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LETTER

Clinical Evidence of Acupoint Stimulation for Primary Dysmenorrhea: A Systematic Review and Updated Meta-Analysis [Letter]

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Dear editor

We read with interest the systematic review and meta-analysis, "Clinical Evidence of Acupoint Stimulation for Primary Dysmenorrhea: A Systematic Review and Updated Meta-Analysis" by Wang et al.[1] Integrating 22 randomized controlled trials and using rigorous statistical analysis, the study offers important evidence for non-pharmacological PD management, particularly the analgesic effects of invasive acupoint stimulation. However, to improve the clinical relevance and methodology, we respectfully highlight several overlooked issues that may influence result interpretation and application.

Omission of Age Stratification and Concealed Efficacy in Adolescent Subgroups

Wang et al included patients aged 14–35 years, with 10 studies enrolling minors (<18 years); however, they did not conduct age-stratified analyses. Research has shown that progesterone and estrogen can alleviate pain associated with endometriosis.[2] However, the levels of sex hormones in adolescents differ significantly from those in adults, characterized by greater fluctuations and an unstable hypothalamic-pituitary-gonadal axis.[3] This physiological feature makes clinical treatment plans based directly on adult data potentially unsuitable for the adolescent population. Given that adolescents are a high-risk group for primary dysmenorrhea, this oversight may lead to a lack of targeted treatment recommendations.

Lack of Standardization for "Acupoint Stimulation Dose" and Ambiguity in Operability

Wang et al included various types of acupoint stimulation methods (such as hand acupuncture, electroacupuncture, moxibustion, and auricular therapy); however, they overlooked the crucial issue of "standardization of intervention dosage". Liu et al[4] used a continuous wave of 2Hz, while Yang et al[5] employed a sparse-dense wave of 50Hz. However, these differences were not stratified in the subgroup analyses. Studies have shown that the immediate analgesic effect of electroacupuncture treatment for dysmenorrhea using the dense-sparse wave is slightly better than that of continuous and intermittent waves,[6] which may be one of the reasons for the higher heterogeneity ($I^2 > 90\%$) in the pain relief outcome.

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Insufficient Follow-up Duration: Most Studies Failed to Capture the "Continuous Efficacy Over More Than 3 Menstrual Cycles"

Primary dysmenorrhea is a chronic and recurrent disease; therefore, long-term follow-up observation is required when evaluating intervention measures. However, the analysis by Wang et al did not meet this standard. Among the 22 included randomized controlled trials, only one study (Yang et al[5]) conducted a 6-month follow-up, six studies had a follow-up period of three menstrual cycles, and 15 studies had no follow-up data. The combined results of "long-term efficacy" in the meta-analysis relied solely on the follow-up data of three cycles (standardized mean difference SMD = −3.74, 95% confidence interval CI −5.57 to −1.90), which was insufficient to reflect the persistence of the therapeutic effect of acupoint stimulation.

Conclusion

In summary, current research on the efficacy of acupoint stimulation for primary dysmenorrhea reveals deficiencies in age stratification, standardized stimulation dosing, and long-term follow-up. Future studies should address these gaps by conducting age-stratified analyses, defining and standardizing the stimulation protocol, and ensuring adequate long-term follow-up. Clarifying these aspects will help provide stronger evidence to guide the clinical application of acupoint stimulation in treating primary dysmenorrhea.

Disclosure

The authors report no conflicts of interest in this communication.

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