Journal of Pain Research

Dovepress
Taylor & Francis Group

Open Access Full Text Article

LETTER

A Commentary on Efficacy of Acupuncture and Pharmacotherapy for Migraine Prophylaxis: A Systematic Review and Meta-Analysis [Letter]

Luyao Fu[1],*, Zhuoyi Li[1],*, Ruijie Ma[2]

[1]The Third School of Clinical Medicine, Zhejiang Chinese Medical University, Hangzhou City, People's Republic of China; [2]Department of Acupuncture and Moxibustion, The Third Affiliated Hospital of Zhejiang Chinese Medical University, Hangzhou City, People's Republic of China

*These authors contributed equally to this work

Correspondence: Ruijie Ma, Email 20071028@zcmu.edu.cn

Journal of Pain Research downloaded from https://www.dovepress.com/
For personal use only.

Dear editor

We read with great interest the article entitled "Efficacy of Acupuncture and Pharmacotherapy for Migraine Prophylaxis: A Systematic Review and Meta-Analysis" by Liu et al.[1] The authors conducted a meta-analysis of 19 randomized controlled trials involving 2296 patients. This study compared acupuncture with pharmacotherapy for migraine relief. Acupuncture proved superior to drugs across several efficacy measures. However, after a careful review of the study, we identified some methodological limitations that merit further discussion.

Inaccurate Description of Bias Risk Assessment Tool

The methods section misdescribed the Cochrane RoB tool, citing eight dimensions while assessing only seven actually. Second, this study's PROSPERO registration (CRD42024521428) claimed RoB-2 usage, conflicting with the actual situation. Compared to the previous version, RoB-2 significantly enhances rigor through structured signaling questions, expanded applicability to trial designs, the introduction of automated tools, and overall risk assessment.[2] This discrepancy may compromise methodological quality assessment. Therefore, it is suggested to explain the reasons for the actual version of the tool used.

Cultural Bias in Adverse Events and Withdrawals

Although the acupuncture group had a lower incidence of adverse events and withdrawal rate, it should be noted that of the 19 included studies, only 2 were from Europe (Germany and Italy), with the rest conducted in China. It omitted discussion of cultural bias impacts in this regard. At the same time, the study did not discuss whether the results apply to areas with lower awareness of acupuncture, nor did it analyze the potential impact of cultural differences on the efficacy or treatment adherence. This hinders the conclusion of universality verification. Country-based subgroup or sensitivity analyses for efficacy heterogeneity are advised.

Insufficient Control of Confounding Factors

The subgroup analysis of the study was only based on intervention types and adherence to drug guidelines, without in-depth exploration of other potential factors such as treatment duration, patient age, and migraine subtypes that may affect efficacy. In addition, the heterogeneity of acupuncture techniques was not adequately addressed. There were significant differences in acupoint selection, stimulation parameters, and treatment frequency across different studies, which may significantly affect efficacy.[3] Expanding subgroup analysis to include confounding factors and acupuncture techniques is recommended to enhance result comparability and reliability.

Received: 17 June 2025
Accepted: 1 July 2025
Published: 3 July 2025

© 2025 Fu et al. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at https://www.dovepress.com/terms.php and incorporate the Creative Commons Attribution – Non Commercial (unported, v4.0) License (http://creativecommons.org/licenses/by-nc/4.0/). By accessing the work you hereby accept the Terms. Non-commercial uses of the work are permitted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission for commercial use of this work, please see paragraphs 4.2 and 5 of our Terms (https://www.dovepress.com/terms.php).

Despite the shortcomings in risk assessment, confounding bias, and subgroup analysis, this study provided evidence for the potential advantages of acupuncture in migraine prophylaxis and treatment. We look forward to more rigorous and high-quality studies in the future to verify the application value of acupuncture in the field of pain management.

Disclosure

The authors report no conflicts of interest in this communication.

References

1. Liu AR, Zhu Q, Li J, Cao Y, Pei T, Shi L. Efficacy of acupuncture and pharmacotherapy for migraine prophylaxis: a systematic review and meta-analysis. *J Pain Res*. 2025;18:2521–2540. doi:10.2147/JPR.S519846
2. Sterne JAC, Savović J, Page MJ, et al. RoB 2: a revised tool for assessing risk of bias in randomised trials. *BMJ*. 2019;366:l4898. doi:10.1136/bmj.l4898
3. Yunshan L, Chengli X, Peiming Z, Haocheng Q, Xudong L, Liming L. Integrative research on the mechanisms of acupuncture mechanics and interdisciplinary innovation. *Biomed Eng Online*. 2025;24(1):30. doi:10.1186/s12938-025-01357-w

Dove Medical Press encourages responsible, free and frank academic debate. The contentTxt of the Journal of Pain Research 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the Journal of Pain Research editors. While all reasonable steps have been taken to confirm the contentTxt of each letter, Dove Medical Press accepts no liability in respect of the contentTxt of any letter, nor is it responsible for the contentTxt and accuracy of any letter to the editor.

Journal of Pain Research

Dovepress
Taylor & Francis Group

Publish your work in this journal

The Journal of Pain Research is an international, peer reviewed, open access, online journal that welcomes laboratory and clinical findings in the fields of pain research and the prevention and management of pain. Original research, reviews, symposium reports, hypothesis formation and commentaries are all considered for publication. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit http://www.dovepress.com/testimonials.php to read real quotes from published authors.

Submit your manuscript here: https://www.dovepress.com/journal-of-pain-research-journal

https://doi.org/10.2147/JPR.S547779