Clinical Effects of Lactobacillus Reuteri Probiotic in the Treatment of Chronic Periodontitis: A Systematic Review of Randomized Controlled Trials

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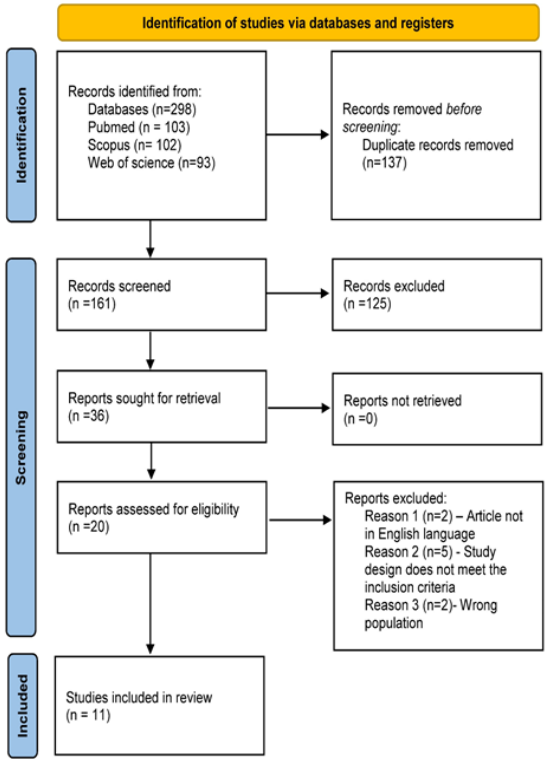
AIM & OBJECTIVE

The aim of this systematic review was to examine the effectiveness of Lactobacillus reuteri as an adjunct as compare to scaling and root planning in the treatment of chronic periodontitis.

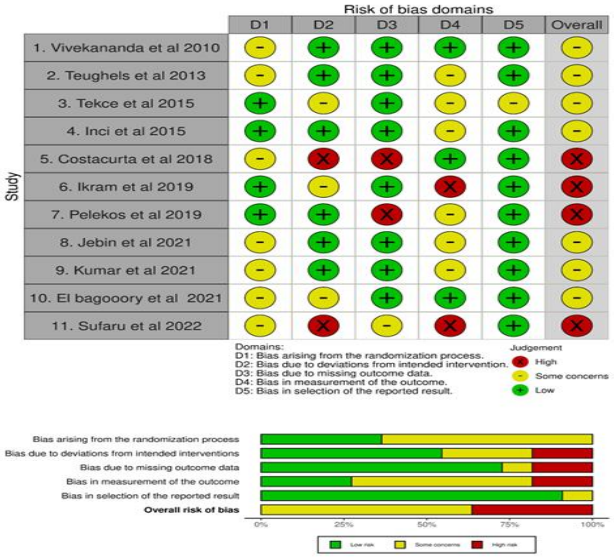


MATERIALS & METHODS

Scopus, Embase, Medline, and Web of Science databases were searched in October 2022. Randomized control trials that evaluated the effects of probiotic Lactobacillus reuteri in patients with periodontitis were included. The primary outcome was the pocket depth and clinical attachment levels while the secondary outcome was bleeding on probing and microbial levels. Articles in languages other than English were excluded. Data extraction and quality assessment were performed independently by two authors, with a third author consulted when needed. Study quality was assessed based on the Cochrane Handbook for Systematic Reviews of Interventions Handbook guidelines and the ROB2 tool.

RESULTS

A total of eleven studies were included. 369 adults (18-70 years) suffering from chronic periodontitis were evaluated. Eight out of the eleven studies reported statistically significant improvement in the intergroup pocket depths whereas seven studies showed a statistically significant reduction in the clinical attachment levels in the probiotic group as compared to the controls. Three studies showed no significant improvement in the pocket depth levels in the probiotic group as compared to the controls. Four studies showed no significant reduction in the clinical attachment levels between the two groups. The overall risk of bias was high in four studies while seven studies reported some concerns with the risk of bias.



CONCLUSION

Based on the limited evidence available, the adjunctive use of Lactobacillus reuteri to scaling and root planning may provide some additional benefits in terms of improvement of periodontal parameters.

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