1 (5-HT1) agonists, are generally used as first-line treatment for this type of headache, as they have strong evidence of efficacy, tolerance, and safety. The choice of triptan should be individualized for each migraine pattern, as this class has great pharmacological heterogeneity and, consequently, different responses. In addition, the best results occur when they are taken at the beginning of the crisis, with pain relief being achieved within 2 hours in 42 to 76 % of cases. Sumatriptan is the most studied and has the most favorable evidence and results, especially in its subcutaneous form. Triptans have proven to be safe for most patients; however, it is recommended that they be avoided in cases of ischemic stroke, ischemic heart disease, and uncontrolled hypertension. Its combination with the NSAID naproxen sodium is widely used in clinical practice. This combination reduces the number of tablets increases patient compliance, and has shown superior efficacy to monotherapy. As a second-line therapy, calcitonin gene-related peptide (CGRP) antagonists, which mediate trigeminovascular pain transmission, have been shown to be very effective in the abortive treatment of severe migraine, as they have a rapid onset of action, around 15 minutes. However, studies show that they require higher doses compared to triptans for the absence or relief of pain. Rimegepant and ubrogepant have received approval from the Food and Drug Administration (FDA) in the USA for the treatment of acute migraine and are very effective in patients who have not responded to or have contraindications to triptans. The FDA has also approved Lasmiditan for the treatment of acute migraine, which is a selective agonist of the serotonin 1F receptor, used in patients with contraindications to the use of triptans due to their cardiovascular risk because they do not have vasoconstrictive activity.

### Conclusions

there are numerous drugs with proven efficacy and safety for the treatment of acute severe migraine attacks. The use of triptans is recommended in these cases, given their rapid and long-lasting action, combined with the reduced number of contraindications. In addition, the sumatriptan-naproxen combination has proved to be very effective, reducing pill burden and increasing patient compliance. Other therapies, such as CGRP antagonists and Lasmiditan, are of great importance as second-line drugs. Therefore, these therapies should be chosen carefully according to the individuality of each patient.

**Keywords:** Migraine Headache; Acute Treatment; Severe Migraine Attack.