Principles of Esthetic Implant Restorations

Achieving natural looking soft tissues around an implant so that it mimics a natural tooth can be a challenge. Having a basic minimum amount of bone and gingiva is foundational. Lack of a papilla, facial recession, or thin gingiva facially allowing grey shadows from the underlying titanium to shine through are significant issues.

The case below demonstrates facial recession even only 1 year after treatment because **connective tissue grafting (CTG) was not performed**.

2004

Custom Abutment
Flapless without CTG

Final after screw retained full contour temporary

1 year Recall

The second case below demonstrates retraction of thick tissues post surgery, and addition of soft tissue at temporary crown placement to thicken the gingiva. Even with grafting, there is still a grey shadow from the titanium abutment, illustrating the added challenge of dealing with small anterior teeth with limitations in material choices because of lack of material thickness.

Initial Thick Tissues

Uncovering with retraction of tissues

Screw retained temporary
with CTG added

Final Restoration

Therefore, nearly all implants, particularly in the anterior, receive bone and gingival grafting as part of my surgical protocol. If surgical means of restoring tissues, especially papilla, is not possible, then orthodontic extrusion and possible endodontic treatment may be needed.

Once the foundation of tissues are present, the contours of the restoration itself are critical. The goal of a screw retained temporary crown shown adjacent, is to duplicate a CEJ, and the cross section of the root in the sub-gingival contours of the restoration to prepare the tissues for the final restoration.

Even with all this effort, particularly over time, tissues will change. This issue of ProbeTips will focus on single anterior implant cases and how they change and can be managed over time.

Screw Retained Temporary with CEJ

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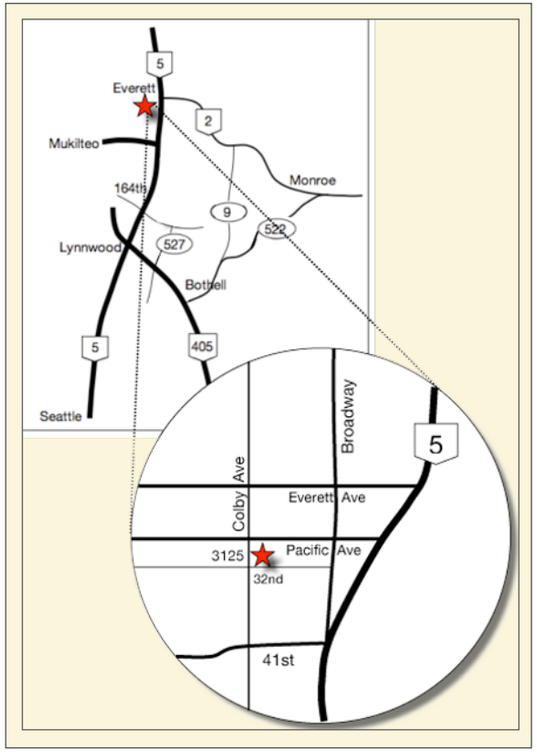
PERIODONTOLOGY IMPLANTOLOGY ORAL MEDICINE



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Probe Tips

A Quarterly Periodontal Newsletter

By Pamela Nicoara DDS MSD

Anterior Implants
Long Term Follow Up

Initial

5 year Recall

Volume 13, No. 4

February 2021

Anterior Implants: Long Term Follow Up

Case 1

This case involved removal of tooth #8 due to root resorption. It was replaced at the time of extraction with an implant, and grafted with bone and palatal soft tissues. A custom healing abutment was used, and clinical crown lengthening was performed on tooth #9 in order to balance the gingival levels and prepare for veneers on teeth #7, 9 and 10.

At the 5 year follow up, intrusion of the implant can be seen. This can be expected in young patients who are not fully mature, but this female patient was 43 years old at the time of implant placement. Treatment options include reduction of the incisal edge of tooth #9, or replacement of the implant crown #8 with a CEJ that is more coronal and a longer incisal edge.

2008

Custom Abutment **with CTG** & CCL #9

Essix and Flipper during integration

Final after Screw-retained Temporary

5 year Recall

vs

Initial Presentation

Case 2

The case below shows a 44 year old female with a very high smile line. Tooth #8 was removed due to deep fracture, and a root too short for extrusion with clinical crown lengthening. The implant was placed on the day of extraction with palatal soft tissue grafting. After 4 months of healing, a temporary crown was placed to shape tissues. The final outcome was outstanding, but at 11 years, you can see a shrinking of papilla around the implant. It even appears gingiva is overgrowing the implant, but it is rather recession on the adjacent teeth and a natural regression of tissues with time in a thinner biotype.

2011

Completely Submerged **with CTG**

Screw-retained Temporary

Final Crown

11 year Recall

vs

Initial Presentation

Case 3

The last case is simply to demonstrate that things can work well over time. This 54 year old male with an average to thick biotype had tooth #9 replaced with an implant and palatal connective tissue grafting on the day of extraction. After 7 years, the tissue contours are similar to the day of final crown seating.

2010

Completely Submerged **with CTG**

Screw-retained Temporary

Final Crown

7 year Recall

vs

Initial Presentation