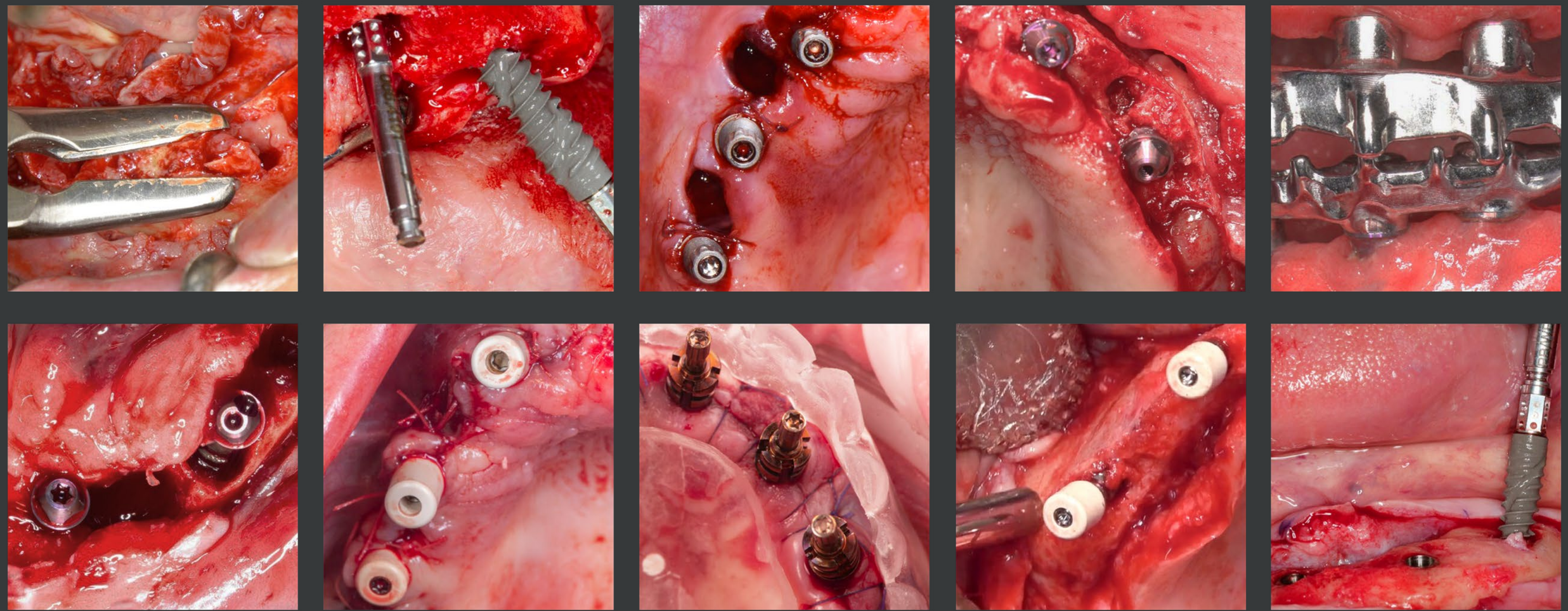
Pro Arch BLX

10 full-arch challenges and solutions

with expert recommendations and clinical cases



straumann

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Dear reader

An aging population is leading to the need for major reform in social and health services in most of the developed world. Recently edentulism was acknowledged as one of the leading ten causes of “Years Lived with Disability” (YLD) in the developed world.[1] Edentulism is now the variable most often used, to gauge oral health in elderly populations.

Immediate fixed full-arch rehabilitation could be one of the cost-efficient solutions for edentulous patients, and an increasing number of patients are willing to undergo this treatment.[2] Today the key drivers for restoration are functionality, enhanced esthetics, easy maintenance and restoring facial features for fully edentulous patients.

Each patient is unique and should be treated as such. Many treatment protocols exist, and a one-size-fits-all strategy is not always the best for the patient. The characteristics of the upper

and lower jaw can differ so much that each arch, or each quadrant could require a completely different approach, presenting a wide range of challenges to overcome.

Low bone availability is one of the most common challenges, this can often be addressed by using fewer implants (less than five, as per the 6th ITI Consensus), shorter implants or tilting of the posterior implants. At the same time, it is common for patients with abundant bone availability to present with a skeletal discrepancy that influences implant placement for an ideal post operative class 1 occlusion and a severe cross-bite occlusion. In addition, different systemic conditions and healing patterns present an additional set of challenges that require clinicians to carefully select implant material, surface and biomaterials, to enhance the soft and hard tissue healing process to deliver long-term success.

Fortunately implant dentistry is going through a very exciting period where new and stronger materials are available allowing the use of narrow implants and less invasive procedures, “state-of-the-art” surface treatment can significantly shorten healing time

as well as overall treatment time. New implant designs such as Straumann® BLX system provide clinicians with a tool to pursue Immediacy with confidence, supported by further development in digital workflows and innovations in 3D treatment planning and guided surgery for higher efficiency, accuracy and predictability.

This e-book details 10 clinical cases exploring challenges in immediate full-arch rehabilitation and the general recommendations from experienced clinicians.

Enjoy the reading!

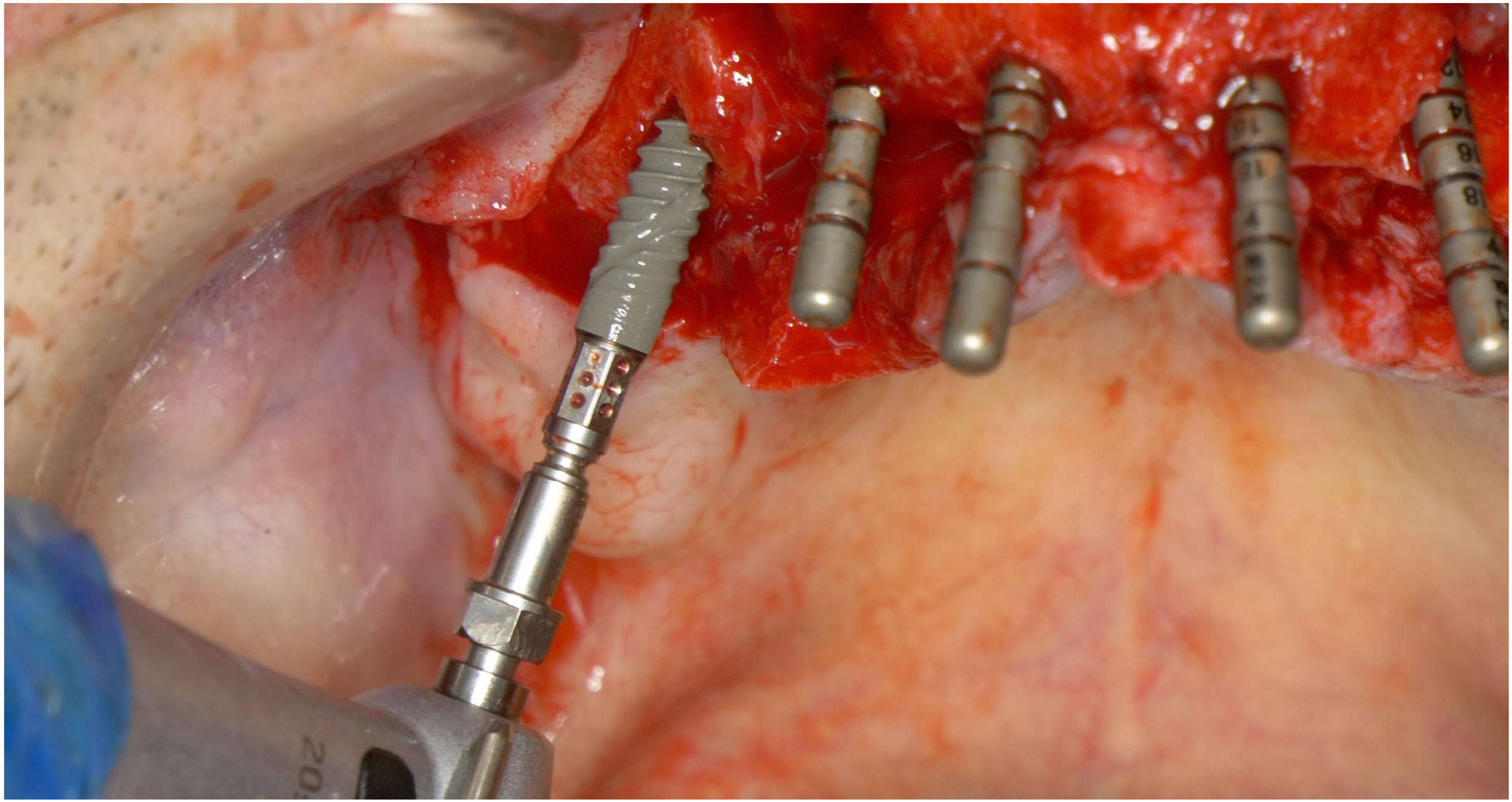
1 GBD 2016 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet. 2017;390(10100):1211-1259.

2 Millenium reports implants & Final abutments APAC 2016- add countries, EU 2015, LA 2014-add countries, NAM 2015.

CONTENT

Challenge 1: Bone reduction and chronic inflammation

General recommendations and clinical case from Prof. João Caramês



General recommendations from Prof. João Caramês

Bone reduction:

- Ensure that the bone plane is parallel to the occlusal plane and transition line won't be visible in forced smile
- Make the edges of the bone smooth and rounded to avoid soft tissue fenestration
- Retain the bone chips for bone grafting, especially for the lip support and to fill and repair bone defects

Chronic inflammation:

- Perform curettage and irrigation of the extraction socket to remove any remnant tooth fragments and diseased tissue
- Remove the inflamed soft tissue from the bone after raising a flap

Professor João Caramês is a Full Professor and Chairman of the Oral Surgery and Implant Department and President of the Scientific Committee at Lisbon University Faculty of Dental Medicine (FMDUL). He is Director and Founder of the Implantology Institute in Lisbon and currently a President state elect of the General Assembly of the Portuguese Dental Association (OMD).

Professor Caramês is Principal Investigator on Implantology research group at the Oral and Biomedical Research Unit of the Lisbon University Faculty of Dental Medicine (UICOB/FMDUL).

He has published and lectured extensively on a national and international level.
Today his private practice is focused on Oral Surgery and Implant Dentistry.

Prof. João Caramês
DMD, PhD
Lisbon, Portugal

Challenge 1: Bone reduction and chronic inflammation

Clinical case

Initial situation

Patient information

Age	60
Jaw	Mandible maxilla
Health status	Good
Height of smile line	Low
Bone type	Soft
Infections at implantation site	Yes
Bone anatomy defects	Yes
Risks	Yes

Additional difficulties

Moderate resorption in the mandible and maxilla
Generalized severe chronic periodontitis

Challenge 1: Bone reduction and chronic inflammation

Clinical case

Provisional prosthesis

Treatment

- Fixed immediate rehabilitation on four implants in the mandible and six implants in the maxilla
- Tilting of the posterior implants due to limited bone availability in the maxilla

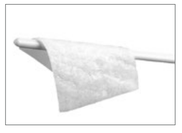
Temporary restoration: acrylic metal reinforced provisional prosthesis
Planned final restoration: zirconia ceramic bridge

Materials used

Straumann® BLX ∅ 3.75 mm RB SLActive® 12 mm Roxolid® (maxilla)
Straumann® BLX ∅ 4.5 mm RB SLActive® 14 mm Roxolid® (mandible)

Straumann® XenoGraft 0.5 mm

RB/WB Screw-retained abutments, straight, angle 0°, ∅ 4.6 mm, GH 3.5 mm
RB/WB Screw-retained abutments, straight, angle 17°, ∅ 4.6 mm, GH 3.5 mm



Straumann® Membrane Flex

Challenge 1: Bone reduction and chronic inflammation

Clinical case

My experience

Prof. João Caramês
DMD, PhD
Lisbon, Portugal

“Straumann® BLX is a good additional tool for the full-arch rehabilitation, especially in the soft bone and extraction sockets, it delivers high primary stability.”

Challenge 1: Bone reduction and chronic inflammation

Clinical case

Initial clinical situation

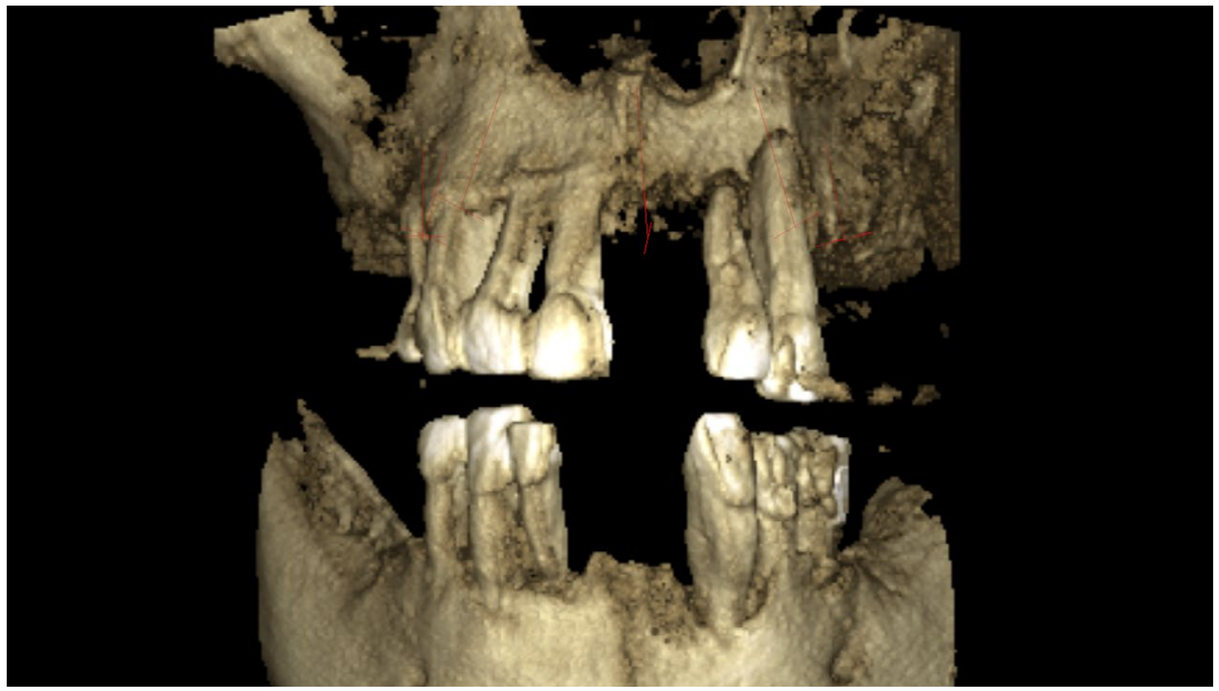
Occlusal view of the mandible

Occlusal view of the maxilla

Preoperative panoramic radiograph

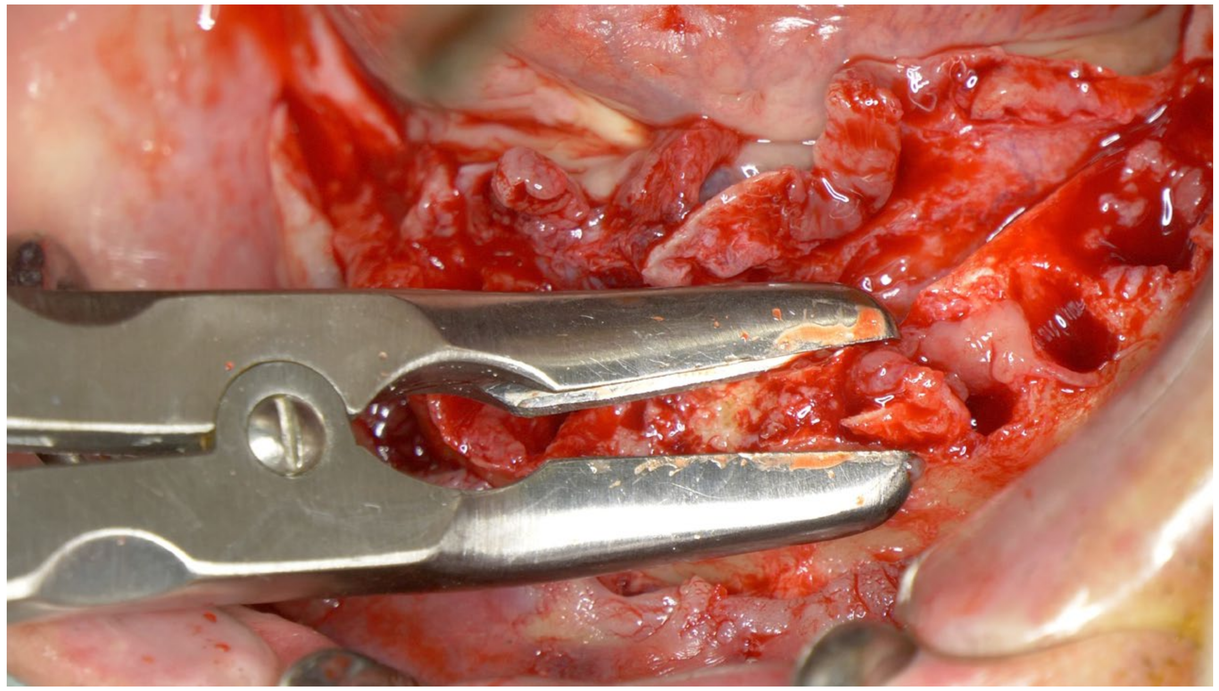
Challenge 1: Bone reduction and chronic inflammation

Clinical case

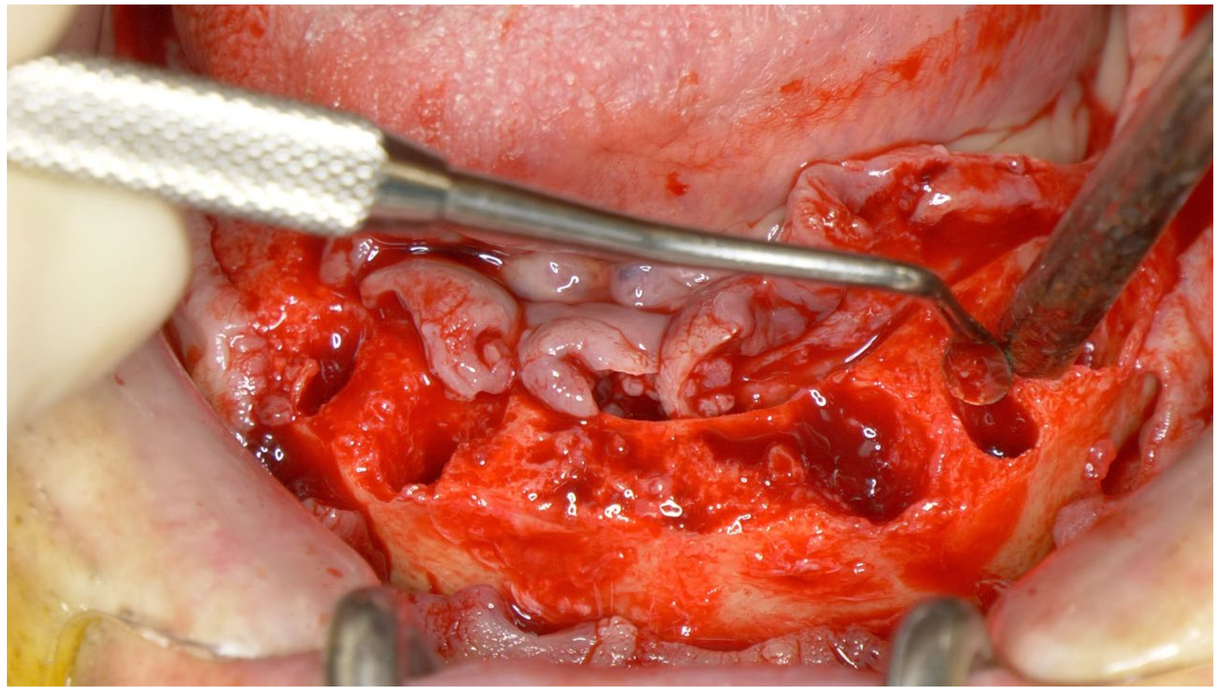


CB CT scan

Occlusal view after the extraction of hopeless teeth



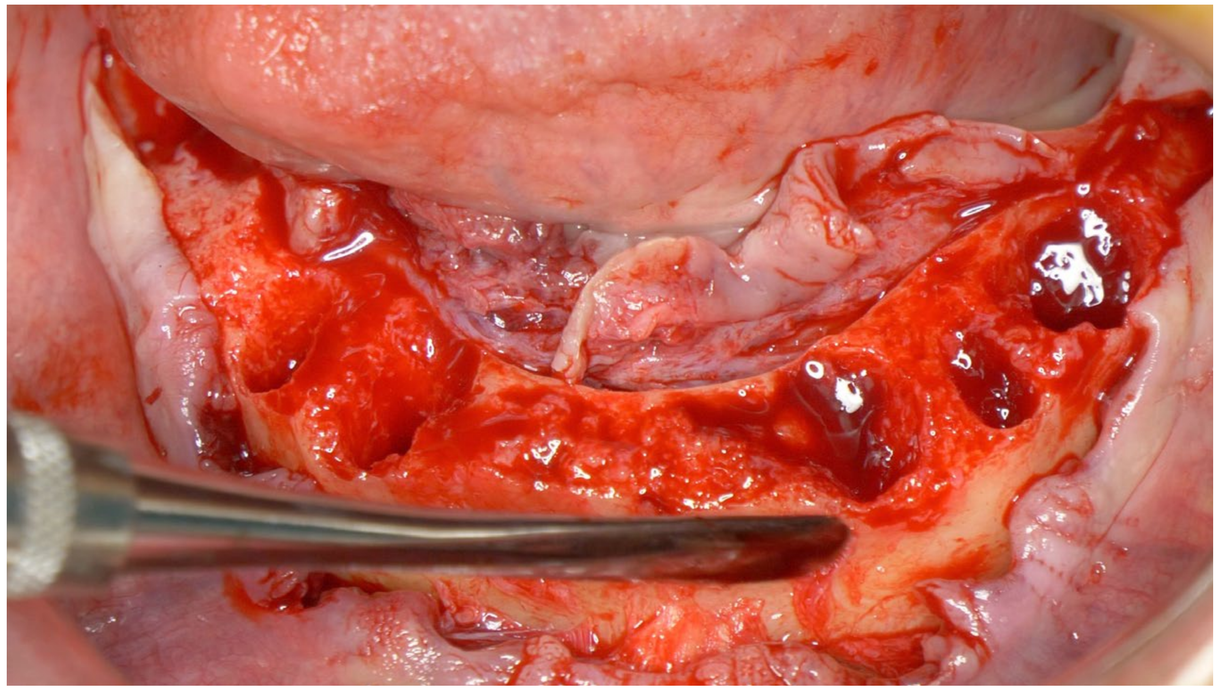
Bone reduction



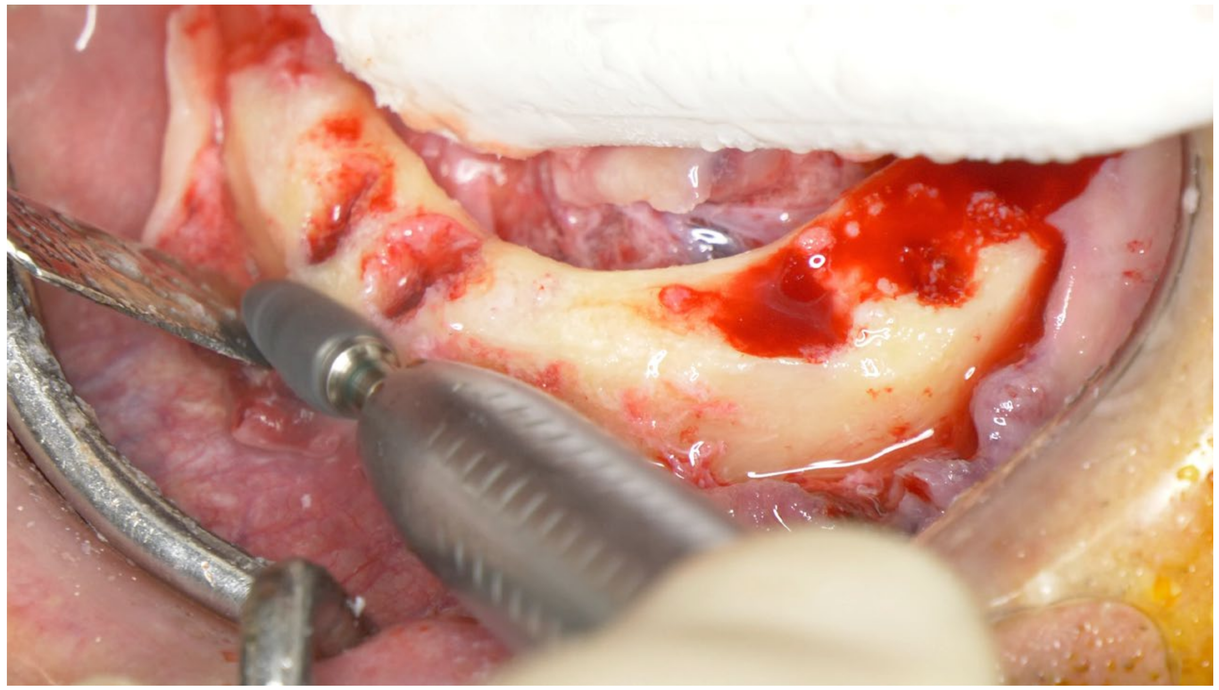
Curettage and irrigation of extraction sockets to remove any remnant tooth fragments and diseased tissue

Challenge 1: Bone reduction and chronic inflammation

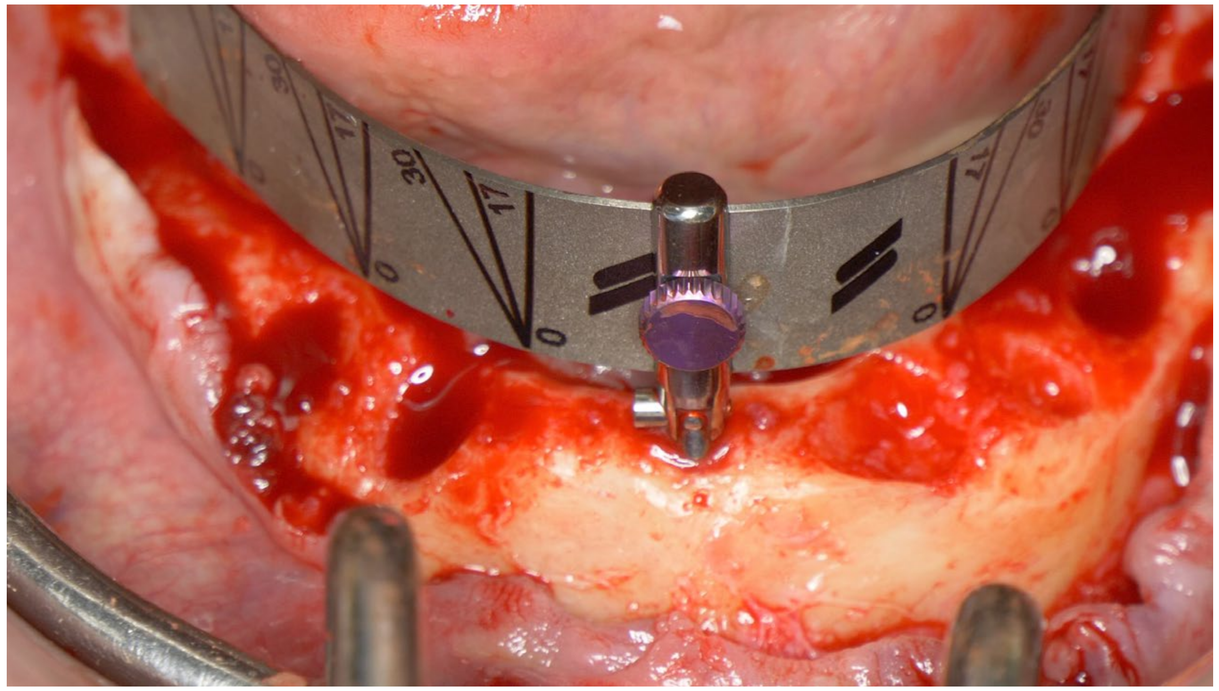
Clinical case



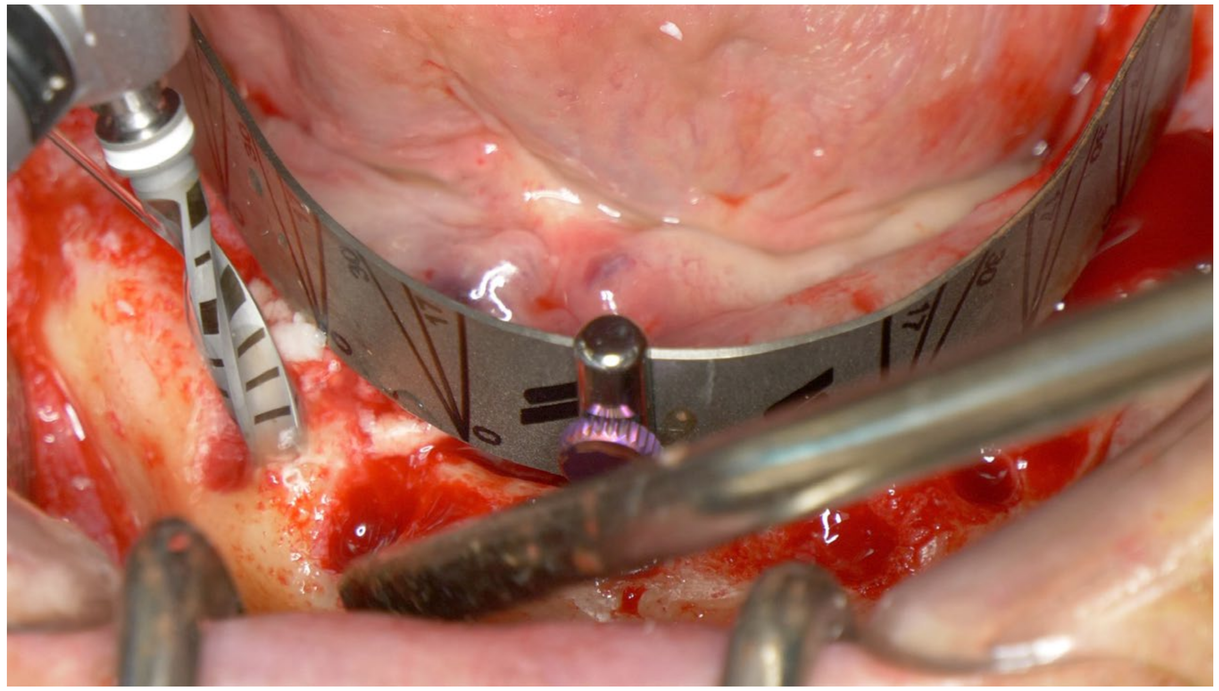
Removal of inflamed soft tissue from the bone



Bone reduction to make the edges of the bone smooth and rounded



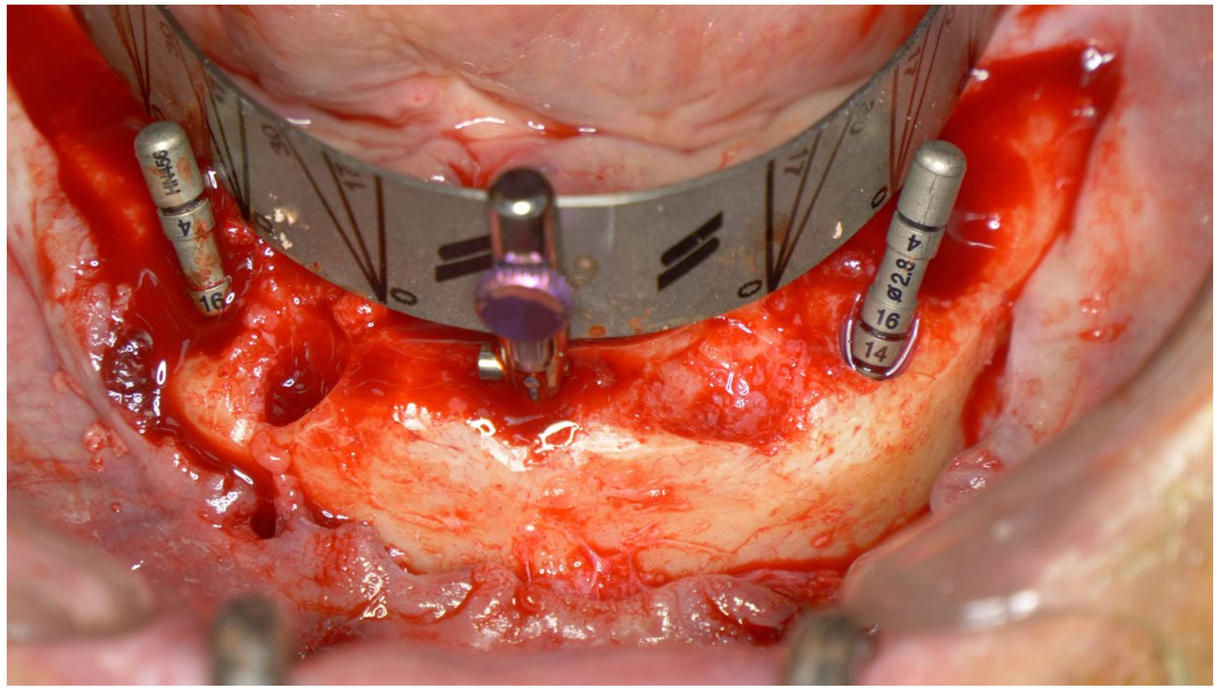
Straumann® Pro Arch Guide in place



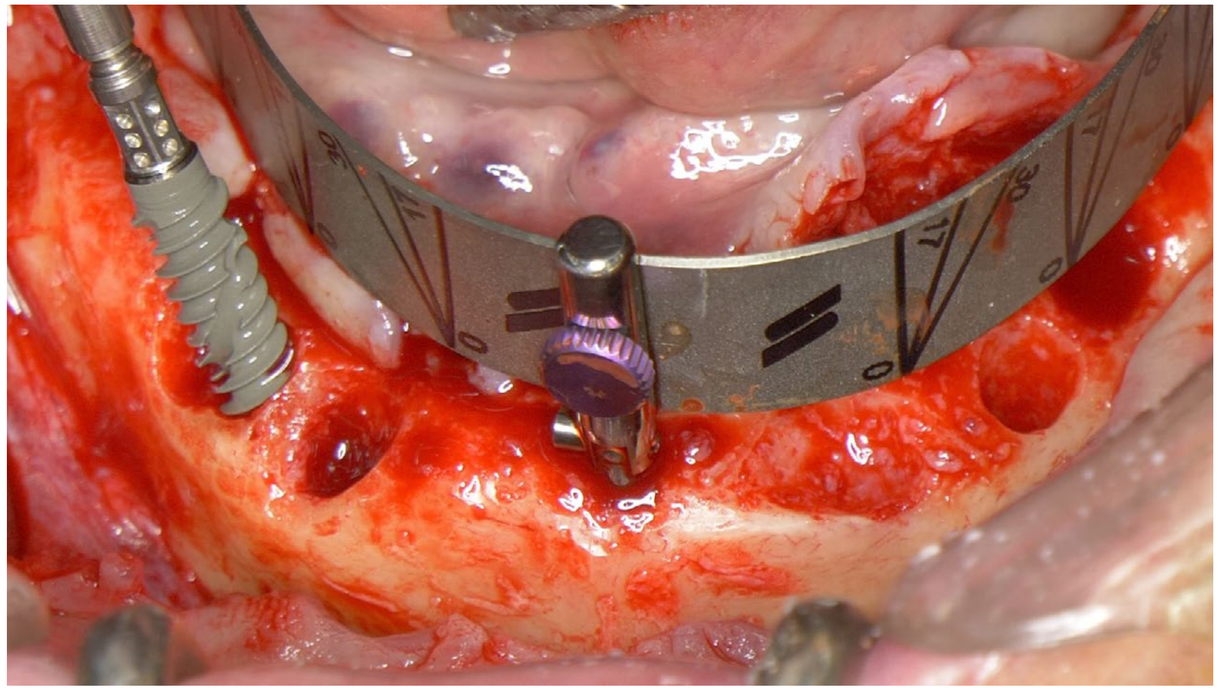
Posterior implants site preparation
Angulation of the posterior implant to increase the A-P spread

Challenge 1: Bone reduction and chronic inflammation

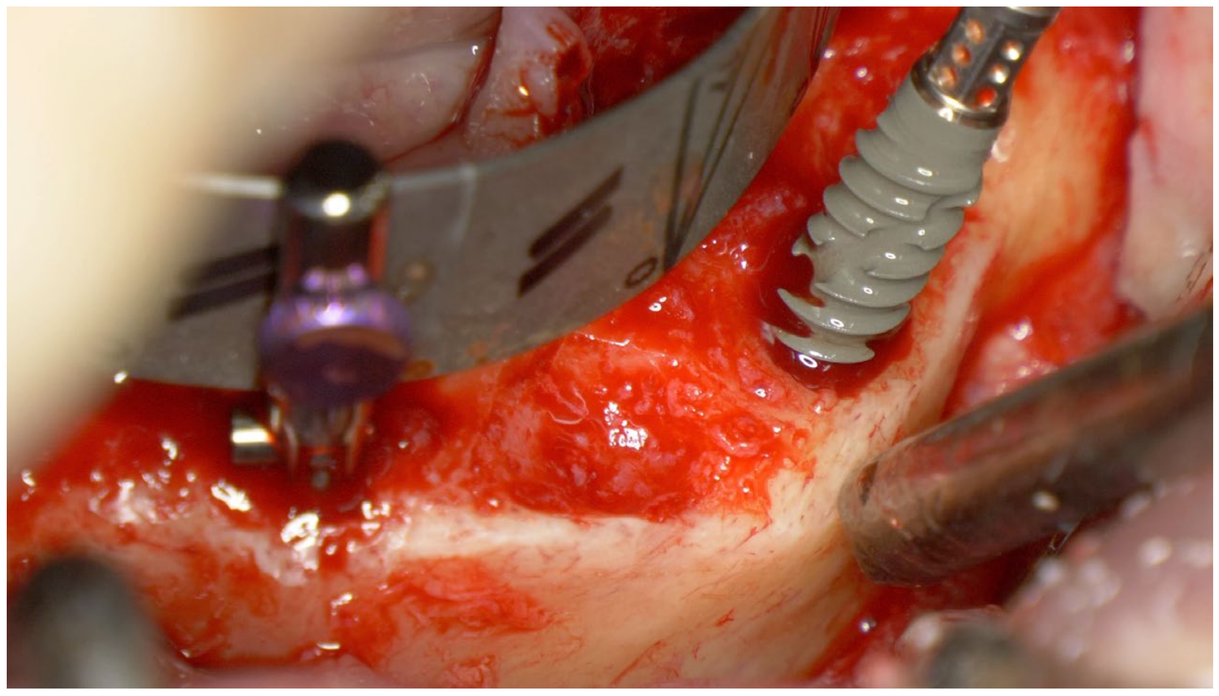
Clinical case



Alignment of the implant sites



Placement of the Straumann® BLX ∅ 4.5 mm RB SLActive® 14 mm Roxolid® implant with the torque of 35 Ncm



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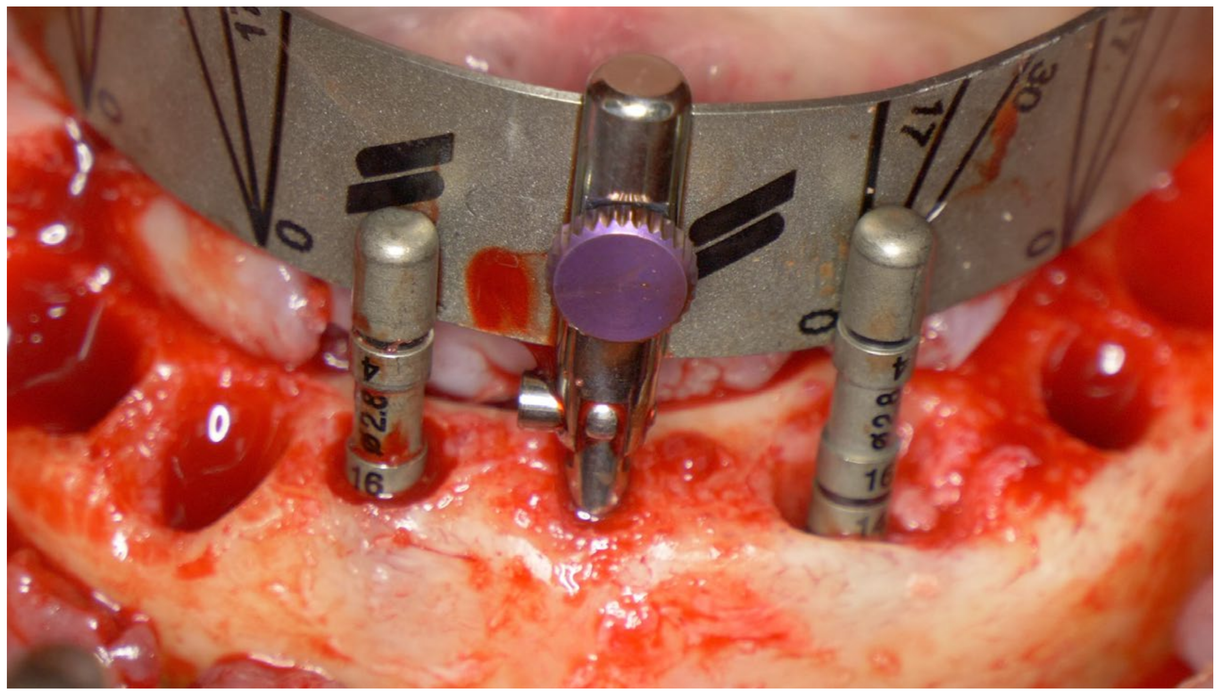

Alignment of the implant sites