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Changing the Game: A New Class of Anti-Migraine Drugs

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Abstract

Background: Migraine headaches are a severe and disabling neurovascular disorder affecting nearly 20% of adults in the United States1. Calcitonin Gene Related Peptide (CGRP) monoclonal antibodies (mAB) is a new class of anti-migraine drugs that represent the first targeted therapy for the prevention of migraine. Methods: There are currently only 3 manufacturers with FDA approved CGRP mABs. Both Emgality (Eli Lilly) and Ajovy (Fremanezumab) target the CGRP ligand whereas Aimovig (Amgen) targets the CGRP receptor. All drugs have been tested independently in studies of episodic and chronic migraine. The safety and efficacy of these study drugs will be reviewed. Results: All three FDA approved drugs show similar efficacy and safety profiles. Aimovig and Emgality reported a mean difference from placebo in reduction of headache days for episodic migraines of 1.9 days compared to 1.5 days for Ajovy.2-4 Change in mean difference was greater for studies of chronic migraine at 2.5, 2.1 and 2.1 days, respectively.5-7 Further data from a 5-year open-label extension study of Aimovig demonstrates its long-term efficacy with 67% of patients experiencing ≥50% reduction in chronic monthly migraines.4 Data also suggests that CGRP inhibitors may have greater efficacy in patients who have failed 1 or more preventative medications.4 Conclusions: Evidence to date suggests that overall, CGRP targeted therapies for the prevention of a variety of headache disorders represent a new series of drugs that are powerful and effective. CGRP anti-migraine drugs have favorable treatment profiles similar to those of placebo and have the potential to treat migraine sufferers with treatment resistant headaches.

Biography

Teena Shetty is a neurologist at Hospital for Special Surgery and is triple board certified in neurology, neuromuscular medicine, and electrodiagnostic medicine. She is the Director for the Concussion Program in Neurology at HSS. She specializes in sports neurology, concussions, neuromuscular diseases, myopathies, peripheral neuropathy, intraoperative monitoring, and spine disorders. In addition to directing the concussion program and seeing patients, Dr. Shetty is also an assistant professor of neurology at Weill Cornell Medical College.

Publication

1. Resting State Functional Connectivity is Directly Related to Clinical Presentation of Mild Traumatic Brain Injury

2. High sensitivity C-reactive protein: Potential biomarker of inflammation in acute mTBI

3. Recovery time, risk factors, and volumetric analysis in acute mTBI

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