CLINICAL CASE

IMMEDIATE FIXED REHABILITATION USING STRAUMANN® PRO ARCH WITH STRAUMANN® BLX IMPLANTS

Patient anamnesis
44-year-old male, edentulous in the upper jaw, tooth loss due to caries lesions bruxist. Medical history: NC

Chief complaint
Unstable removable prosthesis, desire to have a fixed solution.

Oral examination
After evaluating the radiological exams (OPG) it was assessed, that there was moderate resorption in the maxilla: soft bone quality and limited bone availability in the posterior area.

Treatment
Fixed immediate rehabilitation using four Straumann® BLX implants (posterior tilted) because of low bone availability in the posterior region.

Initial situation

Provisional prosthesis

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Degree in Medicine and Surgery "cum laude" from the University of Rome "La Sapienza", Italy.
Has served as professor at the Post Graduate Courses at multiple dental schools and universities in Italy and Austria.
ITI Fellow and Director of the ITI Study Group in Rome. Author of several scientific publications in the field of implantology and speaker and instructor at national and international courses and conferences.
Private practice in Rome and Latina specialized in implantology and oral surgery with focus on severe bone atrophy and related disorders.

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Medical degree as Dentist from the University of Rome "La Sapienza" with "cum laude" distinction.
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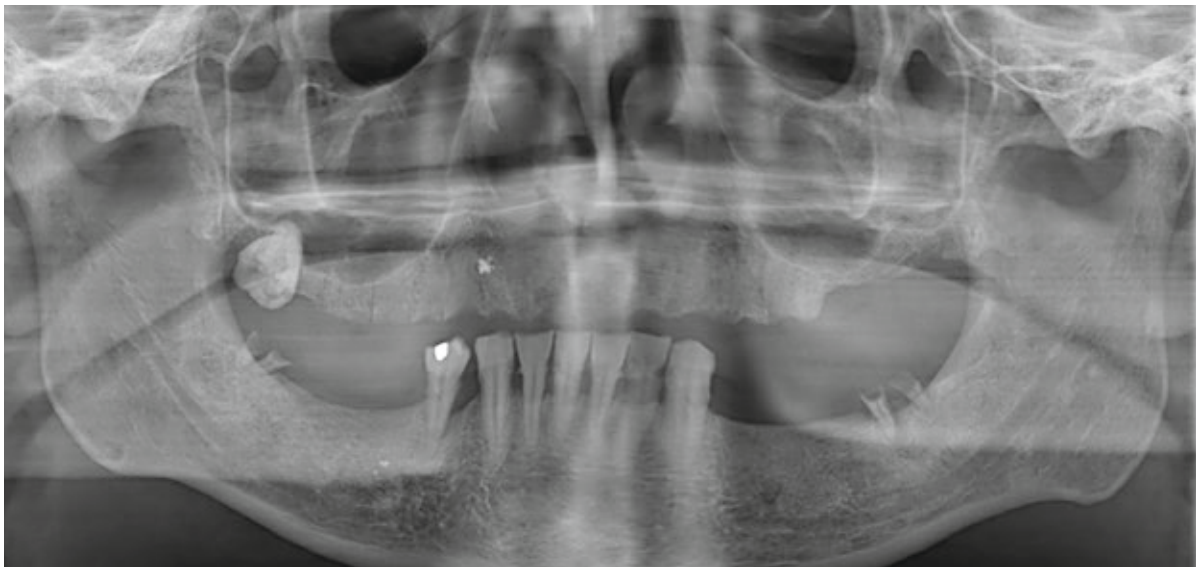
Author of several scientific publications in the field of implantology.
Private practice in Rome for implantology and oral surgery with special focus on regenerative treatment and implant therapy in the esthetic zone.

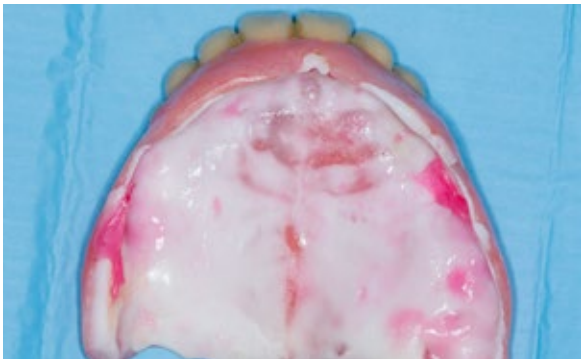
straumann

CLINICAL AND RADIOGRAPHIC EXAMINATION

The radiological exams (OPG) revealed moderate resorption in the maxilla: soft bone quality and limited bone availability in the posterior area.

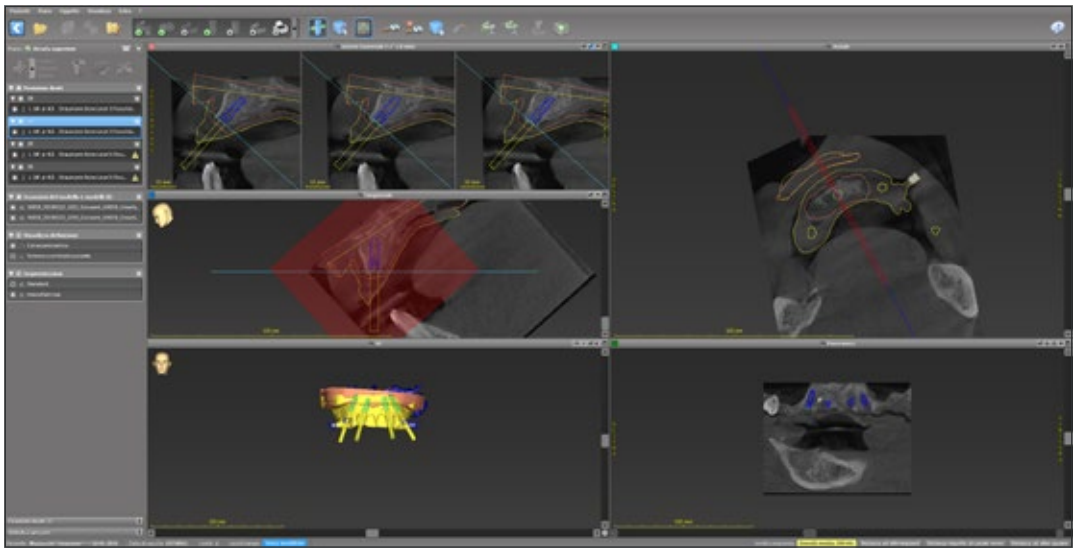


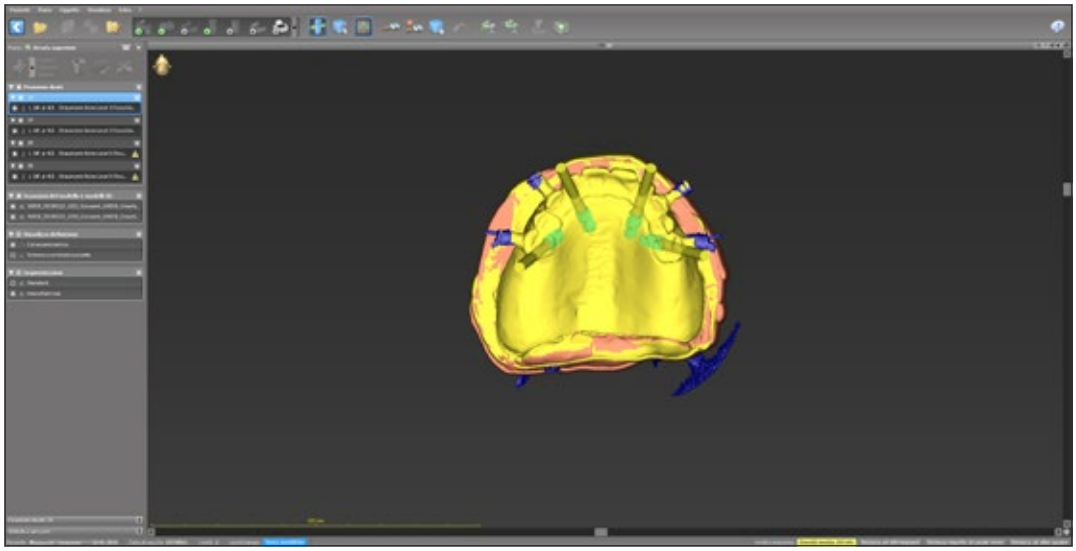
Patient's removable prosthesis

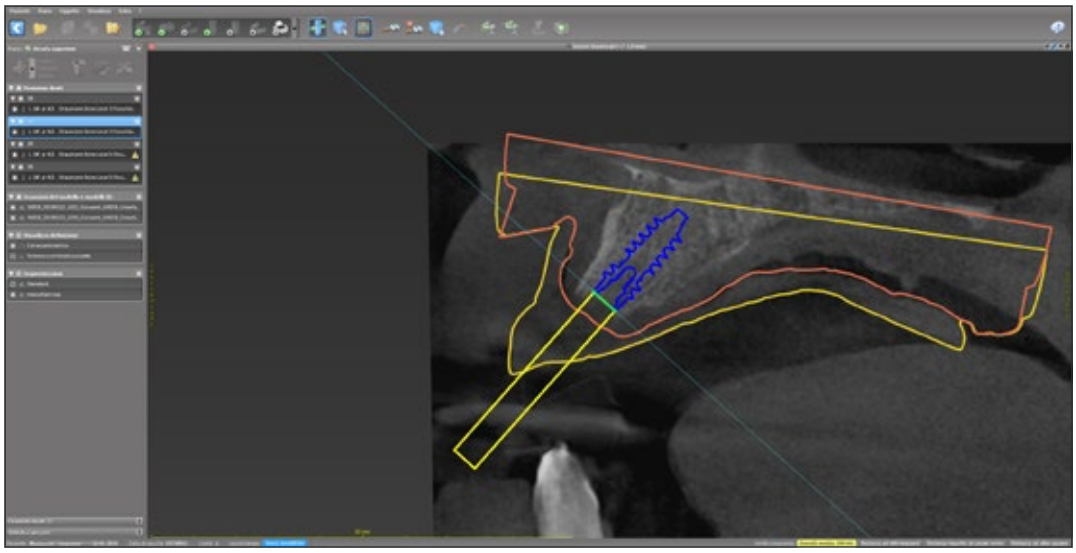


TREATMENT PLANNING WITH CODIAGNOSTIX®

Using coDiagnostiX® and the patient's cone beam computed tomography (CBCT) data, implant placement was planned.



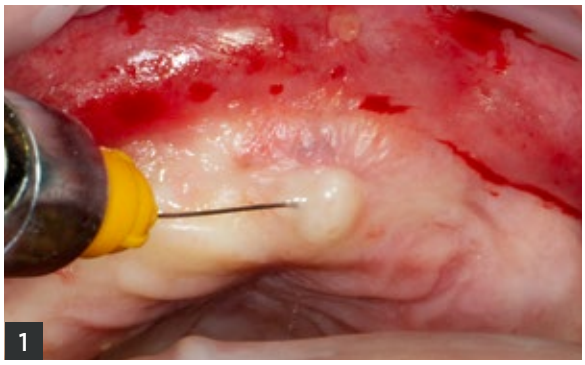




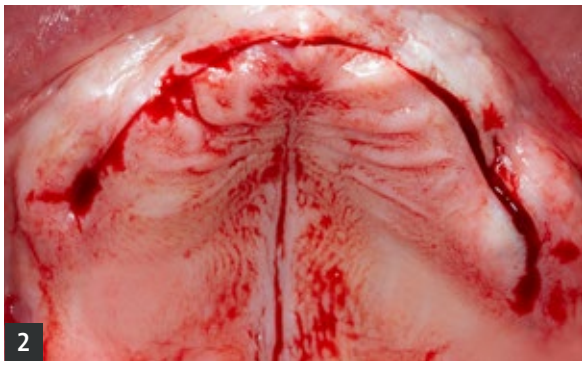
SURGICAL PROCEDURE

Following cause-related therapy in the lower jaw and extraction of radicular remains.

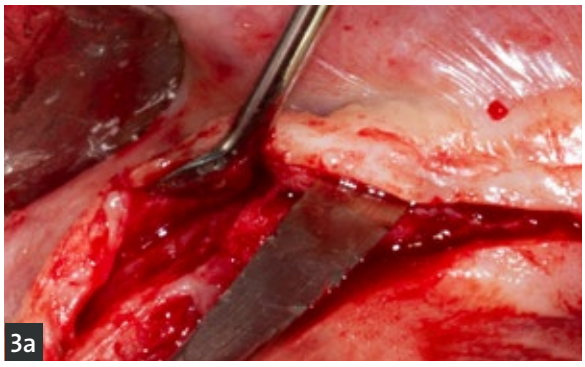
Step 1 – Local anesthesia


1

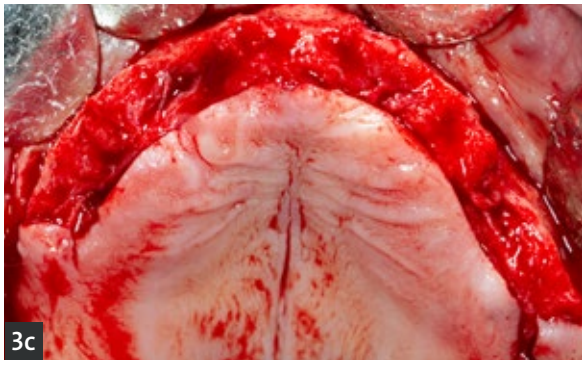
Step 2 – Supracrestal incision


2

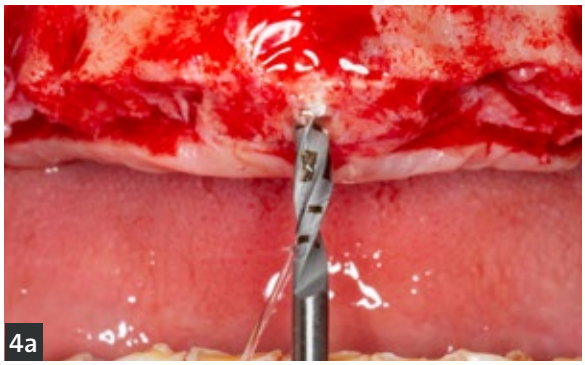
Step 3 – Flap raising


3a

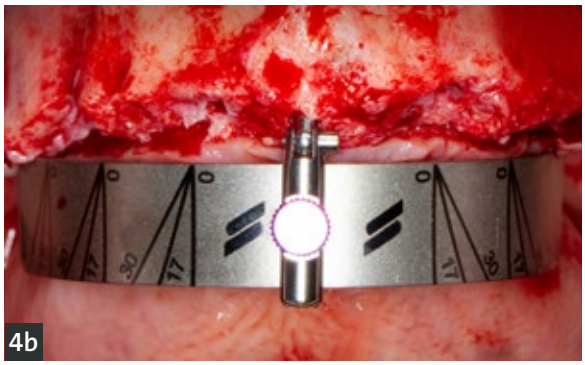

3b


3c

Step 4 – Placement of the Straumann® Pro Arch Guide
The midline osteotomy was prepared by using a ⌀ 2.2 mm Pilot Drill and drilling down to 10 mm.


4a

The Straumann® Pro Arch Guide was bent to adapt to the dental arch and placed in the midline osteotomy.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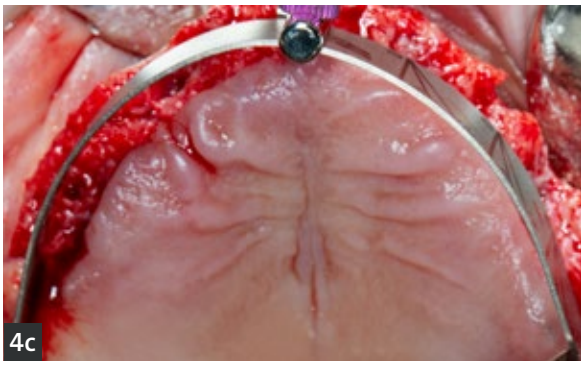
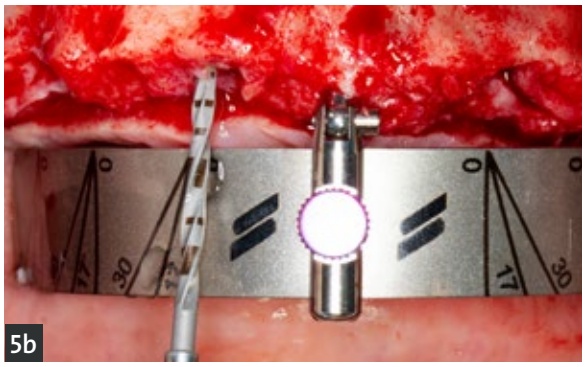

4c

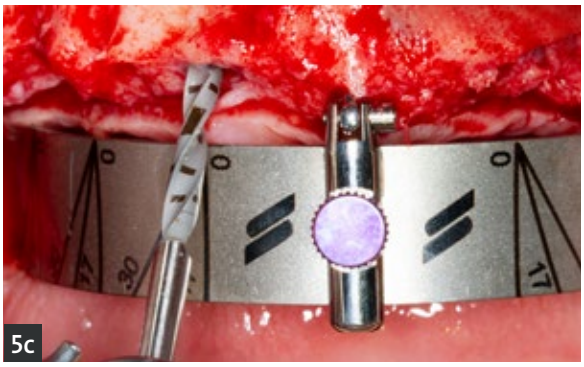
Step 5 – Implant site preparation for Straumann® BLX ⌀ 4.5 mm
Preparation of the osteotomy and placement of the appropriate implants was done according to the Straumann® BLX surgical protocol for soft bone.

5a

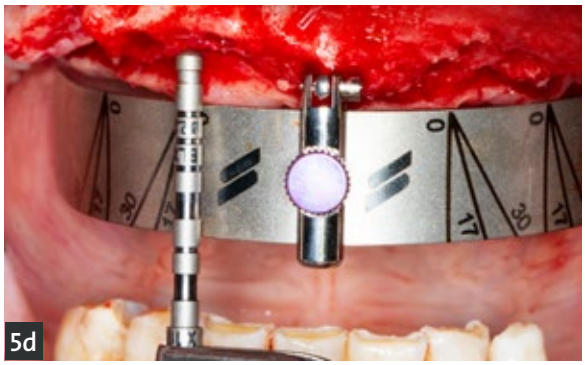
Anterior implants site preparations



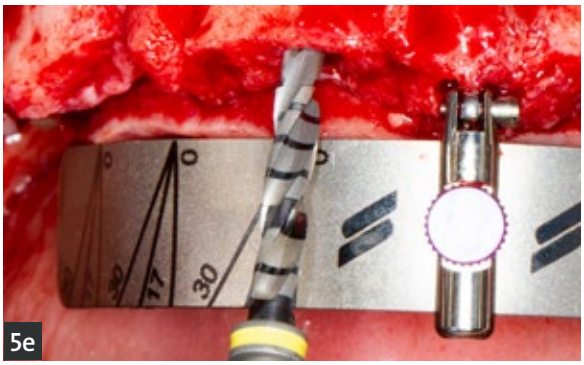
Needle Drill ∅ 1.6 mm



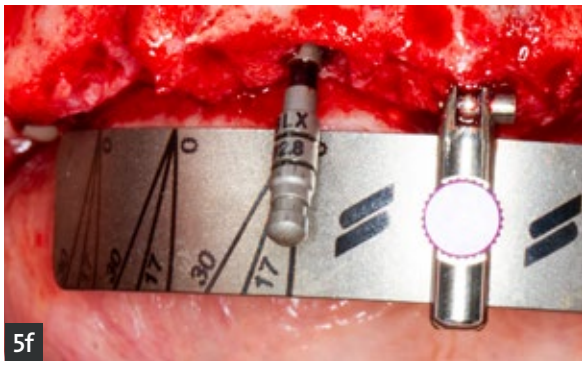
Pilot Drill ∅ 2.2 mm



Alignment Pin ∅ 2.2 mm

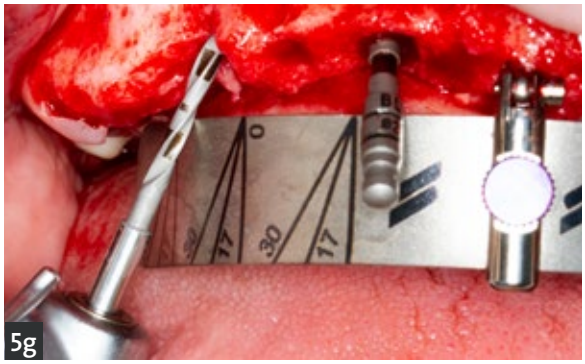


Drill ∅ 2.8 mm

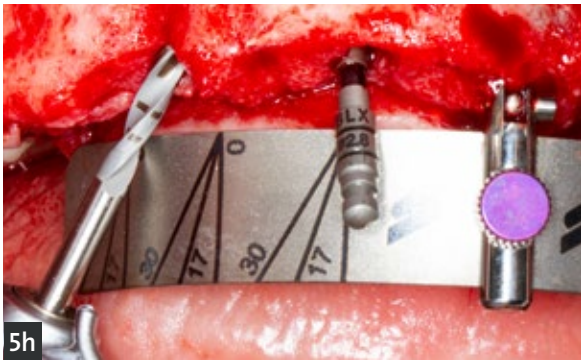


Alignment Pin ∅ 2.8 mm

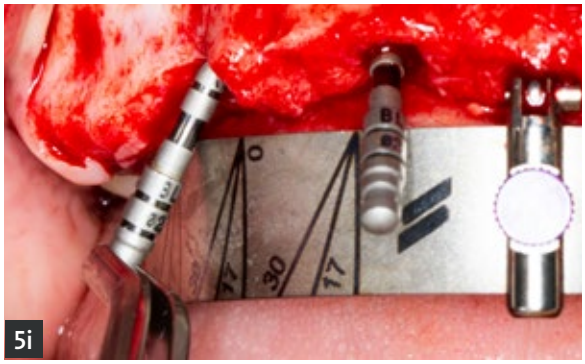
Posterior implants site preparations (tilted)



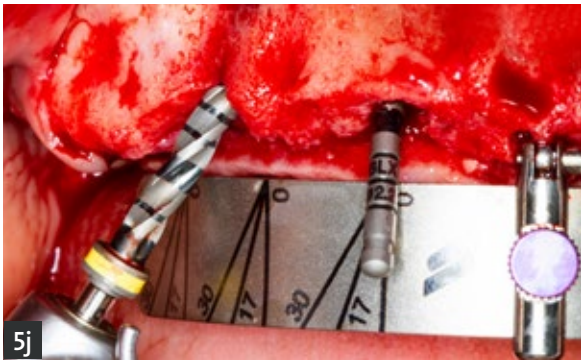
Needle Drill ∅ 1.6 mm



Pilot Drill ∅ 2.2 mm

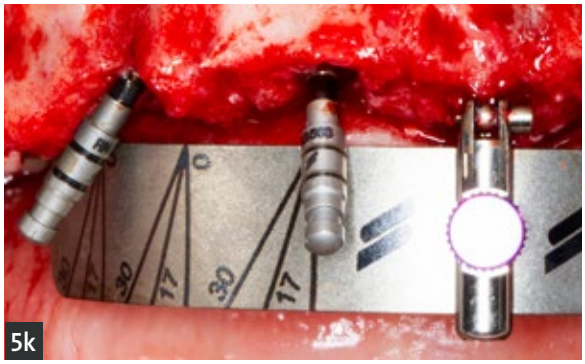


Alignment Pin ∅ 2.2 mm



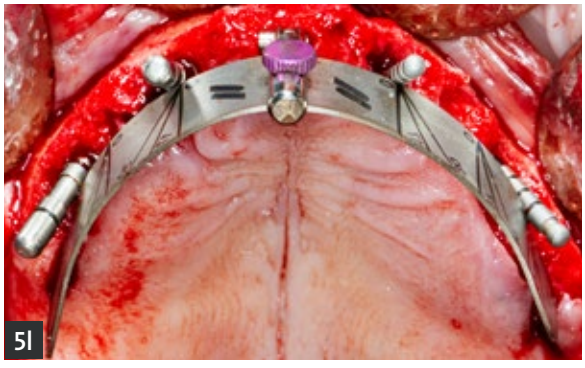
Drill ∅ 2.8 mm

Implant sites for the two remaining implants were prepared according to the Straumann® BLX drilling protocol.



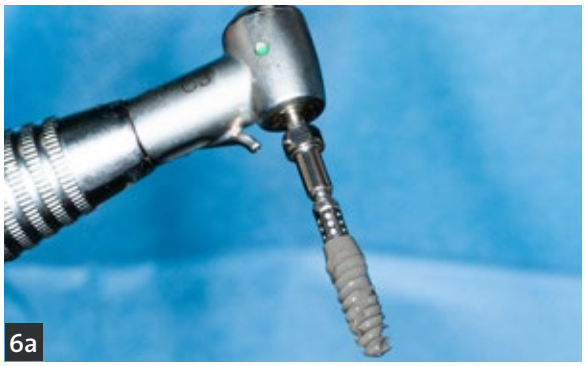
Alignment Pin ∅ 2.8 mm

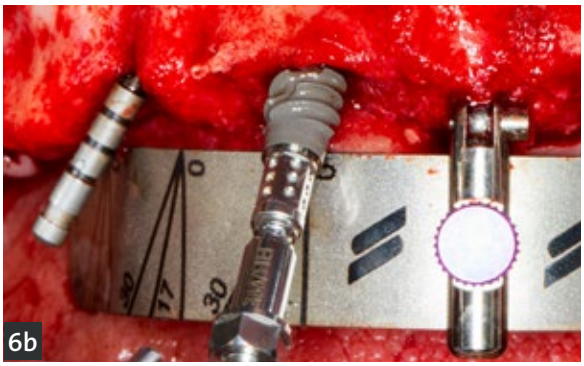
Alignment of the implant sites

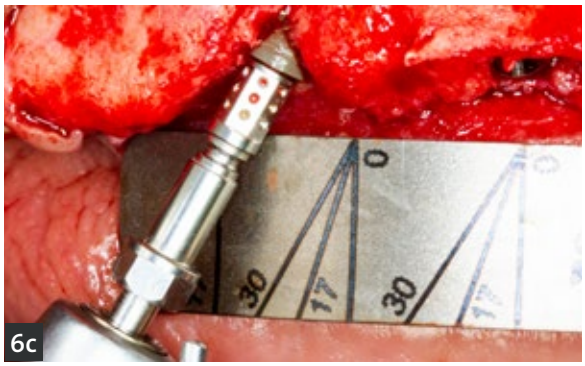


Step 6 – Implant placement

Four Straumann® BLX ∅ 4.5 mm (14 mm RB, SLActive®) implants were selected for this rehabilitation and placed with the maximum torque of 35 Ncm.


6a


6b

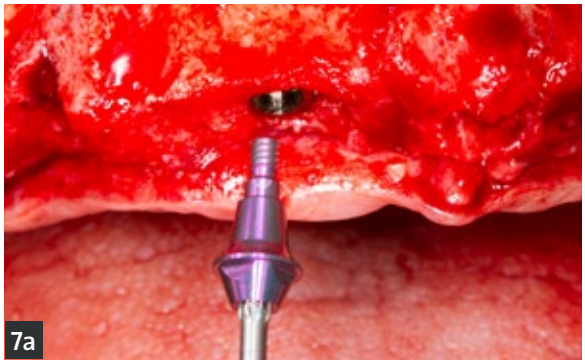

6c

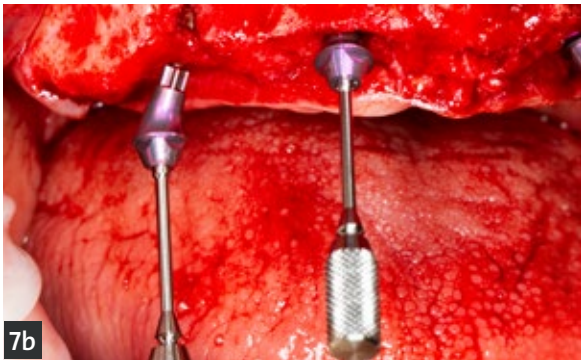
6d


6e

Step 7 – Placement of the Screw Retained Abutments
RB/WB Screw-retained Abutments, TAN ∅ 4.6 mm were placed with a torque of 35 Ncm.

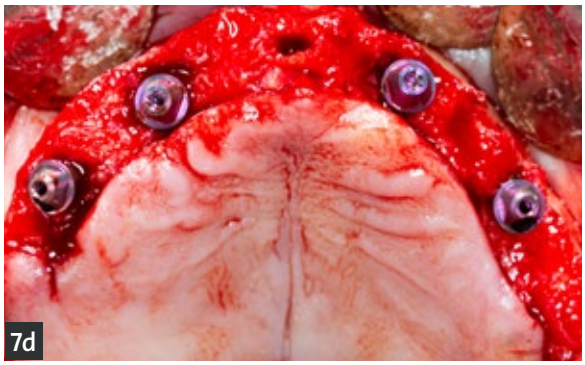
Anterior region: RB/WB Screw-retained Abutment, straight, angle 0°, ∅ 4.6 mm, gingiva height 2.5 mm.


7a


7b


7c

Posterior region: RB/WB Screw-retained Abutment, angle 30°, ∅ 4.6 mm, gingiva height 3.5 mm.


7d

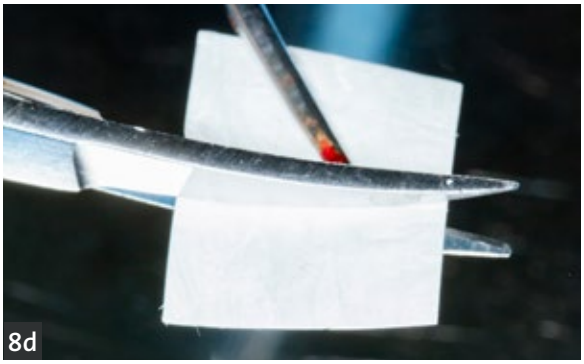
The Straumann® Bone Level Bone Profiler can be used to prepare the bone coronally to the implant shoulder in cases where the bone interferes with the abutment's emergence profile.

Step 8 – Placement of the Xenograft and Collagen Membrane

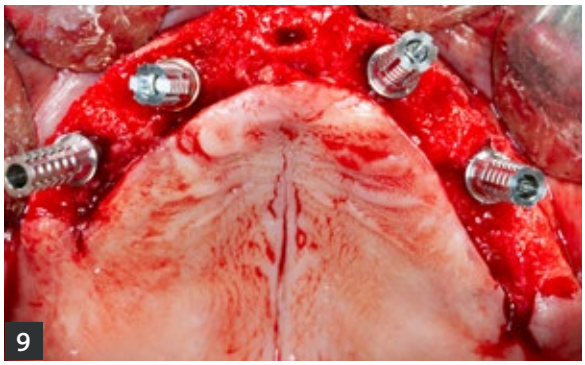

8a


8b


8c


8d

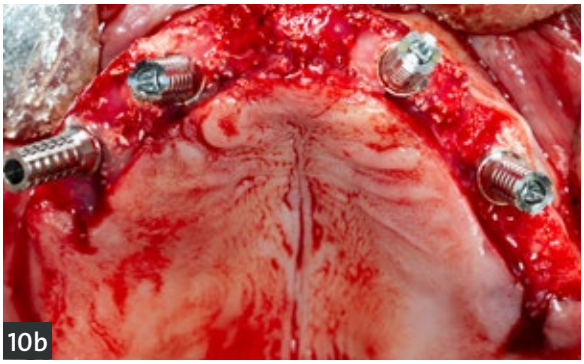
Step 9 – Placement of Titanium Copings


9

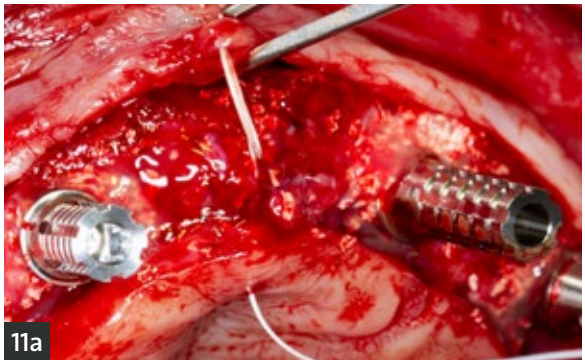
Placement of non-engaging Titanium Copings on the anterior and posterior abutments.
Coping for Screw-retained Abutments ∅ 4.6 mm, for bridges, height 11 mm.

Step 10 – Straumann® Emdogain placement around implants


10a


10b

Step 11 – Suture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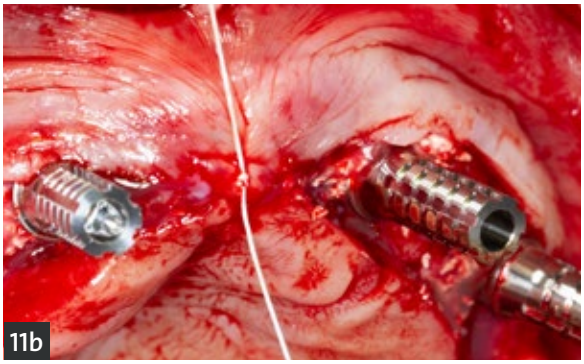
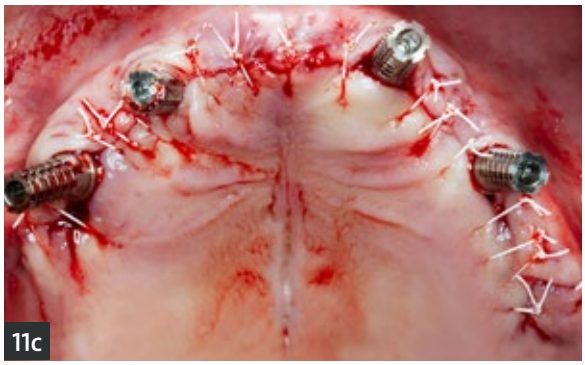
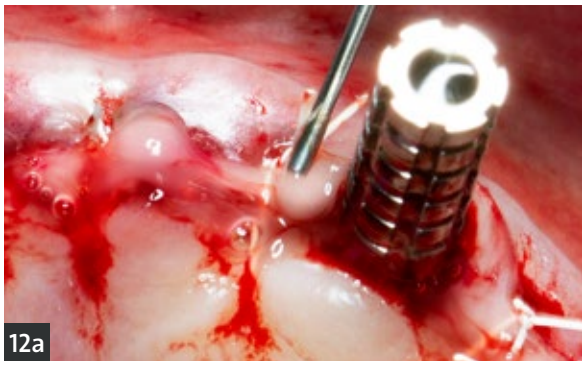
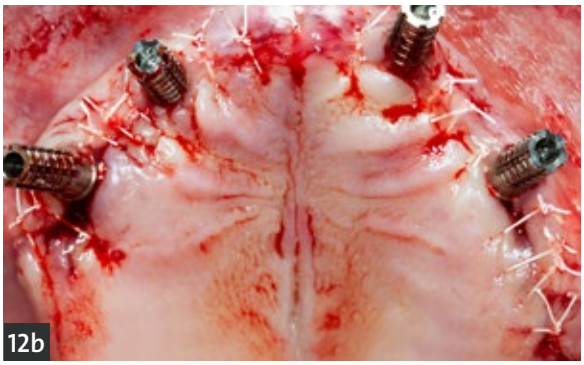

11b


11c

Step 12 – Straumann® Emdogain placement after flap closure


12a

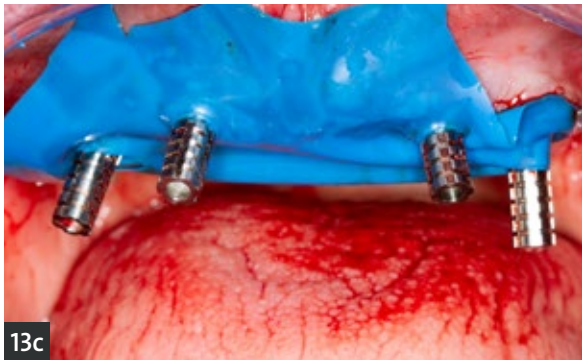

12b

Step 13 – Pick-up of titanium copings

Duplication of the old prosthesis was adjusted to allow passive fit on titanium copings. A rubber dam was placed over the titanium copings for protection of the surgical area. The provisional prosthesis was attached to the titanium copings.


13a


13b


13c


13d

Step 14 – Silicone key


14a


14b

LAB PROCEDURE

Step 15 – Preparation of the provisional prosthesis
The gaps between the titanium copings and the duplication of the old prosthesis were filled and RB Implant Analogs, L 12mm, TAN were placed.


15a


15b

The silicone key was adapted to the lower cast and fixed with the duplication of the old prosthesis using wax.


15c


15d

Placement of the gingival mask around implant analogs.


15e


15f


15g

Placement of the casts on the articulator.


15h


15i


15j

Excess material was cut and the provisional prosthesis was polished afterwards.


15k


15l

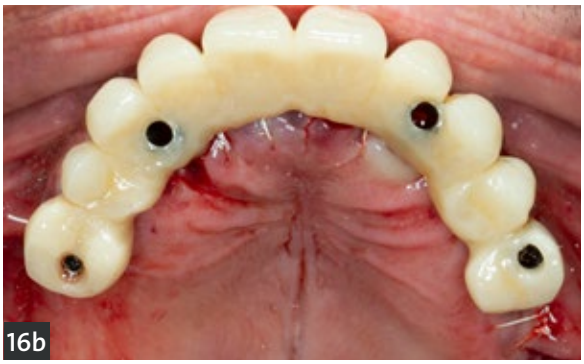

15m


15n

PROVISIONAL PROSTHESIS

Step 16 – Placement of the provisional prosthesis
The provisional prosthesis was placed and fixed with 15 Ncm torque.


16a


16b

Step 17 – Screws' access holes were filled and occlusion was adjusted


17

Step 18 – Final Result


18a


18b


18c


18d

Final prosthesis will be placed in six months after the surgery.

TESTIMONIALS

Professor Laureti: “We are impressed by the possibility to obtain high primary stability with Straumann® BLX even in softer bone types (D3, D4). This is a fundamental requirement for the immediate loading and delivery of the immediate prosthesis.”

Professor Ferrigno: “We appreciate the prosthetic protocol. The simplification of the portfolio facilitates treatment procedure and considerably reduces chair time.

Patients increasingly request immediate restorations with temporary prostheses. The Straumann® BLX Implant System allows clinicians to perform these restorations in a simple and predictable way and offers the possibility to expand the number of patients.”

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