

MINIMALLY INVASIVE THERAPY FOR THE TREATMENT OF INFRABONY DEFECT. A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS

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Introduction:

Emerging evidence suggests that minimally invasive therapy (MIT) including surgical (MIS) and not surgical treatments (MINS) may be successfully used in the treatment of residual pockets associated with deep infrabony defects.

Aims:

The aim of the present systematic review (SR) and network meta-analysis (NM) is to explore the comparative effectiveness of MIT.

Methods:

A literature search on PubMed, Cochrane libraries, EMBASE, and hand-searched journals until October 2017 was conducted to identify Randomized Clinical Trials using MIS techniques. Data were retrieved and a Network Meta-analysis (NM) was performed to merge evidence from direct and indirect comparisons by different trials. Outcome variables were Clinical Attachment Gain (CAL), Probing Depth (PD) and Gingival Recession (Rec).

Results:

A total of 11 RCTs were enclosed in SR and 9 in the NM. The Ranking of treatments by effectiveness in terms of final CAL demonstrated that MIS+growth factors (best probability 24.6%), MINS (best probability 23.5%), double flap approach (best probability 14.6%) and MIS+enamel matrix proteins (best probability 12.9%) showed the highest efficacy. Our confidence on the treatment ranking was moderate due to limitation in terms of number of studies.

Conclusions:

Both minimally invasive surgical (MIS) and not surgical therapy (MINS) showed high efficacy in the treatment of residual pockets associated with infrabony defects. Data suggest caution in applying combinations of bone replacement biomaterials for minimally invasive approaches.