

Soft tissue augmentation at immediate implant placement

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Patient

49 years, female

Clinical situation

Healthy patient, smoker (< 10 cig/day), no history of periodontitis, presented root resorption in tooth 11. Tooth was scheduled for extraction.

Surgical solution

Tooth extraction with immediate implant placement and simultaneous soft tissue augmentation.

Restorative solution

NobelProcera® ASC abutment with screw-retained crown.

Surgery date(s)

April 04, 2017

Total treatment time

6 months

Tooth position(s)

11 (FDI)

Case description (1/2)

Healthy patient, smoker (< 10 cig/day), no history of periodontitis, presented root resorption in tooth 11. Tooth was scheduled for extraction.

During the evaluation phase a CBCT was taken to assess the presence of enough apical bone to stabilize the implant.

Tooth extraction was performed in an atraumatic manner to minimize tissue damage. Pilot drills were utilized to prepare the osteotomy at the palatal aspect of the socket in order to achieve an adequate implant positioning. NobelActive implant of 3.5mm diameter and 13mm length was used. The buccal gap was filled with DBBM.

A partial thickness pouch was created in the buccal aspect under the mucosal margin with the use of tunneling instruments. A collagen matrix, creos™ mucogain was utilized as a soft tissue substitute. Trimmed and adapted mesio-distally to reach the neighbouring teeth and extended apically 6mm bellow the margin. Anchoring sutures in the mesial and distal aspect of the socket were used to stabilize the matrix.

A titanium provisional abutment was utilized to fabricate a provisional restoration, delivered to the patient the same day of implant placement. Sutures were removed 10 days' post surgery.

Definitive prosthesis was delivered approximately 6 months after surgery.



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Case description (2/2)

Silicon impressions were taken at the surgery date and after 6-month follow-up (FU). Models were fabricated and scanned with a desktop 3D scanner. Both STL files were automatically superposed using an image analysis software (Swissmeda Software, Swissmeda AG, Zürich, Switzerland). Linear and volumetric measurements were performed.

Results showed minimal soft tissue diminution 6 months after placing immediate implant.

This clinical case was performed as part of a prospective case series conducted at the University Complutense de Madrid and published in Sanz-Martin I. et al., Soft tissue augmentation at immediate implants using a novel xenogeneic collagen matrix in conjunction with immediate provisional restorations: *A prospective case series. Clin Implant Dent Relat Res. 2018;1-9.*



Initial clinical situation

Treatment planning

Surgical procedure

Restorative procedure

Outcome

Soft tissue augmentation at immediate implant placement



Initial situation – frontal view.



Initial situation – occlusal view.

Initial clinical situation

Treatment planning

Surgical procedure

Restorative procedure

Outcome

Soft tissue augmentation at immediate implant placement



Tooth extraction – frontal view.



Tooth extraction – occlusal view.

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Probing of buccal bone.



Placed 13 x 3.5mm NobelActive™ implant.



Insertion of a DBBM block.

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View of creos™ mucogain over the implantation site.

Side and top view of the prepared creos™ mucogain matrix. The matrix is folded in order to increase the volume to be augmented, and cut to shape in a wet state.

Initial clinical situation

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Outcome

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Preparation of a buccal pouch for soft tissue volume augmentation with the «envelope technique».



Insertion of creos™ mucogain in the pocket.



Fixation of creos™ mucogain to neighboring soft tissue to minimize movements during the healing phase.

Initial clinical
situation

Treatment
planning

Surgical
procedure

Restorative
procedure

Outcome

Soft tissue augmentation at immediate implant placement



Frontal view after placement of creos™ mucogain.
Note that creos™ mucogain is sutured to the neighboring
soft tissue to minimize movement during the healing phase.



Occlusal view after placement of creos™ mucogain.

Initial clinical situation

Treatment planning

Surgical procedure

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Outcome

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Frontal view after 6 months, with the definitive restoration.

Occlusal view of the soft tissue, at initial situation (top) and after 6 months healing (bottom).

Initial clinical situation

Treatment planning

Surgical procedure

Restorative procedure

Outcome

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Frontal view of the clinical outcome after 1 year.

Side and occlusal view.

Case courtesy of Dr. Ignacio Sanz Martín



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