Efficacy of Lasmiditan for the Acute Treatment of Perimenstrual Migraine

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BACKGROUND AND OBJECTIVE

Background

- Lasmiditan has been shown to be effective for the acute treatment of migraine
- Perimenstrual migraine in those with menstrual migraine is considered to be difficult to treat, as it is characterized by:
  - relatively severe and prolonged attacks
  - frequent relapse
- The efficacy of lasmiditan for the treatment of migraine during menses is unknown

Objective

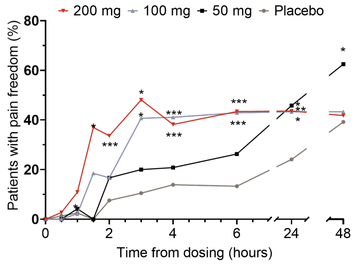
- The objective of this post hoc analysis was to evaluate the efficacy of lasmiditan in the treatment of perimenstrual migraine attacks

METHODS

- Data from 2 randomized, double-blind, placebo-controlled clinical trials assessing lasmiditan for the treatment of migraine attacks, MONONOFU (phase 2 study of Japanese participants; N=846) and CENTURION (phase 3 study of European, North American, and Asian participants; N=1613), were pooled for this post hoc analysis
- Participants were instructed to treat an attack with a single dose of study medication within 4 hours of pain onset providing that the headache severity was at least moderate or severe at the time
- A perimenstrual migraine attack was defined as an attack that was treated any time from day -2 to day +3 of menstruation (with first day of bleeding designated as day 1)
- Data from the first perimenstrual migraine attack for each female in the intent-to-treat populations (all randomized participants who use at least 1 dose of study drug with any postdose pain severity assessments at or before 2 hours postdose) were included in the analysis
- A logistic regression model with treatment group and region (Asia, Europe, North America) as covariates was used
- Participants with missing outcome data were imputed as nonresponders

KEY RESULT- PAIN FREEDOM

A numerically greater proportion of participants achieved head pain freedom after treatment of their first perimenstrual migraine attack with lasmiditan 200 mg versus placebo at all time points assessed



*p<0.05, **p<0.01, ***p<0.001 versus placebo.

LIMITATIONS AND CONCLUSIONS

Limitations

- The study did not recruit women with menstrual migraine
- Attacks and menstruation may have been coincidental rather than a true association
- Small numbers of participants, especially for the 50-mg dose
- Study designs differed

Conclusions

- In a limited sample of women with perimenstrual migraine attacks, treatment with lasmiditan compared with placebo was associated with a reduction in
  - migraine-related head pain
  - most bothersome symptom
  - interference with normal activities

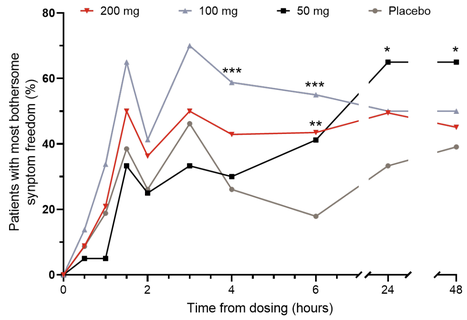
Demographics

	Placebo (N=79)	L50 mg (N=24)	L100 mg (N=90)	L200 mg (N=110)	Total (N=303)
Age (Years), Mean (SD)	38.25 (9.38)	37.50 (9.38)	39.44 (7.94)	38.80 (8.40)	38.75 (8.59)
Race, n[a] (%)	78	24	89	110	301
Asian	27 (34.6)	7 (29.2)	38 (42.7)	45 (40.9)	117 (38.9)
White	46 (59.0)	15 (62.5)	47 (52.8)	57 (51.8)	165 (54.8)
Ethnicity, n (%)					
Hispanic or Latino	10 (12.7)	2 (8.3)	7 (7.8)	9 (8.2)	28 (9.2)
Body Mass Index (kg/m²), Mean (SD)	24.28 (5.60)	26.47 (7.74)	24.78 (6.02)	25.39 (6.93)	25.00 (6.41)
Duration of Migraine History (Years), Mean (SD)	18.11 (10.60)	17.43 (11.62)	16.74 (10.88)	16.36 (10.96)	17.01 (10.87)
Number of Migraines per Month in Past 3 Months, Mean (SD)	5.23 (1.58)	5.46 (2.04)	4.90 (1.41)	5.13 (1.52)	5.11 (1.55)
Baseline Migraine Severity[b], n (%)					
Mild	5 (6.3)	2 (8.3)	2 (2.2)	1 (0.9)	10 (3.3)
Moderate	53 (67.1)	14 (58.3)	68 (75.6)	85 (77.3)	220 (72.6)
Severe	21 (26.6)	8 (33.3)	20 (22.2)	24 (21.8)	73 (24.1)
Baseline MBS[b], n[a] (%)	69	20	79	91	259
Nausea	18 (26.1)	8 (40.0)	27 (34.2)	28 (30.8)	81 (31.3)
Phonophobia	16 (23.2)	4 (20.0)	22 (27.8)	24 (26.4)	66 (25.5)
Photophobia	35 (50.7)	8 (40.0)	30 (38.0)	39 (42.9)	112 (43.2)
Baseline Functional Disability[b], n (%)					
Not at All (0)	1 (1.3)	0 (0.0)	0 (0.0)	3 (2.7)	4 (1.3)
Mild Interference (1)	39 (49.4)	10 (41.7)	41 (45.6)	40 (36.4)	130 (42.9)
Marked Interference (2)	31 (39.2)	12 (50.0)	39 (43.3)	57 (51.8)	139 (45.9)
Need Complete Bed Rest (3)	8 (10.1)	2 (8.3)	10 (11.1)	10 (9.1)	30 (9.9)
Participants with Hormonal Contraceptive at Baseline, n (%)					
Yes	17 (21.5)	4 (16.7)	21 (23.3)	23 (20.9)	65 (21.5)
No	62 (78.5)	20 (83.3)	69 (76.7)	87 (79.1)	238 (78.5)

[a] Number of subjects with non-missing data, used as denominator. [b] Based on the first perimenstrual attack observed. L=lasmiditan; MBS=most bothersome symptom; N=number of subjects in the analysis population; n=number of subjects in the specified category; SD=standard deviation

Most Bothersome Symptom Freedom

A numerically greater proportion of participants achieved freedom from their most bothersome symptom after treatment of their first perimenstrual migraine attack with 100 mg and 200 mg lasmiditan versus placebo.



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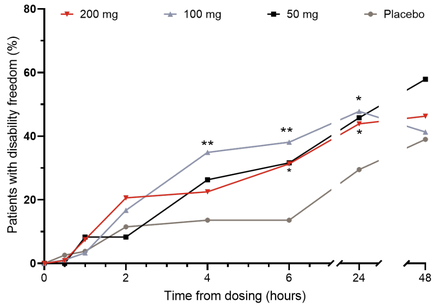
Functional Disability Freedom

A numerically greater proportion of participants achieved functional disability freedom after treatment of their first perimenstrual migraine with attack all doses of lasmiditan versus placebo at later time points.



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Data Available per Time Point

	0.5h	1h	1.5h[a]	2h	3h[a]	4h	6h[b]	24h	48h
Placebo (N)	79	79	19	79	19	79	60	79	79
50 mg (N)	24	24	5	24	5	24	19	24	24
100 mg (N)	90	90	27	90	27	90	63	90	90
200 mg (N)	110	110	27	110	27	110	83	110	110

[a] Time points assessed in MONONOFU only.
[b] Time point assessed in CENTURION only.
Note: Data represent the intent-to-treat population. N's for most bothersome symptom freedom and functional disability freedom may differ as participants need to have a most bothersome symptom or functional disability respectively, recorded at baseline.
N=number of participants with non-missing assessment at given timepoint

Acknowledgements: Yan Dong (Eli Lilly and company) for generating the original data set.

Disclosures: MK, JHK, SKB, MV, and **PMH**: employees and minor stockholders of Eli Lilly and Company. **EAM:** Asarina Pharma (Other Activities) (Scientific Advisory or Data Safety Monitoring board), Bayer Healthcare (Other Activities) (Scientific Advisory or Data Safety Monitoring board), Eli Lilly and Company, Novartis, Theramex (Other Activities) (Scientific Advisory or Data Safety Monitoring board) and Theramex Australia (Speaking and Teaching) (Speakers Bureau). **HI**: Amgen (Consulting), Eli Lilly Japan K.K (Consulting), Kyowa Hakko Kirin (Speaking and Teaching), Otsuka Pharmaceutical Co. Ltd. (Consulting), Pfizer (Speaking and Teaching), Takeda Pharmaceutical Company Limited (Speaking and Teaching), Lundbeck Japan K.K. (Teaching, Daiichi Sankyo Co. Ltd. (Speaking), Eli Lilly Japan K.K.(Consulting and Speaking).
Previously presented at 63rd American Headache Society Annual Meeting (AHS); Virtual 2021; June 3-6, 2021

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