

PC-I-10. Long-term evaluation of implant placed in sites grafted by lateral window approach on maxillary sinus; a 10-year retrospective study

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Background

This study retrospectively evaluated the prognosis and cumulative survival rate of maxillary sinus augmentation using the lateral window approach and compared the related factors over a 10-year follow up.

Materials and Methods

Between May 1997 and May 2007, 129 sinus augmentations using lateral window approach was performed by simultaneous or delayed implant placement. 258 implants were placed in 117 patients. The cumulative survival rates of the implants were calculated. The following factors were evaluated statistically using chi-square analysis: surgical sites, simultaneous vs. delayed, bone graft materials, bone quality and quantity, implant system, membrane, diameter and length of the implant, and complications.

Results

The 10-year cumulative survival rate was 96.90%. There was no difference in the survival rates of the implants between the simultaneous placement and delayed placement. The survival rate was similar regardless of the type and amount of graft materials used. There was no difference in the survival rate according to the implant site and bone quality and quantity. The survival rate was similar when CollaTape® or Gore-Tex® was placed in the window of the lateral wall. There was no statistically difference in the survival rate regardless of the implant length and diameter. The survival rate was as low as 75.00% when there were more than two complications.

Conclusion

Implant placement with sinus augmentation using the lateral window approach was highly predictable treatment. The normal implant survival rate is expected if complications are prevented.