INPLASY PROTOCOL

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Corresponding author:
Jiayi Chen

cjy13912736738@163.com

Author Affiliation:
Suzhou Wujiang District Hospital of Traditional Chinese Medicine.

Support: **None.**

Review Stage at time of this submission: **Preliminary searches.**

Conflicts of interest:
None declared.

Clinical evaluation of maxillary sinus floor elevation with or without bone grafting: a systematic review and Meta-analysis

Chen, JY[1]; Lu, YP[2].

Review question / Objective: **Comparing clinical outcomes between graft-less and grafting maxillary sinus floor elevation treating loss of bone height on posterior maxilla.**
Condition being studied: **Maxillary sinus floor elevation was a method of augmentation of posterior maxilla in implant surgery. Graft-less maxillary sinus floor elevation was a predictable procedure for implant surgery, in contrast to applying bone or bone subsitute under raised sinus membrane.**
Eligibility criteria: **Inclusion criteria: (1)a split-mouth study(2)age of patients included ≥18.Exclusion criteria: (1)Animal or in vitro studies(2)one-arm study(3)patent.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 May 2023 and was last updated on 16 May 2023 (registration number INPLASY202350067).

INTRODUCTION

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bone or bone subsitute under raised sinus membrane.

METHODS

Participant or population: Patients with loss of bone height on posterior maxilla receive the treatment of maxillary sinus floor elevation in implant surgery.

Intervention: Patients with insufficient residual bone height on posterior maxilla undergoing graft-less maxillary sinus floor elevation.

Comparator: Patients with insufficient residual bone height on posterior maxilla undergoing maxillary sinus floor elevation with bone grafting.

Study designs to be included: The exclusion criteria were as following: (1)non-human studies (2)non-original studies (letters, reviews, comments, editorials) (3)studies that did not include maxillary sinus floor elevation with or without bone grafting (4)studies with available data can be extracted (5)non-comparative studies(6)randomized controlled trials (RCTs)and prospective cohort trials(PCTs).

Eligibility criteria: Inclusion criteria: (1)a split-mouth study(2)age of patients included ≥18.Exclusion criteria:(1)Animal or in vitro studies(2)one-arm study(3)patent.

Information sources: Using the three databases of PubMed, Embase and Web of Science, a systematic literature search was conducted May, 2023. The language was restricted to English.

Main outcome(s): (1)bone height gain (2)stability of implant with an observation of at least 3 months (3)survival of implant with an obseravtion of at least 1 year.

Additional outcome(s): (1)change of histology (2)marginal bone loss height.

Quality assessment / Risk of bias analysis: The quality of included studies (RCTs)was evaluated with The Cochrane Collaboration's tool for assessing risk of bias.The Newcastle-Ottawa scale assessed the quality of included studies (PCTs).

Strategy of data synthesis: Statistical analysis were performed with Review Manager 5.3 and Stata12.0.Risk ratio(RR) with 95% CI was used to compared binary variables.The weighted mean difference(WMD) and 95%CI were caculated for continuous variables.The Cochrane Q p value and I^2 statistic were used to test heterogeneity.If p value < 0.05 or $I^2>50\%$, the results should be merged with a random-effect model.Otherwisea fixed-effect model can be applied. A p value.

Subgroup analysis: We perform anlysis of subgroup with more than 10 included studies, otherwise subgroup will not be anlysed in this article. Procedure of maxilla floor elevation will be included in each group.

Sensitivity analysis: When there was significant heterogeneity, sensitivity analysis was performed in STATA 14.0

Language restriction: English.

Country(ies) involved: China.

Keywords: maxillary sinus floor elevation; bone graft; meta-analysis.

Contributions of each author:

Author 1 - Jiayi Chen - The author designed the study, searched the database, extracted the data, analised the data and wrote the article.
Email: cjy13912736738@163.com
Author 2 - Yiping Lu - The author extracted the data.
Email: 13912736738@163.com

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