UNION

UBROGEPANT TREATMENT IN MIGRAINE PATIENTS UTILIZING MONOCLONAL ANTIBODIES

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Background

Ubrogepant, an oral CGRP receptor antagonist, is effective for acute migraine attacks, while injectable CGRP monoclonal antibodies (CGRPmAbs) serve as preventives.[1] However, limited research has explored their combined use. This study aims to determine whether ubrogepant remains effective and safe when used alongside CGRPmAbs. Our findings build upon a 2019 study by Dodick et al[2] published in the New England Journal of Medicine which evaluated the effectiveness and safety of ubrogepant (50 mg and 100 mg) versus placebo. Our study incorporates CGRP monoclonal antibodies within the same primary and secondary endpoints, allowing for comparison of the outcomes between both studies.

Objectives

Primary Objective:
To evaluate the safety and efficacy of ubrogepant in patients currently treated with one of the injectable monoclonal antibodies (mAbs) targeting CGRP or the CGRP receptor (erenumab, fremanezumab, or galcanezumab).

Secondary Objectives:
To assess improvements with the addition of ubrogepant in patients currently treated with one of the injectable monoclonal antibodies targeting CGRP or the CGRP receptor (Aimovig, Ajovy, or Emgality)

Methods

This was a prospective randomized study conducted at the Chicago Headache Center & Research Institute. A total of 165 participants were assigned to one of four treatment arms: ubrogepant 50 mg or 100 mg, either alone or in combination with a CGRPmAb. Pain freedom, freedom from most bothersome symptom (MBS), and adverse events (AEs) were assessed at multiple time points up to 24 hours post-treatment using participant-reported questionnaires. Our results were also compared to the pivotal study by Dodick et al. Statistical analyses included descriptive statistics and chi-square tests, with significance set at $p < 0.05$.

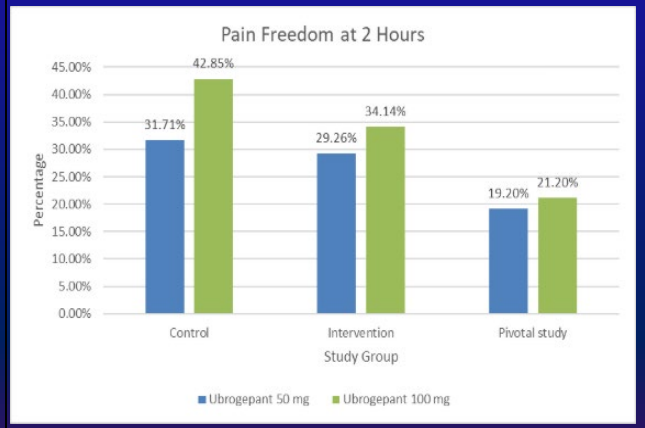

Figure 1: Pain Freedom at 2 hours

Results

The primary outcomes, pain freedom at 2 hours and MBS freedom at 2 hours, did not significantly differ between the intervention (ubrogepant w/ CGRPmAb) and control (ubrogepant alone) groups. However, there was a notable difference between our study and the pivotal study, in which there was a lower percentage of the pivotal study's subjects' achieving pain freedom. MBS freedom did not differ significantly between our study and the pivotal study. Secondary endpoints, including sustained pain relief and freedom at 2-24 hours, also showed minimal differences between groups. AE rates were also similar.

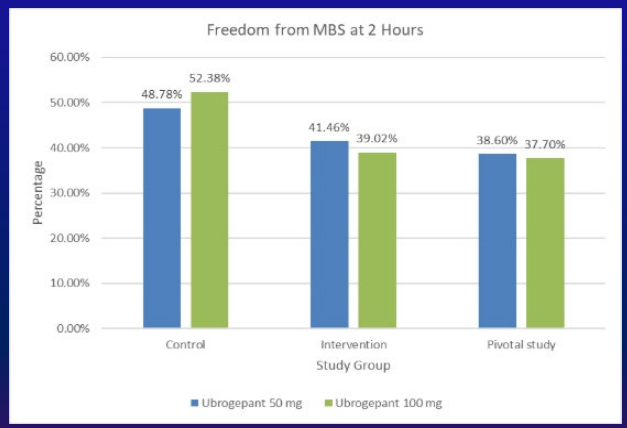

Figure 2: MBS Freedom at 2 hours

Discussion

The data show there is no statistically significant difference in the percentage of patients achieving pain freedom or freedom from the most bothersome symptom at 2 hours between the control and intervention groups. Specifically, 36.14% of patients in the control group and 30.49% in the intervention group achieved pain freedom at 2 hours ($p=0.441$), while 48.19% in the control group and 59.76% in the intervention group achieved freedom from the most bothersome symptom ($p=0.92$). These results suggest that the intervention did not provide a significant advantage in achieving pain freedom or relief from the most bothersome symptom compared to the control.

The data analysis also revealed no statistically significant difference between the control and intervention groups across various measures of pain relief and sustained pain relief or freedom. Specifically, rates of pain relief at 2 hours, sustained pain relief from 2 to 24 hours, and sustained pain freedom from 2 to 24 hours, both after the initial and second doses, were comparable between the groups. This suggests that the intervention did not significantly improve pain outcomes compared to the control.

Ubrogepant maintains comparable efficacy and safety profiles regardless of concurrent CGRPmAb use. These findings support its role as an acute migraine treatment for patients already on preventive CGRPmAb therapy. Future studies should explore long-term outcomes and potential interactions between these treatments.

References

1. Cohen, F., Yuan, H., & Silberstein, S. D. (2022). Calcitonin Gene-Related Peptide (CGRP)-Targeted Monoclonal Antibodies and Antagonists in Migraine: Current evidence and Rationale. BioDrugs, 36(3), 341–358. https://doi.org/10.1007/s40259-022-00530-0
2. Dodick, D. W., Lipton, R. B., Ailani, J., Lu, K., Finnegan, M., Trugman, J. M., & Szegedi, A. (2019). ubrogepant for the treatment of migraine. New England Journal of Medicine, 381(23), 2230–2241. https://doi.org/10.1056/nejmoa1813049