period. One sinus graft complication occurred when a patient in this group presented with an infection two weeks postoperatively. The patient was placed on amoxicillin/clavulanate pills of 875 mg two times per day for 10 days and healed uneventfully.

Following a 4- to 6-month healing period, grafted sites deemed to be implant surgical sites were re-entered via a full thickness mucoperiosteal flap. Examination of the lateral windows grafted appeared to be bony hard in consistency. The grafted sites were not penetrable with the periosteal elevator. 136 Tapered Screw Vent® implants were placed into 52 grafted sinuses. Of the 136 implants placed, all were uncovered and restored to date, except for 3 implants, making a total of 133 restored implants.

Loading with either a fixed prosthetic restoration or bar over-denture was performed over a 4- to 6-month period. A total of 31 implants were considered failures. The remaining 133 implants showed good soft tissue anatomy that was clinically acceptable. Radiographic examination of all remaining implants did not show any peri-implant radiolucency. The total failure rate was concluded to be 2.3%. A total implant success rate of 97.7% was established (Chart 3).

Discussion

Patients often need to be evaluated for the amount of bone in the posterior maxilla. The posterior maxilla often presents a challenge to the implant dentist due to inadequate bone volume from the crest of the bone to the floor of the maxillary sinus. Unpredictable bone loss can occur after tooth extraction, particularly if there is an existing bony defect or radiolucency present. Early tooth loss often leads to pneumatization of sinuses. The lack of bone in the posterior maxilla is a challenge to the clinician needing to place dental implants.

Many techniques have been advocated for treating the posterior maxilla including subperiosteal implants,1 tube-osseous implants,2 zygomatic implants,3 zygomatic root form implants,4 root form implants placed, all were uncovered and restored to date, except for 3 implants, making a total of 133 restored implants.

The authors of this report have placed particular mineralized bone allograft into 56 sinuses. The mineralized allograft was easy to utilize and resulted in good healing of the grafted areas. Most grafted sites were allowed to heal for a period of 4- to 6-months prior to re-entry for dental implant placement.

After healing, the graft material clinically appeared to form a dense bony structure within the grafted site, which allows the surgeon to place implants in a conventional manner. The cases in which resorbable HA was mixed with mineralized allograft did not appear to have any different clinical healing. Upon reentry for dental implant surgery, the material generally appeared hard and resistant to periosteal probing on the lateral wall preparation.

This material was clinically useful to develop bone volume prior to implant placement. The grafted sinus sites were sufficiently dense enough to withstand an osteotomy drilling procedure within a period of 4 to 6 months. The density of bone was usually of D3 or D4 quality. Tapered shaped root form implants were placed in these patients to provide compression into immature bone for greater implant stability.

Following a 4- to 6-month healing period, examination of the lateral windows grafted appeared to have a bony hard consistency. 136 Tapered Screw Vent implants were placed into 52 grafted sinuses. Of the 136 implants placed, all were uncovered and restored to date, except for 3 implants, making a total of 133 restored implants. The total failure rate was concluded to be 2.3%. A total implant success rate was 97.7% was established (Chart 3).

The implants placed in this study ranged from 27 months to date, except for 3 implants, making a total of 133 restored implants. The total failure rate was concluded to be 2.3%. A total implant success rate was 97.7% was established (Chart 3).

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