LB.P44

Use of Rimegepant 75 mg for the Acute Treatment of Migraine is Associated With a Reduction in Monthly Migraine Days: A Pooled Analysis of 2 Open-Label Trials

Shengyuan Yu[1], Terence Fullerton[2], Glenn Pixton[2], Yunjun Zou[3], Qi Zhong[3], Hua Zhu[3]

[1]PLA General Hospital, Beijing, China; [2]Pfizer Inc, Groton, CT, USA; [3]Pfizer (China) Research and Development, Shanghai, China

BACKGROUND

- Rimegepant is an oral small-molecule calcitonin gene-related peptide receptor antagonist indicated for acute and preventive treatment of migraine in adults.[1,2]
- Preliminary evidence suggests long-term use of rimegepant for acute treatment of migraine may reduce the overall number of monthly migraine days (MMDs) over time.[3]

OBJECTIVE

- This pooled subgroup analysis examined whether long-term use of rimegepant for acute treatment of migraine may reduce MMDs over time.

METHODS

PARTICIPANTS

- Patient-level data were pooled from 2 multicenter, uncontrolled, open-label clinical trials conducted in the United States (NCT03266588) or China (NCT05371652).
- Key inclusion criteria included age ≥18 years, ≥1 year history of migraine (with or without aura), attacks lasting an average of 4–72 h if untreated, and 2–14 (NCT03266588) or 6–18 (NCT05371652) attacks per month of moderate or severe intensity within 3 months prior to screening.
- Participants included in this subgroup analysis had ≥6 MMDs during a 30-day observation period (OP) prior to start of study treatment.

TREATMENT

- Participants self-administered rimegepant 75 mg tablet (NCT03266588) or orally disintegrating tablet (NCT05371652) as needed, up to once per day for up to 52 weeks, for acute treatment of a migraine attack of any severity.
- Preventive migraine medications (if dosing was stable for ≥2 months prior to the baseline visit) and previously prescribed standard of care medications were permitted.

ENDPOINTS

- On-treatment adverse events (AEs), defined as AEs with onset date on or after study drug start date through study drug end date +7 days, were assessed in all treated participants.
- Mean change in the number of MMDs, relative to the OP, was assessed for each 4-week (ie, 28-day) interval during the long-term treatment period in participants with ≥14 days of data (not necessarily consecutive) in the OP and the reporting 4-week interval.
- Mean change in migraine-related disability (MIDAS) total score and migraine-specific quality of life (MSQ) domain scores were assessed at Week 12, Week 24 (NCT03266588) or 28 (NCT05371652), Week 36 (NCT03266588) or 40 (NCT05371652), and Week 52 in all treated participants with available data.
  - Treatment satisfaction, treatment preference, and clinical global impression of change were assessed at Weeks 24/28 and 52 in all treated participants with available data.

RESULTS

PARTICIPANTS

- 1288 participants (US = 1052, China = 236) were treated with rimegepant (**Table 1**).

ADVERSE EVENTS

- 68.7% of participants reported an AE; most AEs were mild to moderate in severity (**Table 2**).
  - AEs reported by ≥5% of participants were upper respiratory tract infection (9.5%), nasopharyngitis (7.8%), and COVID-19 (7.6%).
- Few participants reported a serious AE (2.9%), a severe AE (4.7%), or an AE leading to rimegepant discontinuation (2.4%). Serious AEs reported by >1 participant were accidental overdose (n=3), appendicitis (n=3), osteoarthritis (n=3), and pneumonia (n=2).
- 29.1% of participants reported a treatment-related AE; few were serious (0.7%), severe (1.3%), or led to rimegepant discontinuation (1.4%; **Table 2**).
  - The most common treatment-related AE was upper respiratory tract infection (2.2%). All other treatment related AEs occurred in <2% of participants.

Table 1: Demographics and clinical characteristics of all treated participants

Demographic/characteristic	Rimegepant 75 mg (N=1288)
Age, years	
Mean (SD)	42.5 (12.06)
Median (range)	42.0 (18–83)
Sex, n (%)	
Female	1146 (89.0)
Male	142 (11.0)
Country, n (%)	
United States	1052 (81.7)
China	236 (18.3)
Race of US-based participants, n (%)[a,b]	
White	860 (81.7)
Black or African American	149 (14.2)
Asian	18 (1.7)
Other	25 (2.4)
Body mass index[c], kg/m^2	
Mean (SD)	28.74 (7.579)
Median (range)	27.10 (14.3–65.9)
Primary migraine type, n (%)	
Without aura	897 (69.6)
With aura	391 (30.4)
Average duration of untreated attacks, h	
Mean (SD)	32.0 (22.18)
Median (range)	24.0 (4–72)
No. attacks with moderate or severe pain intensity per month	
Mean (SD)	7.9 (3.05)
Median (range)	8.0 (2–16)
Took preventive migraine medication, n (%)[d]	166 (12.9)

[a] Race was not assessed in Study NCT05371652 and these percentages are based on the 1052 participants from US-based study NCT03266588.
[b] Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or multiple responses.
[c] n=1284 (4 participants were missing data).
[d] Taken on or after informed consent and before start of study drug.

Table 2: Summary of AEs in all rimegepant-treated participants (N=1288)

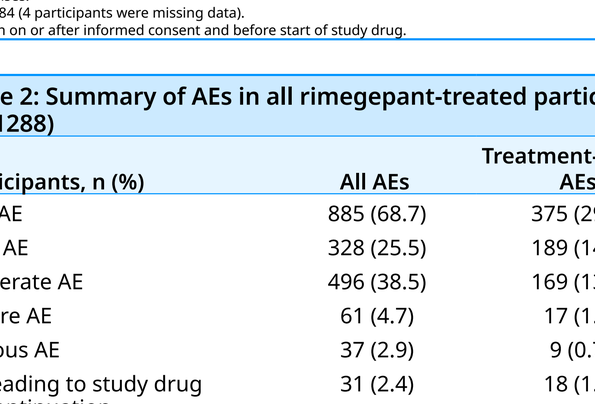
Participants, n (%)	All AEs	Treatment-related AEs
Any AE	885 (68.7)	375 (29.1)
Mild AE	328 (25.5)	189 (14.7)
Moderate AE	496 (38.5)	169 (13.1)
Severe AE	61 (4.7)	17 (1.3)
Serious AE	37 (2.9)	9 (0.7)
AE leading to study drug discontinuation	31 (2.4)	18 (1.4)
AEs in ≥5% of participants[a]		
Upper respiratory tract infection	123 (9.5)	28 (2.2)
Nasopharyngitis	100 (7.8)	15 (1.2)
COVID-19	98 (7.6)	22 (1.7)

[a] Based on all AEs; no treatment-related AEs occurred in ≥5% of participants.
AE=adverse event

CHANGE IN MMDS

- Among 1269 participants in the MMD analysis, the mean (SD) number of MMDs during the OP was 11.1 (4.3) days.
- The number of MMDs decreased, relative to the OP, over the course of 52-week treatment with rimegepant; overall mean (SD) change was –2.0 (4.6) days (**Figure 1**).

Figure 1: Mean change in MMDs, relative to the OP, during long-term treatment with rimegepant



n: Month 1 (≤4 weeks) = 1267, Month 2 (>4 to ≤8 weeks) = 1196, Month 3 (>8 to ≤12 weeks) = 1151, Month 4 (>12 to ≤16) = 1093, Month 5 (>16 to ≤20 weeks) = 1058, Month 6 (>20 to ≤24 weeks) = 1033, Month 7 (>24 to ≤28 weeks) = 989, Month 8 (>28 to ≤32 weeks) = 954, Month 9 (>32 to ≤36 weeks) = 927, Month 10 (>36 to ≤40 weeks) = 902, Month 11 (>40 to ≤44 weeks) = 880, Month 12 (>44 to ≤48 weeks) = 864, Month 13 (>48 to ≤52 weeks) = 842, Overall = 1269.
MMD=monthly migraine day; OP=observation period

OTHER EFFICACY ASSESSMENTS

- Rimegepant was associated with improvements in MIDAS and MSQ scores over the course of long-term treatment (**Table 3**).

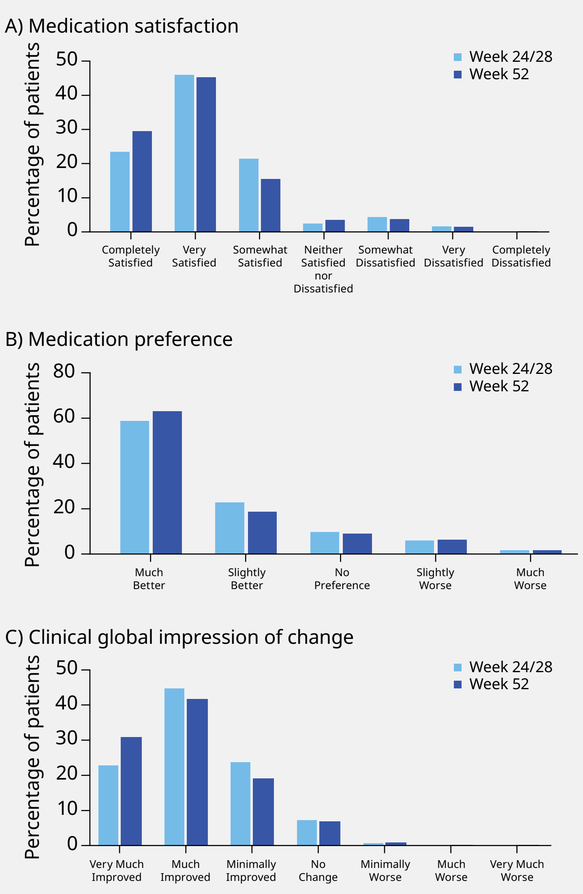
Table 3: Summary of MIDAS and MSQ domain scores

		Change from baseline			
Measure	Baseline	Week 12	Week 24/28	Week 36/40	Week 52
MIDAS Total Score					
n	1282	1085	1014	916	816
Mean (SD)	42.1 (37.5)	–14.6 (34.2)	–19.4 (33.4)	–20.9 (34.9)	–22.7 (35.5)
95% CI	-	–16.6, –12.6	–21.4, –17.3	–23.2, –18.7	–25.1, –20.2
MSQ RRF Domain Score					
n	1286	1087	1020	917	823
Mean (SD)	50.9 (17.3)	13.4 (18.0)	16.8 (18.3)	18.7 (18.8)	19.9 (19.5)
95% CI	-	12.3, 14.5	15.7, 17.9	17.5, 19.9	18.6, 21.2
MSQ PRF Domain Score					
n	1286	1087	1020	917	823
Mean (SD)	65.4 (19.7)	10.8 (18.6)	14.0 (19.3)	15.2 (18.9)	16.8 (20.0)
95% CI	-	9.7, 11.9	12.8, 15.2	14.0, 16.4	15.5, 18.2
MSQ EF Domain Score					
n	1286	1087	1020	917	823
Mean (SD)	59.1 (25.3)	14.2 (23.1)	17.1 (23.9)	18.7 (24.2)	19.7 (25.7)
95% CI	-	12.8, 15.6	15.7, 18.6	17.2, 20.3	18.0, 21.5

Negative MIDAS score change indicates improvement. Positive MSQ domain score change indicates improvement.
EF=emotional function; MIDAS=migraine disability assessment; MSQ=migraine specific quality of life ; PRF=preventive role function, RRF=restrictive role function

- Most participants were completely or very satisfied with rimegepant treatment at Week 24/28 (69.6%) and Week 52 (75.0%) (**Figure 2A**), most preferred rimegepant over previous migraine treatments at Week 24/28 (81.9%) and Week 52 (82.2%) (**Figure 2B**), and physicians rated most of their patients as very much or much improved at Week 24/28 (67.8%) and Week 52 (72.6%) (**Figure 2C**).

Figure 2: Summary of treatment satisfaction, preference, and clinical global impression of change



Treatment satisfaction, n: 895 at Week 24/28 and 760 at Week 52.
Treatment preference, n: 896 at Week 24/28 and 760 at Week 52.
Clinical global impression of change, n: 1020 for Week 24/48 and 821 for Week 52.

CONCLUSIONS

- In this subgroup of participants with ≥6 MMDs at baseline, long-term use of rimegepant 75 mg for acute treatment of migraine, up to once per day for up to 52 weeks, was well tolerated and provided a reduction in the number of MMDs that was observed as early as the first 4 weeks and continued throughout 52 weeks of treatment.
- The observation that MMDs were reduced over time suggests that medication overuse headache is unlikely to be associated with rimegepant.

REFERENCES

1. Nurtec ODT (rimegepant) prescribing information. Pfizer, 2023.
2. Vydura (rimegepant) prescribing information. European Medicines Agency, 2024.
3. L'Italien G, et al. Cephalalgia Reports 2022;5:1-11.

DISCLOSURES

SY: Reports no conflicts of interest. **TF, YZ, QZ, HZ:** Employees of Pfizer and may own stock/options. **GP:** Employee of Pfizer and owns stock or options in Pfizer and AbbVie.

ACKNOWLEDGMENTS

This study was sponsored by Pfizer. Medical writing support was provided by Matt Soulsby, PhD, CMPP, of Engage Scientific Solutions and was funded by Pfizer.

Presented at the 20th Migraine Trust International Symposium (MTIS), September 5–8, 2024, London, UK