Anterior restoration using advanced tissue grafting for improved esthetics

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Patient:
Male
32 years old

Clinical situation:
Upper-right central incisor was lost through trauma two years prior. Soft tissue is lacking both horizontally and vertically.

Surgical solution:
NobelReplace CC PMC 3.5 x 13 mm
Slim Healing Abutment CC NP 7 mm
Temporary Abutment
Engaging CC NP

Restorative solution:
NobelProcera ASC
Abutment with zirconia crown

Surgery date:
July 22, 2014

Total treatment time:
Six months

“Currently, one of the most important advances in implant dentistry is the improvement in treatment of gingival tissue around the implant. The grafting of connective tissue in the cervical area of the implant improves esthetics and long-term marginal sealing. In this sense, the Slim abutment increases the chances of success, allowing simultaneous placement and stabilization of the gingival graft. Slim abutments maximize space for grafting, reduce treatment time and improve the final result.”

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Initial Situation: 32-year-old patient. Central incisor was lost through trauma two years prior. Soft tissue is lacking both horizontally and vertically.

The NobelClinician Software is used for accurate implant treatment planning. Because of the narrow width of the ridge and presence of the nasopalatine nerve, placement of a NobelReplace CC PMC 3.5 x 13 mm is the most appropriate solution for rehabilitation of this region.
Preview of surgical template in the NobelClinician Software allows for the template to be visualized before sending the order for production.
Site preparation

The flap is raised using a microblade.

Partial-thickness flap procedure is performed and the bone is not exposed.

Clinical case courtesy of Dr. Juan Zufía, Spain
Site preparation

Surgical template is placed in the correct position after raising the flap. It fits perfectly in the patient’s mouth. No instability of the surgical template could be detected.

The Guided Twist Drill Ø2.0 mm is used to prepare the site for the final depth.

Clinical case courtesy of Dr. Juan Zufía, Spain
Guided Surgery

Preparation of the osteotomy is carried out with Ø3,5 mm guided drill.
A NobelReplace CC PMC 3.5 x 13 mm implant is placed into the osteotomy using Implant Driver CC NP for Slim Abutment.

The marker on the driver indicates the correct depth of the implant.
A connective tissue graft from the palate is used to improve the soft tissue environment around the implant. The patient had no tuberosity at all.

The connective tissue graft is prepared so that it covers the implant from the buccal side to the palatal side.

Clinical case courtesy of Dr. Juan Zufía, Spain
Connective tissue grafting

The prepared palatal connective tissue graft is then placed on the Slim Healing Abutment.
Connective tissue grafting

The Slim Healing Abutment is connected to the implant.

The graft covers the edentulous space completely.

Clinical case courtesy of Dr. Juan Zufía, Spain
A monofilament suture is used to displace the tissue coronally. The suture must generate as little tension as possible on the surrounding soft tissue to avoid ischemia of the flap and to allow the revascularization of the graft.
Soft tissue maturation

Situation two weeks after the surgery.

After three months of healing the tissue has grown vertically and horizontally.

Clinical case courtesy of Dr. Juan Zufía, Spain
Soft tissue maturation

Occlusal view three months after the surgery, the soft tissue contour developed correctly.

Slim Healing Abutment is removed to be replaced by a larger-diameter healing cap.

Clinical case courtesy of Dr. Juan Zufía, Spain
The healing cap will work as a transition between the use of Slim Healing Abutment and the provisional restoration.

Provisional restoration is placed after three months. Screw retained Temporary Abutment Engaging CC NP is used. A screw-retained final restoration is to be placed at a later date.
Final restoration

Six months after surgery, a NobelProcera ASC Abutment and a zirconia crown are placed as the final restoration.
Final restoration

To ensure symmetry, a composite restoration is performed on the left central incisor.

Clinical case courtesy of Dr. Juan Zufía, Spain
Final result

Final clinical picture six months after the surgery.

Clinical case courtesy of Dr. Juan Zufía, Spain