D4 骨密度大空洞一次植牙

D4 with a Huge Boneless Hole One-time Implant

守仁牙醫診所 傅守仁

Introduction:

In order for the implant to withstand powerful bite, complete osseointegration is required. And for the implant to completely fit in with osseointegration, primary stability after operation is of prime importance; that is, the torque of the implant is a crucial factor, which at least has to be over 20 NC. To meet this level of demand, the implant must be planted where there is complete envelopment of bone.

To ensure primary stability is not a problem for D1 and D2. For D1 and D2, the required torque can be readily obtained with careful attention to drilling procedures, ordering, size, and to whether tapping is necessary. But D4 is different in density. It is composed of a thin outer layer of cortical bone, with a huge hole inside filled with soft and loose bone scraps mixed up with granulation tissue. Under this condition, to gain primary stability and proper torque by one endeavor requires special attention to approaches of operation, so that the implant can fit well in with osseointegration. It is important to note that, in a mouth with hyperactive tongue and cheeks, inadequate torque and lack of primary stability may result in damage to osseointegration and the subsequent implant failure.

Approaches:

To enable the implant to be completely enveloped by bone, the implant site has to be stuffed with bone graft so as to create a fortified, solid framework bone. Based on five years of practice, I would like to present how I have dealt with such problem by conducting G.B.R. plus implant in one-time operation. And I am also pleased to share with you how, in an individual case, two implants are planted respectively by using different operation methods to examine the different results that ensue.

As part of the SOP, preparations precede all the other procedures. They involve cleaning the implant hole and conducting curettage to rid of granulation tissue, and simultaneously, flushing the implant hole out with normal saline. After all these are done, the following two different approaches are employed.

Approach 1:

First, stuff the huge hole of the implant site with graft. Next, use a drill of the same size as the implant to drill out graft. Then, plant the implant.

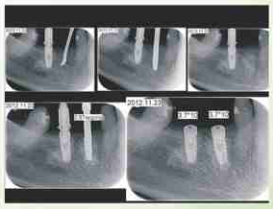
Approach 2:

First, stuff the hole with graft. Next, use a tapping of one-size-smaller than the implant to make the graft blended and settled. Then, plant the implant.

Conclusion:

Approach 2 proves to be a better option in that it can result in more complete and solid bone envelopment, the enhancement of torque, and better osseointegration. These advantages can be clearly detected from the X-ray images. The images of the lower jaw implant are similar to those of the upper jaw implant performed by osteotome or open window.

46 area is D4 Bone Density
with Huge Bonless Hole Use
3.5 Drill→3.7×10 Implant



45 area is D4 Bone Density
with Huge Bonless Hole Use
2.9 Tapping→3.7×10 Implant

The change of Bone after
4.5 years.

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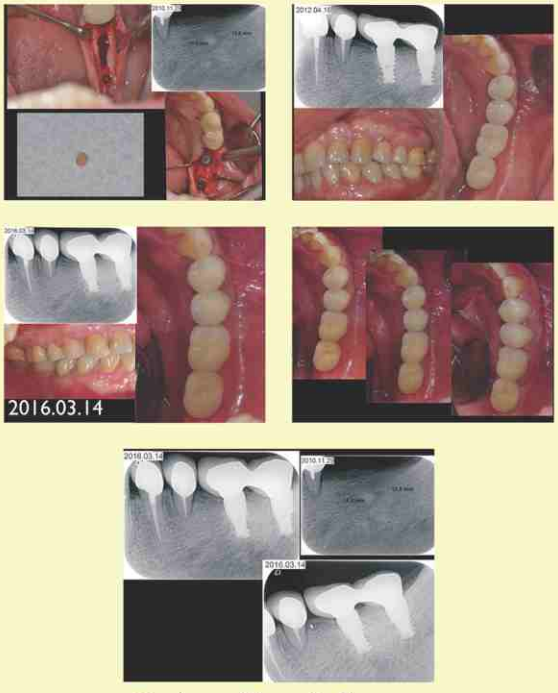
Demonstrate Five Addional Cases To Share

Case 1

The change of Bone after Five years.

Case 2



The change of Bone after Five years.

Case 3

The change of Bone after three years.

Case 4

Case 5