

C-7. Clinical and histological evaluation on the bone formation activity of deproteinized bovine bone(OCS-B)

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Background

The presence of the maxillary sinus often poses problems for inserting implants into the posterior maxillary regions. This area can be grafted to facilitate implant installation. Implant installation in horizontal and vertical defect in localized edentulous atrophic alveolar ridges remains a challenging procedure. Guided bone regeneration therapy in rebuilding of atrophic alveolar bone prior to implantation has been well-established in the literature.

Deproteinized bovine bone grafts have been used extensively, either alone or in combination with autogenous bone in maxillary sinus augmentation and guided bone regeneration.

Object

The purpose of this study is to determine the clinical, histologic and histomorphometric evaluation of the deproteinized bovine bone in implant-related cases.

Method

A crestal incision was made and vertical releasing incision was placed, and a bony window was outlined with bur without perforating the Schneiderian membrane. The grafting material(OCS-B, NIBEC, Seoul, Korea) was gently packed into the sinus. The implant placement was delayed after grafting. The core biopsies were taken and the implants were placed into the augmented bone.

The defect in the mandibular molar area was grafted with deproteinized bovine bone(OCS-B) and membrane. Primary wound closure was achieved and sufficient amount of healing time was given to the area. The core biopsies were done simultaneously with implant installation.

Results

The tissue healing was uneventful in all cases and no complications with grafts or implants were noted. The width of the ridge in the mandible was well maintained up to following period. All bone grafts showed new bone formation and all implants osseointegrated. The new bone was deposited around the graft material and the bone mineral was integrated with the new bone. Newly formed bone was undergoing remodeling and the percentage of new bone formation was getting higher as time goes on.

Conclusion

The use of deproteinized bovine bone in challenging in implant cases showed good results and the bone regeneration was evident in all specimens.