

Effects of probiotics for the treatment of bacterial vaginosis in adult women: a meta-analysis of randomized clinical trials

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Abstract

Purpose: The aim of this study was to evaluate the evidence for probiotic use in the treatment of bacterial vaginosis (BV) in adult women.

Methods: The Cochrane Library, PubMed, CINAHL and EMBASE databases were searched to identify the relevant randomized controlled trials that investigated the effects of probiotics for the treatment of BV. Two independent authors used an Excel file to extract data and assessed trial quality. The primary outcome measure was the cure rate of BV. The meta-analysis was performed with the fixed-effects model or random-effects model according to heterogeneity.

Results: A total of 1,304 patients from 12 trials were subjected to meta-analysis. The pooled result showed that probiotics supplementation can significantly improve the cure rate in adult BV patients [risk ratio (RR) 1.53; 95 % confidence interval (CI) 1.19-1.97]. Findings were slightly different when analyses were restricted to nine high-quality studies (RR 1.60; 95 % CI 1.16-2.22). In a subgroup meta-analysis, a statistically significant beneficial effect of probiotics was observed in Europe populations and short-term follow-up days.

Conclusion: Compared with the control arm, the limited evidence suggests that probiotics show a beneficial effect in patients who are suffering from BV. However, the results should be interpreted cautiously because of the heterogeneity among study designs. Further large-scale, well-designed RCTs on this topic are urgently needed.