Objective: We have developed a regenerative medicine therapy for the alveolar bone and endoscopic surgery for maxillary sinus lift without bone grafts, in patients experiencing severe periodontal disease with significant absorption of the maxillary alveolar bone, in which more than 10 mm of bone thickness in the maxillary bone was attained, with satisfactory results. The objective of this study was to examine the treatment outcomes of implants that were performed after these therapies.

Participants and Methods: The participants were 26 patients with severe periodontal disease, who cannot be cured with any other treatments except the extraction of all teeth. The 36 patients are all patients who underwent regenerative treatment of the alveolar bone through tooth replantation and transplantation of the iliac cancellous bone (the bone marrow) as well as endoscopic surgery for maxillary sinus lift from May 2003 to July 2007 in our clinic. A total of 120 implants were placed in these patients when the replanted tooth had kept because of root resorption, and the success rate was examined.

Results: The success rates of the implants were 16 of 33 (48%) in the group when surveyed less than 2 years after surgery, and 84 of 87 (96.5%) in the group when surveyed more than 2 years after surgery. In addition, bone regeneration was observed in all patients.

Conclusion: We have developed a regenerative medicine therapy for the alveolar bone and endoscopic surgery for maxillary sinus lift without bone grafts, in patients experiencing severe periodontal disease with significant absorption of the maxillary alveolar bone, which results in the success rate of more than 96% over 2 years after surgery. This therapy is effective for patients who cannot be cured with any other treatments except the extraction of all teeth.
under the peristeam while simultaneously developing a wide operative field. Upon the complete removal of the infected tissues and scar tissue caused by the periodontal disease, the socket is lightly drilled using a bur and the teeth is replaced in that location by driving lightly using a hammer. During this work, the root of the replanted tooth is exposed in the maxillary sinus on the maxillary side. Subsequently, a plastic suture transplants firstly created iliac cancellous bone (bone marrow) in the surrounding of the replanted tooth on the buccal side and sutures the gingival flap while extending it.

The ilium survives, and, at the stage when the replanted tooth is fixed 3 to 4 months after the surgery, the superstructure is sufficiently prepared to allow the patient to start chewing.

Endoscopic Surgery of Maxillary Sinus Lift

A sinus lift is also an endoscopic procedure. Endoscopically undercuts every operation. Because the root of the replanted tooth is exposed in the maxillary sinus bones, advancing the maxillary sinus is first widened in the inferior nasal meatus to prevent dental sinusitis. Subsequently, an endo-

Implant Placement

An implant may be placed as needed during the stage in which the replanted tooth falls out because of root resorption. Implants of a length as long as possible are used, depending on the aug-

Participants and Results

The participants were 36 patients in which both regenerative medicine therapy for the alveolar bone endoscopy surgery for the maxillary sinus lift were performed on for severe periodontal disease, which could not be cured with any other treatments ex-

Patient 1: A 44-Year-Old Man With Severe Periodontal Disease

He lost many teeth because of severe periodontal disease and was told by physicians from other clinics he had visited that the only treatment possible was to remove all his remaining teeth and replace them with a complete denture, which prompted him to visit our clinic (Kiyokawa Dental and Oral Surgery Clinic). At the first consultation, although 5 teeth in the right maxilla and 4 teeth in the mandibular anterior region were found, all of them were already loose (Fig. 1A). Significant absorption in the entire region of the maxillary alveolar bone and right odontogenic max-

Significant absorption of the maxillary alveolar bone

Endoscopic maxillary sinus lift extended to the ethmoid sinus

Significant absorption of the maxillary sinus floor

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