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Comparing the disease burden of migraine between users of CGRP monoclonal antibodies and preventive gepants

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Background

- In the United States (US), 16.0% of adults have reported experiencing migraine or severe headache.[1]
- The neuropeptide calcitonin gene-related peptide (CGRP) and its receptors play a role in migraine pathophysiology. Several molecules targeting CGRP signaling have been developed for migraine treatment, including gepants and monoclonal antibodies (mAbs).[2]
- While CGRP mAbs are solely used for migraine preventions, gepants can be used for both acute and preventive treatment. Of the available gepants, rimegepant and atogepant are approved for migraine prevention.[3]
- Although CGRP mAbs and preventive gepants both target the CGRP pathways, they differ in molecular class, administration and pharmacokinetics. Real-world comparisons between these two groups remain limited.

Objective

This research examines sociodemographic characteristics and clinical burden among users of CGRP mAbs and gepants indicated for migraine prevention (preventive gepants).

Methods

Data source

- This study used data from the 2025 US National Health and Wellness Survey (NHWS). NHWS is a cross-sectional, nationally representative, internet-based survey of adults aged ≥18 years.

Study population

- The study included participants that:
- Experienced migraine or migraine headaches in the past 12 months;
- Physician diagnosis of migraine; and
- Currently using CGRP mAbs (erenumab, fremanezumab, eptinezumab, or galcanexumab) or preventive gepants (rimegepant or atogepant).

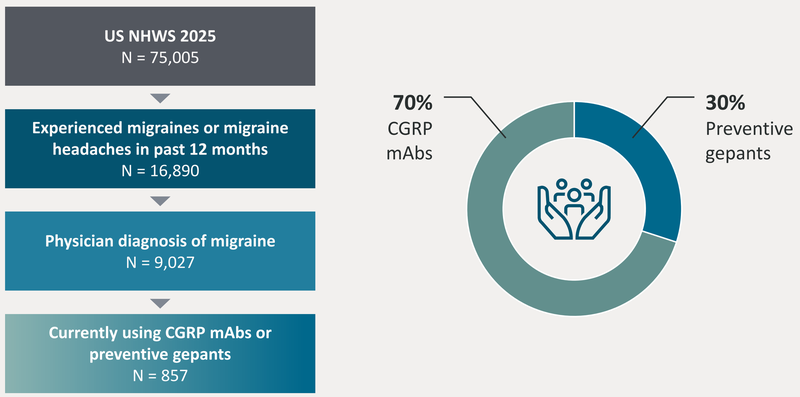
Study measures

- Sociodemographic, clinical characteristics, and psychological burden (via PHQ-9[4] and GAD-7[5]) were examined.
- Migraine-related disability and treatment optimization were assessed using migraine-specific measures, including the Migraine Disability Assessment Scale (MIDAS[6]) and the Migraine Treatment Optimization Questionnaire (mTOQ-6[7]).

Statistical analyses

- Descriptive statistics were calculated, including counts and percentages for categorical variables, and means with standard deviations for continuous variables.
- The groups were compared using chi-squared tests for categorical variables and t-tests for continuous variables. An alpha level of p<0.05 was considered statistically significant.

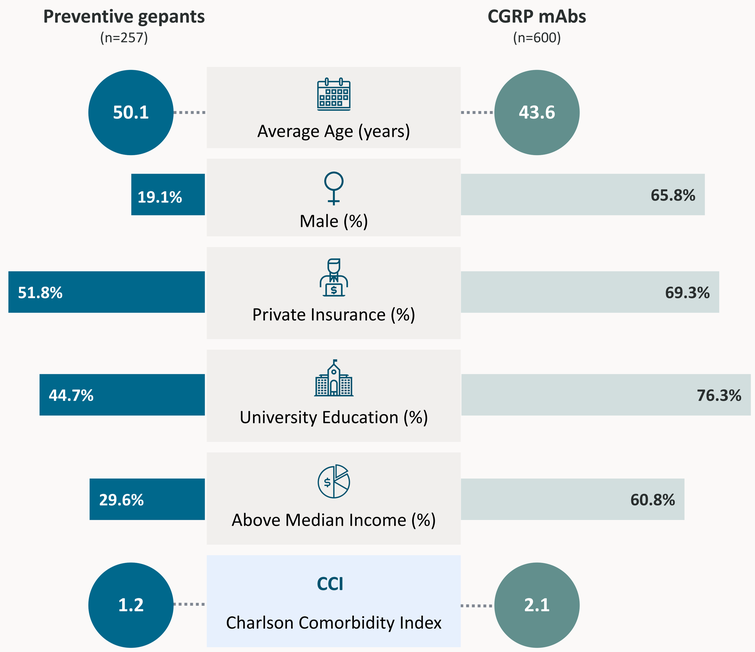
Figure 1. Study population



Results

A total of 857 participants were included, consisting of 600 using CGRP mAbs and 257 taking preventive gepants. CGRP mAbs users were younger, more likely to be male, had more comorbidities, and had higher income and education levels than preventive gepant users (all p<0.001) (**Figure 2**).

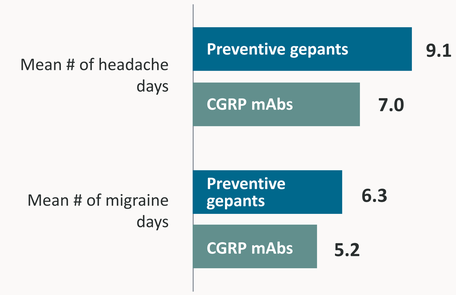
Figure 2. Sociodemographic characteristics



Clinical Characteristics

- Compared to preventive gepants users, CGRP mAbs users experienced more depression and anxiety symptoms (PHQ-9 scores: 12.1 vs. 7.2; p<0.001; GAD-7 scores: 9.4 vs. 6.6; p<0.001).

Figure 3. Migraine and headache days in the past 30 days

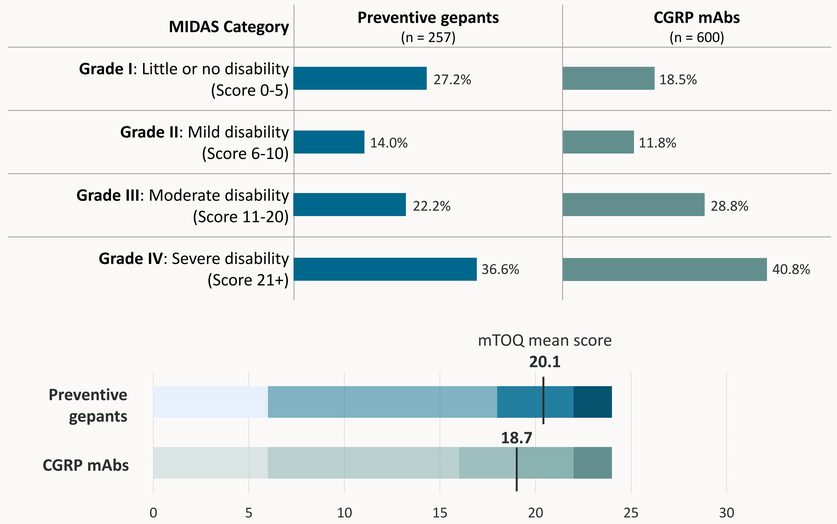


CGRP mAbs reported fewer mean migraine and headache days in the past 30 days than preventive gepants group (both p<0.05).

Migraine specific measures

- CGRP mAbs users were more likely to have MIDAS Grade III/IV disability and lower mTOQ scores (both p<0.05) (**Figure 4**).

Figure 4. Patient reported outcomes for MIDAS and mTOQ



Limitations

- Given the cross-sectional nature of the survey, causality cannot be infered from the study results.
- Self-reported data are subject to potential recall bias.
- Participants may have been using concomitant medications, which could confound the observed outcomes.

Conclusion

In a national survey of general US adults, CGRP mAbs users reported fewer migraines and headache days than those on preventive gepants (though still greater than the meaningful clinical goal of ≤4 days per month), but experienced lower treatment efficacy, greater mental health burden and migraine-related disability.

These findings underscore the need to address psychological and functional burden among patients on migraine preventives.

References:

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