Critically Appraised Topic (CAT)

Project Team:
3A-5
Project Team Participants:
Nolan Frisch, Jiovannah Campbell, Tyler Grisar, and Ine Suh
Clinical Question:
In patients who require maxillary sinus augmentation, how does the long term prognosis of an endosseous implant placement differ when comparing 1-stage vs. 2-stage procedures?
PICO Format:
P:
Patients who require maxillay sinus augmentation before placement of endosseous implant
I:
1-stage sinus augmentation
C:
2-stage sinus augmentation
O:
Long-term prognosis
PICO Formatted Question:
In patients who require maxillary sinus augmentation before placement of an endosseous implant, how does the long term prognosis of the implant placement differ when comparing 1-stage vs. 2-stage procedures?
Clinical Bottom Line:
Study conclusion: No statistically significant differences were observed between implants placed according to 1- or 2-stage sinus lift procedures. However this study may suggest that in patients having residual bone height between 1 to 3 mm below the maxillary sinus, there might be a slightly higher risk for implant failures when performing a 1-stage lateral sinus lift procedure.
Date(s) of Search:
9/27/2020
Database(s) Used:
PubMed
Search Strategy/Keywords:
Dental implants, dental implantation, endosseous implant, maxilla/surgery, osseointegration, sinus floor augmentation
MESH terms used:
Sinus augmentation, 1 stage, 2 stage
Article(s) Cited:
Felice P, Pistilli R, Piattelli M, Soardi E, Barausse C, Esposito M. 1-stage versus 2-stage lateral sinus lift procedures: **1-year post-loading** results of a multicentre randomised controlled trial. Eur J Oral Implantol. 2014 Spring;7(1):65-75. PMID: 24892114.
Study Design(s):
Multicenter, comparative randomized controlled trial
Reason for Article Selection:
Article(s) Synopsis:

Level of Evidence: (For Therapy/Prevention, Etiology/Harm)

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See http://www.cebm.net/index.aspx?o=1025

☐ **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)

☐ **1b** – Individual RCT

☐ **2a** – Systematic Review of Cohort Studies

☐ **2b** – Individual Cohort Study

☐ **3** – Cross-sectional Studies, Ecologic Studies, "Outcomes" Research

☐ **4a** – Systematic Review of Case Control Studies

☐ **4b** – Individual Case Control Study

☐ **5** – Case Series, Case Reports

☐ **6** – Expert Opinion without explicit critical appraisal, Narrative Review

☐ **7** – Animal Research

☐ **8** – In Vitro Research

Strength of Recommendation Taxonomy (SORT) For Guidelines and Systematic Reviews

See article **J Evid Base Dent Pract 2007;147-150**

☐ **A** – Consistent, good quality patient oriented evidence

☐ **B** – Inconsistent or limited quality patient oriented evidence

☐ **C** – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening

Conclusion(s):

Article Cited:

Kim HJ, Yea S, Kim KH, Lee YM, Ku Y, Rhyu IC, Seol YJ**. A retrospective study of implants placed following 1-stage or 2-stage maxillary sinus floor augmentation by the lateral window technique performed on residual bone of <4 mm: Results up to 10 years of follow-up.** J Periodontol. 2020 Feb;91(2):183-193. doi: 10.1002/JPER.19-0066. Epub 2019 Aug 2. PMID: 31372997.

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Reason for Article Selection:

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Conclusion(s):

Article(s) Cited:

Raghoebar, GM, Onclin, P, Boven, GC, et al. Long-term effectiveness of maxillary sinus floor augmentation: A systematic review and meta-analysis. *J Clin Periodontol*. 2019; 46(Suppl. 21): 307– 318. https://doi.org/10.1111/jcpe.13055

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