Immediate implant placement in a site with severe buccal dehiscence

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“creos xenogain is a user-friendly bone grafting material: hydration, manipulation and positioning is simplified by its wettability coupled with a smart syringe packaging that really makes things easy.”

Patient:
Male
60 years old

Clinical situation:
Chronic periodontitis.

Tooth # 25 with porcelain fused to metal crown and metal post and core.
Vertical root fracture occurred two months earlier.
10 mm “U” shaped buccal dehiscence.

Surgical solution:
Immediate implant placement (NobelParallel CC RP 4.3 x 13 mm) in combination with a GBR procedure (using creos xenogain and creos xenoprotect).

Restorative solution:
NobelProcera Zirconia Abutment

Surgery date:
GBR: May 9, 2016

Total treatment time:
Seven months
Pre-operative situation

Initial situation: pre-operative CBCT images.

Clinical pre-surgical situation.

Case courtesy of Dr. D'Avenia, Italy
Implant placement

After atraumatic tooth extraction, the granulation tissue is completely removed. The osteotomy is prosthetically driven, in order to provide a second premolar screw retained restoration with an occlusal screw access hole. In order to satisfy this criteria, the implant is more favorably housed in predominantly native bone, mesio-lingually to the center of the defect.

The implant (NobelParallel CC RP 4.3 x 13 mm) is placed with 20Ncm insertion torque, with buccal threads exposed to the defect area (without bone contact).

Case courtesy of Dr. D'Avenia, Italy
Grafting procedure

Placement of creos xenoprotect inside the extraction socket to protect creos xenogain from exposure to the soft tissue through dehiscence.

Hydration of creos xenogain with venous blood.

Case courtesy of Dr. D'Avenia, Italy
Grafting procedure

Placement of creos xenogain into the bony defect. The implant is covered with a 3 mm healing abutment (Ø 3.6 mm).

Healing after 8 days with slight membrane exposure.

Case courtesy of Dr. D’Avenia, Italy
Post-operative follow-up

Post-operative CBCT showing sufficient bone augmentation of the buccal wall dehiscence.

120 day follow-up: during the final impression visit, the healing abutment is changed. A wider diameter allows a better management of the final restoration emergency profile.

Case courtesy of Dr. D'Avenia, Italy
Post-operative follow-up

CBCT after healing.

Case courtesy of Dr. D'Avenia, Italy
Final restoration.