Computer Guided Three-Dimensional Implant Placement of Small Diameter Implants in Limited Spaces and for Temporary Retention

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Time: 6:00 pm - 9:00 pm

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Hilton Garden Inn, 840 East El Camino Real, Mt. View CA 94040

Recently there has been increasing interest in CT three-dimensional implant diagnosis and placement. Dr. Abe has been using computer guided precision three-dimensional implant placement on virtually all implants since 1993. He also has been placing implants flaplessly on patients since about 1995. The advantages and importance of three-dimensional implant diagnosis for long and short term success will be reviewed. Many of those who use computer planning do not directly or accurately transfer it to the patient clinically. The need to directly link 3-D computer planning to implant placement in the mouth is critical. Dr. Abe will review different computer guided implant placement systems along with their advantages and limitations.

The mandibular anterior and maxillary lateral areas are traditionally the most difficult areas to place implants due to the size discrepancy between the smallest implants available, the width of the roots and the limited space available. This size mismatch results in aesthetic compromises or prevents placement. The mandibular anterior area is normally restored with an implant supported bridge because of the space limitations of the area and the inability to place implants close enough to allow integration. Frequently the limited space, in the maxillary laterals and single mandibular centrals and laterals, prevent implant placement for the same reason. Small diameter implants are defined as implants less than 3.25mm. Recently availability and FDA approval of small diameter implants have allowed placement in areas of limited space. In the lower anterior region even small diameter implants frequently cannot be used to replace teeth “tooth for tooth”. An innovative approach, combining angled small diameter implants and computer guided implant placement, will be shown. This combination of precision guided implant placement and angled and straight small diameter implants allows replacement of the lower anteriors with 4 separate implants rather than an implant supported bridge. This allows the patient to floss normally. It also avoids the fused “tombstone” look because the lab is forced to place more than one tooth on the implant abutments of the bridge. Small diameter implants also can be used for single tooth replacement situations in the lower anterior areas and maxillary laterals.

The use of mini-implants (implants less than 3mm in diameter) can be used as temporary anchorage for temporary restorations while standard implants and site preparation occurs. This allows for patients to lead a normal life without compromising esthetics during treatment.

Cases will be reviewed utilizing these mini-implants for temporary retention and small diameter implants in areas of limited space.