

The effectiveness of vitamin E on pain management of primary dysmenorrhea among adolescents: A meta-analysis

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Introduction

In the adolescent population, dysmenorrhea is the most common cause of school absenteeism and has negative effects on school performance and concentration. Recent studies show that Vitamin E has promising results in alleviating primary dysmenorrhea in menstruating women.

Objective

To determine the effectiveness of Vitamin E in decreasing the pain intensity of adolescents who had menarche with primary dysmenorrhea

Methodology

PRISMA guidelines were followed. Articles were searched using different search strategies. Assessment of quality of articles was performed using Cochrane version 2 risk-of-bias tool for RCTs (RoB 2). Quantitative data were pooled and analyzed using the Review Manager 5.4.

Keywords

Vitamin E; Dysmenorrhea; Adolescent; Meta-analysis

Results

The pooled mean difference showed lower pain score in the vitamin E group (MD= -1.34, 95%CI= -2.01, -0.67, p-value<0.0001) compared to control group. Sensitivity analysis excluding the trial with high risk for bias was done which showed mean difference of -1.70 (95% CI -2.17 to -1.22), implying that lower pain was felt among those in the vitamin E group.

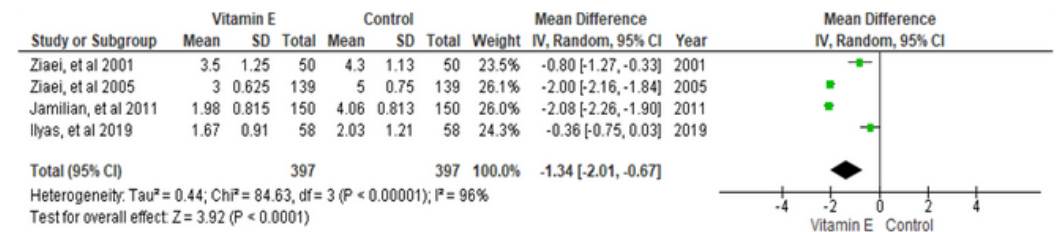


Figure 4 Meta-analysis on the effect on pain score

Conclusion

Vitamin E may be effective in decreasing the pain intensity of adolescent girls with primary dysmenorrhea. However, due to presence of heterogeneity, results should be treated with caution.

Recommendation

Recommendation for future research include inclusion of additional high-quality trials. Future studies may also look into optimal dose of vitamin E, as well as presence or absence of side effects must be properly documented.