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Analysis of the Use of Erenumab for the Prevention of Chronic Migraine: A Systematic Literature Review

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Introdução

Migraine is a neurological condition characterized by recurrent and debilitating headaches of varying intensity, ranging from moderate to severe. It can be classified based on frequency into episodic migraine (EM), with fewer than 15 headaches days per month, and chronic migraine (CM), with a frequency equal to or greater than 15 headaches days per month for at least three months, with at least eight days of migraine. This condition is the second leading cause of years lived with disability, demonstrating its potential to significantly impact the daily lives of both patients and their families, with its disability increasing as the migraine progresses, especially chronic migraine. The most commonly reported symptoms of migraine include unilateral headache lasting from 4 to 72 hours, often accompanied by nausea, vomiting, photophobia, phonophobia, and preceded by sensory disturbances (aura). These symptoms are often associated with the use of acute headache medications (AHM) in approximately 90% of patients, including triptans, opioids, non-steroidal anti-inflammatory drugs, and barbiturates, which can lead to various medical complications with long term use. The utilization of monoclonal antibodies in migraine therapy and prevention is grounded in the understanding of the involvement of the trigeminal system with the release of calcitonin gene-related peptide (CGRP) in migraine pain. Monoclonal antibodies work by binding to CGRP receptors and inhibiting their effects. Erenumab was the first fully human monoclonal antibody selective blocker of the CGRP receptor. Studies have shown its effectiveness at doses of 70 and 140 mg in the prevention of migraine in adults.

Objectives

Analyze the advantages, effectiveness, adverse effects, and response of Erenumab in individuals with chronic migraine.

Methodology

For the present study, the DeCS/MeSH descriptors 'monoclonal antibodies' and 'chronic migraine' were used, employing the boolean operator 'and' in the PubMed database. Filters applied included publication year between 2020 and 2023, free full text in English, and Clinical Trial in PubMed itself. The selected studies for final analysis had in their methodology the investigation of only Erenumab for the treatment of chronic migraine.

Results

It was demonstrated that with 12 weeks of Erenumab 70mg intravenous usage, there was a reduction of at least 50% in monthly migraine days and a decrease of 5.34 days in monthly acute headache medication (AHM) use. In this context, 8.6% of patients reported constipation, and 9% reported upper respiratory tract infections such as nasopharyngitis, while 1.9% developed antibodies against Erenumab during the study. Regarding the response time, other study showed that for patients who used 140mg, 52.5% had responses in the first month, and 84.2% in the second month. For the 70mg group, 41.7% had a response in the first month, while 77.8% had it in the second month, suggesting that 140mg may be a better option for chronic migraine (CM). The effects of Erenumab tend to persist or increase with continued treatment at both dosages. Studies have also shown a reversion from CM to episodic migraine (EM) in 53.9% of patients using 70mg and 52.2% with 140mg. Erenumab has also proven effective in individuals who did not respond to other treatments such as Botulinum toxin type A.

Conclusion

Erenumab has proven effective in improving the symptoms of chronic migraine (CM), including its reversal to episodic migraine (EM). Due to its longer half-life and selectivity, it has shown few adverse effects, contributing to treatment adherence. However, cases such as allergies and antibody production have been reported, representing a potential disadvantage alongside its price and possible fear of needles. Long-term follow-up studies should be encouraged to better assess the outcomes of the use of anti-CGRP monoclonal antibodies.

Palavras-chave: Erenumab;chronic migrane;monoclonal antibodies.