Ridge preservation with OSSEO+ compared to Cenobone for implant site development: a clinical and histologic study in humans

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Abstract:

Background and Aim:

Alveolar ridge reduction after tooth extraction could be minimized via ridge preservation by using grafting material. The aim of this study was to compare OSSEO+ (allograft, made by IMTEC Corporation) with Cano Bone (allograft, made by Tissue Regeneration Corporation) in preservation and bone formation of the alveolar ridge after tooth extraction.

Materials & Methods:

This randomized double blind clinical trial was accomplished on 20 patients. Subjects were divided into two groups of 10 each with respect to similarity in age, gender, jaw being treated and cigarette smoking habits. The effect of each material was studied clinically and histologically. Horizontal and vertical ridge dimensions were determined immediately after tooth extraction and three months later before implant placement. Three months after application of each material, histologic analysis of the trephine cores was done to determine the percentage of vital, non-vital, trabecular, amorphous bones and number of osteoblasts. Statistical analysis was done using Repeated Measure ANOVA .T-test was used for statistical analysis of bone formation.

Results:

In both groups minimum reduction in height and width of alveolar ridge was observed with no statistically significant difference. The extent of vital, non-vital, trabecular and amorphous bones wasn't statistically significant. The amount of osteoblasts was significantly higher in CenoBone group (6.98± 1.57) than in OSSEO+ group (4.88±1.56) (P<0/05).

Conclusion:

Both materials were similar in preservation of alveolar ridge height and width. The extent of vital, non-vital, trabecular and amorphous bones in both groups were similar. It should is said that according to the present findings, foreign sample of DFDBA isn't better than Iranian sample. Only the number of osteoblasts in CenoBone group was higher.

Key words: CenoBone, OSSEO+, Bone formation, alveolar ridge preservation

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