INPLASY

The efficacy and safety of zavegepant nasal inhalation versus oral calcitonin-gene related peptide receptor antagonists in the acute treatment of migraine: A systematic review and network meta-analysis of the literature

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 January 2025 and was last updated on 18 January 2025.

INTRODUCTION

Review question / Objective To investigate the efficacy and safety of zavegepant nasal inhalation versus oral calcitonin-gene related peptide (CGRP) receptor antagonists for the acute treatment of migraine.

Condition being studied The new intranasal inhaled calcitonin gene-related peptide (CGRP) receptor antagonist, Zavegepant, has been shown to have definitive efficacy in the acute treatment of migraine. However, whether it shows superiority over other oral CGRP receptor antagonists remains to be demonstrated.Zavegepant, a new nasal inhalation calcitonin gene-related peptide (CGRP) receptor antagonist, has been proven to have a clear efficacy in the acute treatment of migraine. However, whether the efficacy of this new nasal inhalation drug is better than other oral CGRP receptor antagonists remained to be confirmed.

METHODS

Search strategy A search for eligible studies published up to 1 December 2024 was conducted on PubMed, EMBASE and the Cochrane Register of Controlled Trials (CENTRAL). PubMed, EMBASE, and The Cochrane Register of Controlled Trials (CENTRAL) were searched for eligible studies published up to December 1, 2024. The following keywords (in the title/abstract) were used: migraine, zavegepant, CGRP receptor antagonists, acute treatment of migraine.

Participant or population Adult participants diagnosed with migraine.

Intervention Zavegepant or oral CGRP receptor antagonists.

Comparator Placebo of the same dose.

Study designs to be included RCT.

Eligibility criteria Exclusion criteria: comment, review, letter, animal experiment, retrospective study, case series, or case reports; no extractable datas; non-English article.

Information sources PubMed, EMBASE, and The Cochrane Register of Controlled Trials (CENTRAL).

Main outcome(s) Pain freedom at 2 hours, freedom from the most bothersome symptom(MBS) at 2 hours.

Additional outcome(s) Pain relief at 2 hours, sustained pain freedom 2-24 hours, sustained pain freedom 2-48 hours, sustained pain relief 2-24 hours, sustained pain relief 2-48 hours, phonophobia freedom at 2 hours, photophobia freedom at 2 hours, AEs(adverse events), nausea and vomiting.

Quality assessment / Risk of bias analysis The risk of bias were assessed with Cochrane Collaboration tool.

Strategy of data synthesis Review Manager 5.3 was used. Risk ratio was analyzed with 95% confidence intervals. $P < 0.05$ was statistically significant.

Subgroup analysis NA.

Sensitivity analysis The I2 statistic was used to weigh measure heterogeneity; values less than 30% indicate “low heterogeneity,” values between 30% and 50% indicate “moderate heterogeneity,” and values more than 50% indicate “severe heterogeneity.” Sensitivity analysis was used to investigate the stability of the consolidated data.

Language restriction English.

Country(ies) involved China.

Keywords migraine, zavegepant, CGRP receptor antagonists, acute treatment of migraine.

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