Response to Treatment With Lemborexant: Subjects with Irregular Sleep-Wake Rhythm Disorder and Alzheimer’s Disease Dementia

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Introduction

• Hypersomnia after awakeness (HAW) is a persistent hypersomnia disorder characterized by excessive somnolence (daytime sleep attacks) and an increased nighttime sleep duration.
• The use of validated actigraphy in clinical and research settings helps in the diagnosis of HAW.
• Lemborexant (LEM), an orexin receptor antagonist, has been shown to improve HAW symptoms in clinical trials.

Methods

Participants
• Men and women 65 years of age or older.
• Consenting participants with HAW based on the National Institute on Aging’s Sleep-Wake Disorders Guidelines.
• On-treatment Data (MTD): 138 subjects (77 LEM, 61 PBO).
• Off-treatment Data (MTD): 138 subjects (77 LEM, 61 PBO).
• Subjects had to be ambulatory and actively engaged in activities of daily living in the 24-hour period before the onset of treatment.
• Baseline diaries were collected for 7 days before treatment began.

Study Design
The phase 2 study (NCT03965128) was an open-label, double-blind, randomized, parallel-group, placebo-controlled, dose-escalation study. A total of 160 subjects were randomized to 1 dose of LEM or PBO (1:1) for 4 weeks.

Results

Daytime Wake Endpoints
• No significant worsening of cognition was observed (MMSE, ADAS-Cog) (PBO vs. LEM groups).
• Improvement in caregiver burden was observed (PBO vs. LEM groups).

Nighttime Sleep-Related Endpoints
• A greater percentage of subjects in each LEM group, compared with PBO, achieved a greater percentage of sleep without wake fragments during sleep.

Circadian Endpoints
• A greater percentage of subjects in each LEM group, compared with PBO, met responder analyses (PBO vs. LEM groups).

Conclusion

Lemborexant treatment was safe and well tolerated. The research on this poster was supported by Eisai Inc. The investigators retained full independence in the conduct of this research.

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