

Maxillary Sinus Augmentation Using Macroporous
Biphasic Calcium Phosphate (MBCPTM) :
Three Case Report With Histologic Evaluation

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Background

Several bone grafting materials have been used in sinus augmentation procedures. Macroporous Biphasic Calcium Phosphate(MBCPTM) consists of the mixture of 60% HA and 40% - TCP. Therefore, it can provide good scaffold for the new bone to grow owing to HA, in the other hand, it can have bioactivity for bone remodeling owing to -TCP. The purpose of this study was to evaluate bone formation following maxillary sinus augmentation using MBCPTM by means of histologic analysis.

Material and Method

MBCPTM was placed as a primary bone substitute for maxillary sinus augmentation. Three patients were selected after evaluation of their medical dental examination. MBCPTM only, MBCPTM combined with Irradicated cancellous bone and MBCPTM combined with autogenous bone were used for each patient. After six months, bone biopsies were harvested for histologic evaluation and fixtures installed.

Results

Six months after surgery we observed new vital bone surrounding MBCPTM particle and the amount of new bone was more than 40% even though there were discrepancies between specimens. This case report documents that MBCPTM when used as a grafting material for sinus floor augmentation whether combined other bone graft material or not, may lead to the predictable results for dental implants on posterior maxillary area with insufficient vertical height for fixture installation.