Comparison of Calcitonin Gene-Related Peptide Receptor Antagonists and Tricyclic Antide Pressants in The Prophylactic Treatment of Migraines

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Abstract

Background and Purpose: The migraine is a common, debilitating neurological illness that affects the global population.1 For over 35 years, tricyclic antidepressants (TCAs) have been a mainstay prophylactic treatment for migraines. However, the overall progress in migraine management has been tremendous within the last few years as more novel drugs are being put into market, such as calcitonin gene-related peptide (CGRP) receptor antagonists. The purpose of this analysis is to determine if calcitonin gene-related peptide receptor antagonists are more effective than tricyclic antidepressants in the prophylactic treatment of migraines.

Methods and Materials: Research was conducted using the following: PubMed, Google Scholar, and Ovid. Keywords searched were chronic migraines, TCA, amitriptyline CGRP receptor antagonists, prophylaxis, preventative treatment, migraines, erenumab, galcanezumab, and fremanezumab. We investigated 20 articles after excluding meta-analyses, systematic reviews, and articles published greater than 10 years ago. Article analysis was used to determine efficacy among several CGRP receptor antagonists and amitriptyline.

Results: CGRP antagonists showed effectiveness in the reduction of migraine days, severity of the migraines, headache hours, and decreased use of additional analgesics with side effects most commonly related to injection of the medication. TCAs showed a limited effectiveness in controlling migraine symptoms with a larger side effect profile and high dropout rates.

Conclusion: CGRP receptor antagonists have proven to be clinically more effective in reducing headache symptoms and tolerated better among patients. Up to date studies on amitriptyline with standard variables and measures of efficacy is necessary to provide extensive comparison between the two drug classes.

Biography

The Jasmine Delancy Department of Physician Assistant Studies at the The University of Texas Medical Branch, Galveston, Texas.

She is in the third year of her Ph.D. and is a holder of DST-INSPIRE fellowship. She has qualified UGC NET exam twice. The Jasmine Delancy is a senior research fellow at the Institute of Texas Medical Branch.