Sinus floor augmentation with bovine hydroxyapatite mixed with fibrin glue and later placement of nonsubmerged implants: a retrospective study in 50 patients.

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Abstract:

PURPOSE: The aim of the present study was to evaluate retrospectively both the results of using a mixture of bovine hydroxyapatite (BHA) and fibrin glue as the only grafting material in the floor of the maxillary sinus and the outcome of nonsubmerged implants placed later.

MATERIALS AND METHODS: A total of 50 consecutive patients (71 maxillary sinuses) were augmented with a mixture of BHA and fibrin glue. The grafts were allowed to heal for a mean of 8 months prior to implant placement. A total of 218 solid titanium screw-type implants were placed in a nonsubmerged fashion and allowed to heal for a mean of 10 weeks before loading (range, 10 days to 10 months). The outcome of the placed dental implants was evaluated retrospectively.

RESULTS: Twelve implants were lost, giving a cumulative survival rate of 94.5% after a mean loading time of 20 months (range, 6 to 42 months).

DISCUSSION: This study shows that augmentation of the maxillary sinus with a BHA/fibrin glue mixture and later placement of nonsubmerged implants with short healing times preceding functional loading can be a predictable concept. However, the use of autogenous bone and placement of submerged implants in the grafts with long healing times is routine in many clinics. This article discusses the evidence on which this protocol is based.

CONCLUSION: The short-term results from this retrospective clinical study indicated that BHA/fibrin glue can be used as a grafting material without autogenous bone in the maxillary sinus to produce a high survival rate for later placement of nonsubmerged implants.