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ADMINISTRATIVE INFORMATION

Support - No support.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202360077

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 June 2023 and was last updated on 26 June 2023.

INTRODUCTION

Review question / Objective To evaluate the efficacy of Bovine Derived Xenograft (BDX) with the use of Minimally Invasive Surgical Technique (MIST) in the treatment of intrabony defects.

Condition being studied Intabony defects in chronic periodontitis patients.

METHODS

Participant or population Patients having intrabony defects with minimum probing depth of more than or equal to 5mm and radiographic defect of more than or equal to 3mm.

Intervention Minimally invasive surgical technique with Bovine Derived xenograft in the treatment of intrabony defects.

Comparator Minimally invasive surgical technique in the treatment of intrabony defects without use of Bovine derived xenograft.

Study designs to be included Randomized Controlled Trials (RCTs) , Cohort Studies.

Eligibility criteria Inclusion criteria- RCTs and cohort studies, studies using MIST for treatment of intrabony defects, all studies using BDX, studies with a follow up of minimum 6 months, all articles in English language exclusion criteria- case reports, reviews, editorials, grey literature, articles in languages other than English, in vitro studies, studies not done using MIST, studies which have used regenerative materials other than BDX, studies with follow up less than 6 months.

Information sources Pubmed, Medline, Google scholar, Google, DPU library.

Main outcome(s) Probing pocket depth; Clinical Attachment Level; Gingival Recession.

Additional outcome(s) Wound healing index; Pink Esthetic score.

Quality assessment / Risk of bias analysis

Quality assessment of RCTs done through Risk of Bias Assessment tool (RoB2 tool). For prospective studies , quality assessment done through Newcastle Ottawa scale.

Strategy of data synthesis

According to PRISMA A systematic search was conducted using Pubmed , Google scholar, clinical Trials registry and manual search using DPU college library resources. Then a flow chart wad made according to PRISMA guidelines. Articles were included or excluded bases on eligibility criteria and a systematic table was made to extract all the data from the selected Articles.

Subgroup analysis Linear effect model; Funnel plot.

Sensitivity analysis Risk of Bias Assessment tool (Rob2); Revman software; Newcastle Ottawa Assesment scale for systematic review.

Language restriction No.

Country(ies) involved India.

Keywords Minimally invasive surgical technique, bovine derived xenograt, intrabony defects, BDX, MIST, infrabony defects.

Contributions of each author

Author 1 - Shambhavi Thakur - Author 1 drafted the manuscript.

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Author 2 - Santosh Martande - Author 2 helped in conducting the study and formulation of the systematic review.

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