

Bone changes in ridge split with immediate implant placement: A systematic review

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Abstract

Introduction

Alveolar width deficiency represents loss of buccal cortical or/and medullary bone. Deficiency of the buccal represents significant difficulty in implant reconstruction. A variety of implant-driven bone augmentation techniques for the deficient alveolar bone have been proposed. Alveolar ridge split is an excellent tool for regaining alveolar ridge width.

Material and method

Publications on the subject in English were searched to select articles up to June 2015. A systematic review was conducted searching an electronic database (MEDLINE, Pub- Med and Cochran) for articles in pre-reviewed journals concerning studies on humans. Two independent reviewers screened 815 papers.

Result

A consensus on the studies to be selected was reached after discussion; 804 articles were excluded on the basis of the title and abstract. Kappa score for the selection of the paper was 0.89. Full-text articles were obtained for the 11 selected publications. The 11 full texts were independently assessed by the two reviewers and 3 studies were found to qualify for inclusion.

Conclusion

Alveolar ridge splitting might be considered a predictable approach that demonstrates a high implant survival rate, adequate horizontal bone gain and minimal postoperative complications. Weak evidence showed the effect of flap design and immediate implantation on marginal bone loss and survival rate.

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