

GBR using a **Ti-reinforced** non resorbable membrane and simoultaneous sinus lift

Dr. Fabrizio Colombo, DDS







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Patient

62, F, No systemic diseases, no oral pathologies or dental problems other than the existing one.

Clinical situation

Absence of the dental elements from 1.3 to 1.7, horizontal atrophy of the I quadrant and vertical atrophy in the region of 1.4, 1.5, 1.6 and 1.7.

Surgical solution

GBR using creos[™] syntoprotect Ti-reinforced PTFE membrane and a mixture of creos xenogain[™] and autologous bone to improve the width of the alveolar ridge.

Sinus lift through lateral approach to reach the amount of bone useful to place implant in the posterior area.

Placement of 4 NobelReplace CC implants after 8 months of healing.

Free gingival graft to get keratinized tissues around the implants.

Restorative solution

Provisional: [Acrylic (PMMA) screw retained temporary crowns. Final: Metal-ceramic crowns.

Surgery date

23th October 2018 (GBR/ Sinus Lift) 1st July 2019 (Implants placement) 17th October 2019 (Soft tissues management) 18th November 2020 (Final prosthesis)

Total treatment time

25 Months

Tooth position 13-14-15-16

Treatment planning

Surgical procedure

Restorative procedure

Outcome

GBR and Sinus lift surgery



Extra-oral view: No gummy smile; slight asymmetry during spontaneous smile

Treatment planning

Surgical procedure

Restorative procedure

Outcome

GBR and Sinus lift surgery





Intra-oral lateral view

Detail of the atrophy

Initial	clinical
situat	ion

Surgical procedure Restorative procedure

Outcome

GBR and Sinus lift surgery





Pre-surgical OPG

CBCT showing horizontal atrophy of the alveolar ridge and pneumatization of the right maxillary sinus

Treatment planning Surgical procedure Restorative procedure Outcome

GBR and Sinus lift surgery





Opening of a full-thickness trapezoidal flap

Occlusal view of the horizontal atrophy

Treatment planning Surgical procedure Restorative procedure

Outcome

GBR and Sinus lift surgery





Ti-reinforced non resorbable PTFE membrane (creos[™] syntoprotect) already fixed on the palatal wall and grafting material in situ (mix of 50% autologous bone and 50% creos[™] xenogain). At the top left of the picture the collagen membrane (creos[™] xenoprotect) is placed to protect the Schneiderian membrane.

Antrostomy

Initial clinical Treatment situation

planning

Surgical procedure

Restorative procedure

Outcome

GBR and Sinus lift surgery



Resorbable and non-resorbable membranes in place. The Ti-reinforced non-resorbable PTFE membrane was fixed using self tapping screws

Occlusal detail of the membrane before closure of the wound

Treatment planning

Surgical procedure

Restorative procedure

Outcome

GBR and Sinus lift surgery



Detail of the wound closed by primary intention

Initial	clinical
situat	ion

Surgical procedure Restorative procedure

Outcome

GBR and Sinus lift surgery





OPG immediatly after the surgery

CBCT after 8 months healing

Initial	clinical	
situation		

Surgical procedure Restorative procedure

Outcome

Implant placement





Clinical picture after 8 months of healing (lateral view)

Clinical picture after 8 months of healing (frontall view)

Initial	clinical
situat	ion

Surgical procedure Restorative procedure

Outcome

Implant placement





Surgical guide in place

Reopening

Initial	clinical
situat	ion

Surgical procedure Restorative procedure

Outcome

Implant placement



Detail of the regenerated bone (occlusal view)

planning

Surgical

Restorative procedure procedure

Outcome

Implant placement



Four NobelReplace CC implants in place. The ones in position 13-14-15 are sizing 3.5x13 mm, the distal one is a 4.3x11.5 mm



Closure of the wound by primary intention

Treatment planning

Surgical procedure

Restorative procedure

Outcome

Soft tissues management (FGG)



Clinical picture after further 4 months of healing (12 months since start of GBR)

Opening a partial-thickness flap

Treatment planning

Surgical procedure Restorative procedure

Outcome

Soft tissues management





Placement of 4 healing abutments

Placement of an epithelial-connectival tissue graft

Treatment planning Surgical procedure Restorative procedure

Outcome

Soft tissues management





End of the soft tissue surgery

10 days of healing after soft tissue surgery

Initial	clinical
situation	

Surgical procedure Restorative procedure Outcome

First quadrant rehabilitation



Clinical picture just after provisional insertion

Treatment planning

Surgical procedure

Restorative procedure

Outcome

First quadrant rehabilitation





Radiograph 10 months after provisionalization

Final soft tissues picture

Treatment planning Surgical procedure Restorative procedure

Outcome

Atrophic first quadrant rehabilitation



Clinical picture (frontal view) 2 weeks after final prosthesis insertion

Initial clinical Treatment situation

planning

Surgical procedure Restorative procedure

Outcome

Atrophic first quadrant rehabilitation



Clinical picture (lateral view) 2 weeks after final prosthesis insertion

Initial	clinical
situation	

Surgical procedure Restorative procedure

Outcome

Atrophic first quadrant rehabilitation





OPG and CBCT 1 year after prosthetic loading

Case courtesy of Dr. Fabrizio Colombo, DDS



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