Photophobia and Migraine Outcome during Treatment with Galcanezumab

Catherine Lapp*

Editorial Office, Journal of Neurology and Neurophysiology, Belgium

*Corresponding Author**

Catherine Lapp
Editorial Office, Journal of Neurology and Neurophysiology, Belgium
Email: neuroscience@neurologyjournals.org

Received: 05-Apr-2023, Manuscript No. jnn-23-100746; **Editor assigned:** 07- Apr -2023, Pre QC No. jnn-23-100746 (PQ); **Reviewed:** 15- Apr -2023, QC No. jnn-23-100746 (Q); **Revised:** 16- Apr -2023, Manuscript No: jnn-23-100746 (R); **Published:** 30-Apr-2023, DOI: 10.35248/2332-2594.23.14(4).341

Abstract

The Calcitonin Gene-Related Peptide (CGRP), which affects both migraine pain and accompanying symptoms including photophobia, is crucial to the physiology of migraines. The current study sought to determine if monoclonal antibodies that target CGRP are effective in lowering ictal photophobia as well as headache and migraine frequency and disability.

Keywords: Headache • Analgesic

Introduction

The most prevalent neurological and ophthalmic condition when photophobia arises is migraine. The International Headache Society (IHS) uses hypersensitivity to light as a diagnostic criteria for migraine, which results in avoidance. It has also been described as the most annoying migraine related symptom.

It is now understood that the neuropeptide Calcitonin Gene-Related Peptide (CGRP) plays a significant role in the pathophysiology of migraine. The Central and Peripheral Nervous Systems (CNS and PNS, respectively) both contain CGRP-containing neurons, and the body also has CGRP receptors, which have been linked to a variety of activities. The most powerful vasodilatory peptide, CGRP is associated with neurogenic inflammation in the periphery and has mostly been related to nociceptive signaling in the Central Nervous System (CNS). The consequences of CGRP activation, both central and peripheral, are consistent with migraine symptoms, including photophobia. In randomized clinical trials as well as in real-world settings, all monoclonal antibodies work to prevent migraines in individuals with chronic migraine who are difficult to treat, whether they are taking medication or not.

A humanized IgG4 monoclonal antibody called galcanezumab preferentially binds to and neutralizes the ligand known as CGRP. High specificity and affinity are observed in the binding of galcanezumab to CGRP. Adrenomedullin, Amylin, Calcitonin, and Intermedin are similar peptides.

The suggested dose is 240 mg loading dose followed by a monthly subcutaneous injection of 120 mg galcanezumab to reach steady state in one month. After anti-CGRP monoclonal antibodies were shown to be effective in reducing migraine frequency, severity of pain, and disability, current research is concentrating on migraine-related symptoms such as interictal disability, quality of life, and interictal disability. Investigations into response predictors have revealed that unilateral pain and a triptan response are linked to a consistent response to galcanezumab.

The current study evaluated the effectiveness of galcanezumab, a monoclonal antibody that targets the CGRP molecule, in lowering ictal photophobia and conventional outcome variables such headache/migraine days, pain intensity, analgesic use, and migraine-related disability.

The current study supports earlier findings about galcanezumab's effectiveness in preventing migraines. There was a noticeable improvement in the number of migraine/headache days, the severity of the pain, and the amount of analgesics consumed after 3 and 6 months of therapy. Disability from migraines also showed a comparable improvement.

The purpose of the current research was to determine if ictal photophobia also improved following treatment with galcanezumab because it has been noted that photophobia is the most distressing migraine-associated symptom. Up to 68% of participants in our group said that their photophobia had improved while taking galcanezumab. Most patients who did see such improvement did so during the first month of therapy, according to their reports. Additionally, nearly half of the patients rated the improvement as high (on a scale with three options: low, moderate, and high). Notably, two patients only saw improvement in their ictal photophobia during their second therapy cycle. It's interesting to see that migraine relief did not affect photophobia.

Patients with substantial responses to galcanezumab for ictal photophobia, on the other hand, reported decreased levels of migraine disability both before and after therapy. The diagnosis and triptan response were the only variables that significantly correlated with photophobia improvement. Particularly, individuals with an episodic migraine diagnosis and those who showed a substantial response to triptans were more likely to see a significant reduction in ictal photophobia.

Given these presumptions, it is not unexpected that galcanezumab, a powerful monoclonal antibody against CGRP ligand, was found to be beneficial in lowering photophobia in a cohort of migraine sufferers, regardless of migraine relief. Patients with episodic migraines saw photophobia improvement more frequently than those with chronic migraines, which may be because the latter group of patients had lower levels of central and peripheral sensitization. In triptan response, photophobia was significantly more prevalent. This result is consistent with other studies that linked triptan response to erenumab with onabotulinumtoxin. A responsiveness. The primary contributing component was hypothesized to be the shared effects of triptans and erenumab/ onabotulinumtoxin A on the trigeminovascular systems. Additionally, compared to non-responders, triptan responders have been reported to have increased ictal CGRP levels. Triptan non-responders may respond less favorably to CGRP-targeted therapies because pain neurotransmitters other than CGRP may have a role in the development of migraine in these patients.

Cite this article: Lapp, J. Photophobia and Migraine Outcome during Treatment with Galcanezumab. J Neuro Neurophysiol 2023, 14 (4), 001