

Case report

Full-mouth rehabilitation with Axiom X3® Simplification of the drilling protocol

Dr. Pierre BRUET
France



axiomX3®

Anthogyr
A Straumann Group Brand



DR. PIERRE BRUET

France

CASE PRESENTATION

Mr. V., 56 years old, came for a consultation as he had a complex about his smile and difficulty in eating correctly. The patient was very anxious and had a pronounced dentophobia, which explained the deteriorated condition of his teeth.

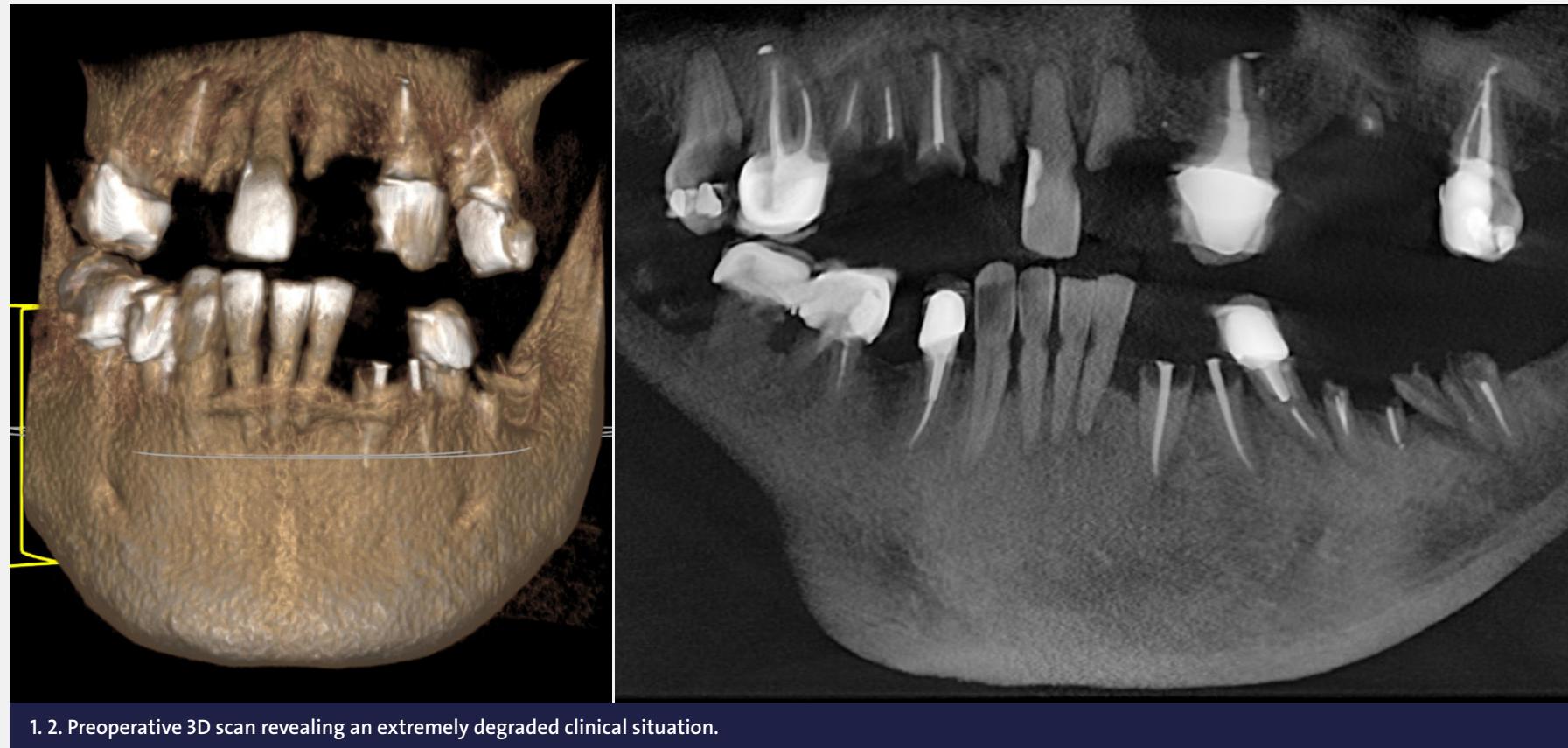
His job involved contact with the public and he had an extremely busy schedule.

After a thorough prosthetic and radiographic evaluation, we proposed an extraction of all teeth under conscious sedation followed by full-mouth implant-borne rehabilitation with immediate loading of 6 maxillary implants and 6 mandibular implants 48 hours after surgery.

Significant bone reconstruction would be performed simultaneously using sticky bone from allogenic bone.

A healing period of 4 months had to be observed before fabricating the final bridges.





1. 2. Preoperative 3D scan revealing an extremely degraded clinical situation.

3 / 25

axiomX3®

Initial
situation



Surgery

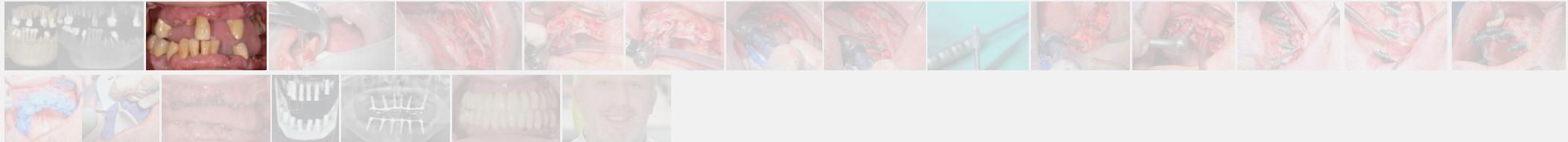


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



3. Initial clinical situation. Many teeth missing or with only roots remaining. Note the absence of maxillomandibular occlusal stability.



4 / 25

axiomX3®

Initial
situation



Surgery

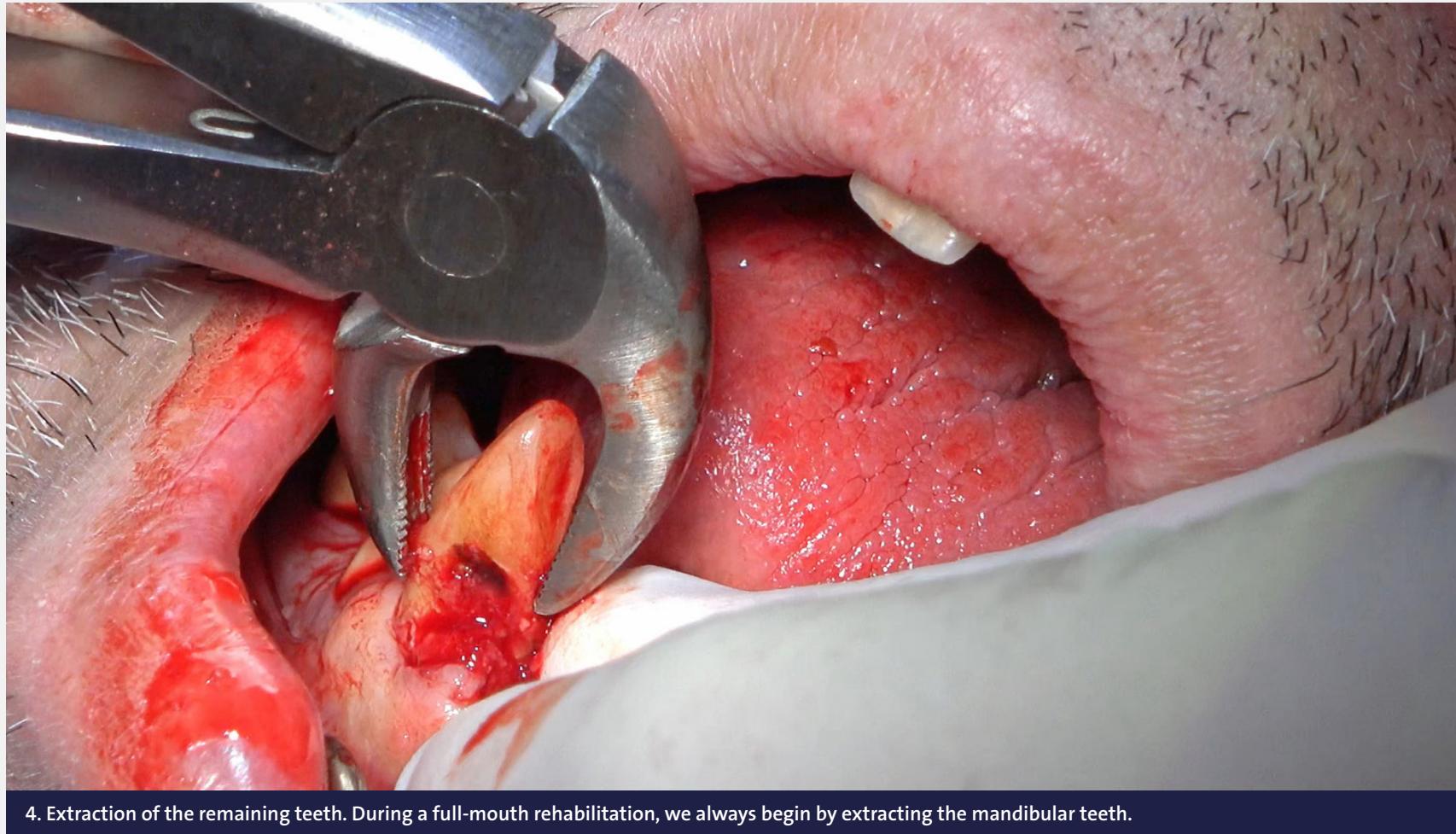
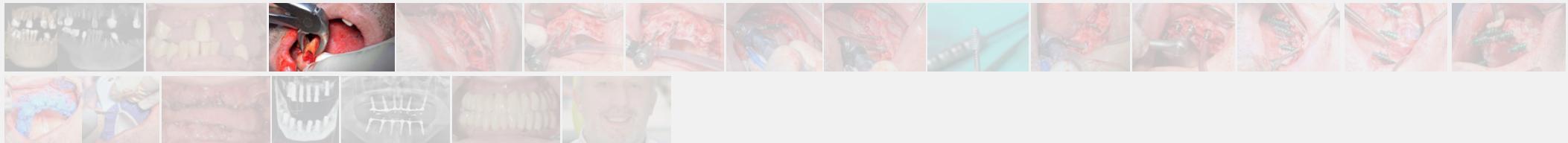


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



4. Extraction of the remaining teeth. During a full-mouth rehabilitation, we always begin by extracting the mandibular teeth.



5 / 25

axiomX3®

Initial
situation



Surgery

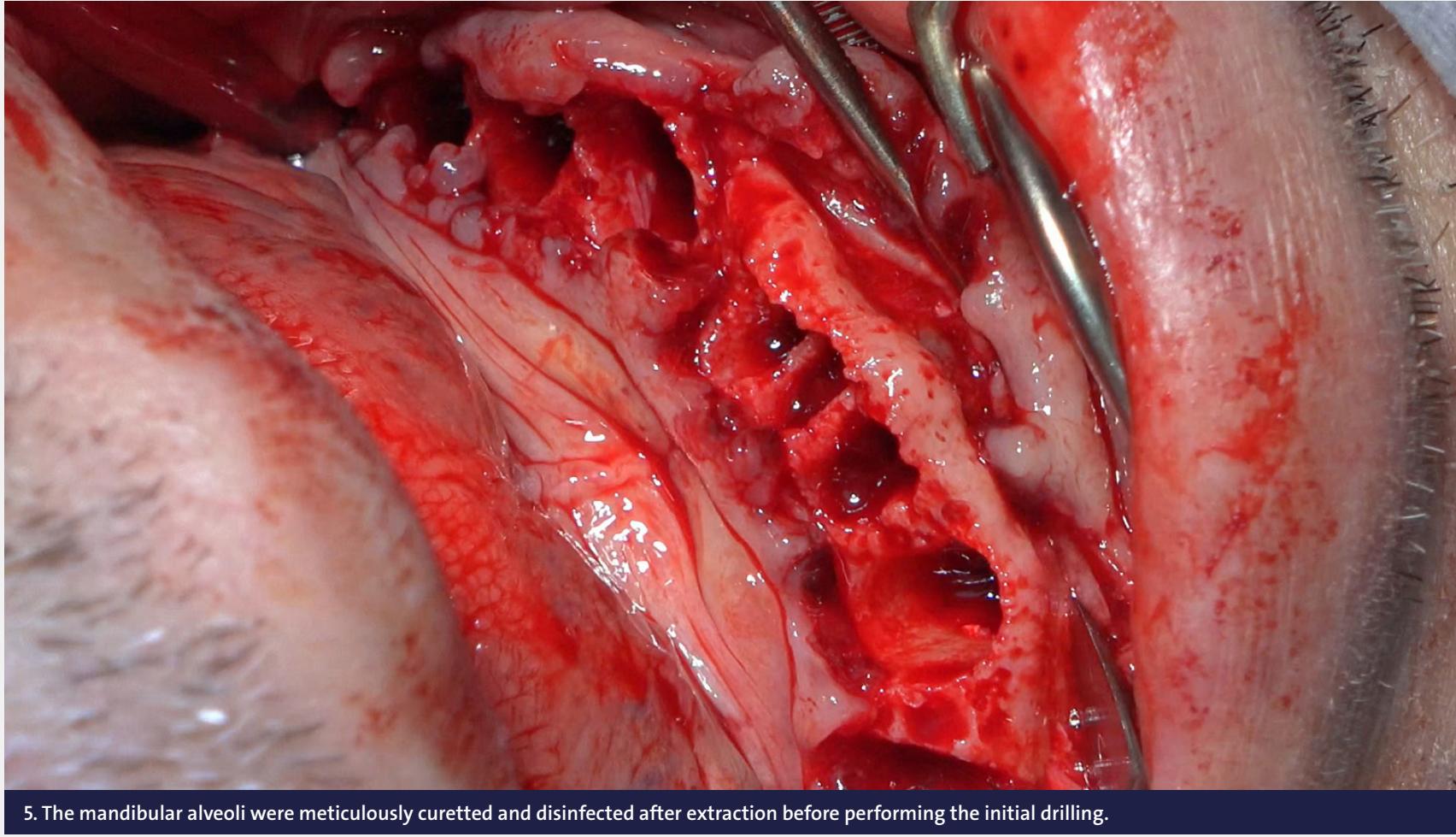


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



5. The mandibular alveoli were meticulously curetted and disinfected after extraction before performing the initial drilling.

6 / 25

axiomX3®

Initial
situation



Surgery

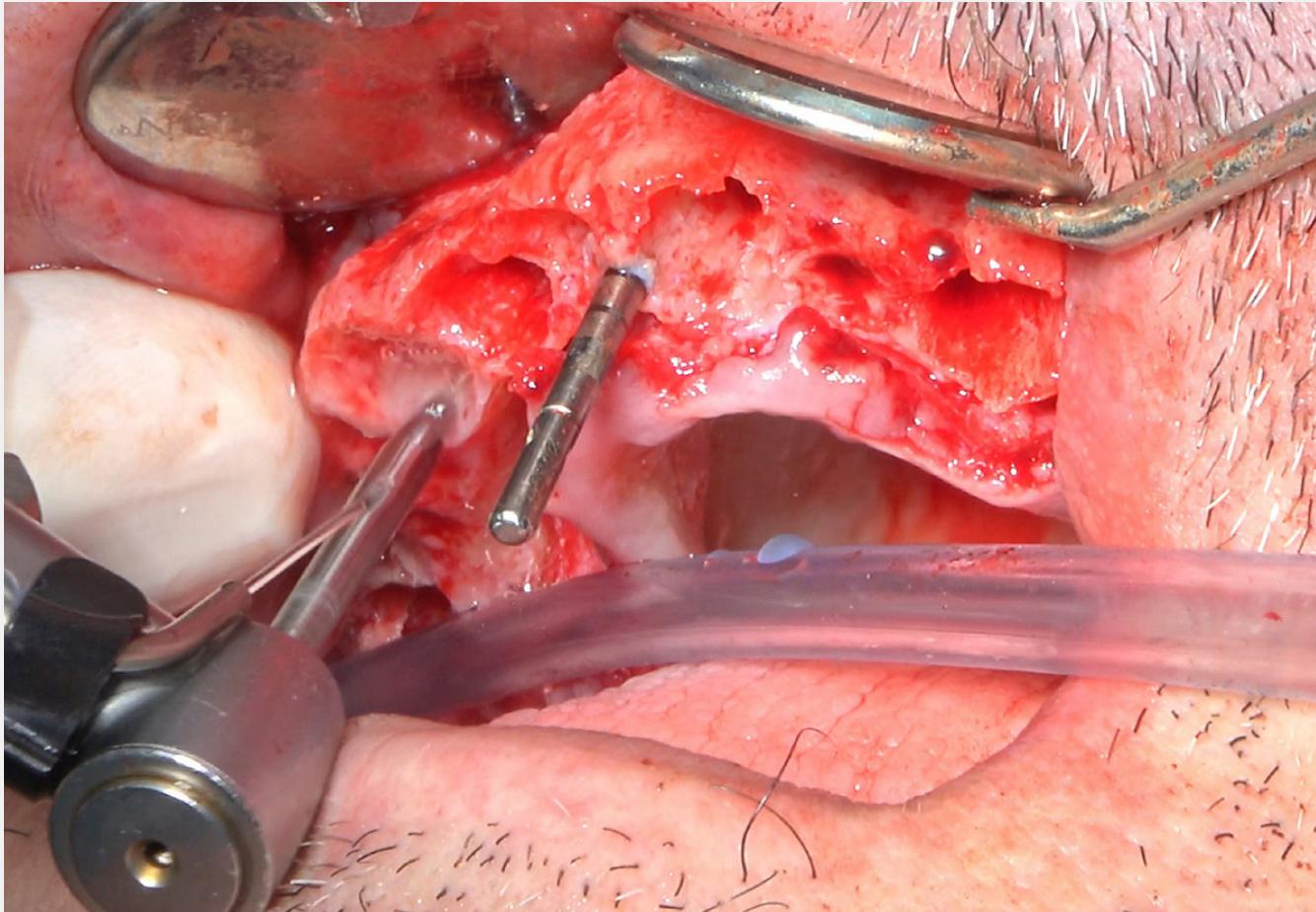


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



6. Initial central drilling was performed to provide a reference axis to place the 6 implants parallel to each other. Additionally, a surgical guide is always made beforehand.



7/ 25

axiomX3®

Initial
situation



Surgery

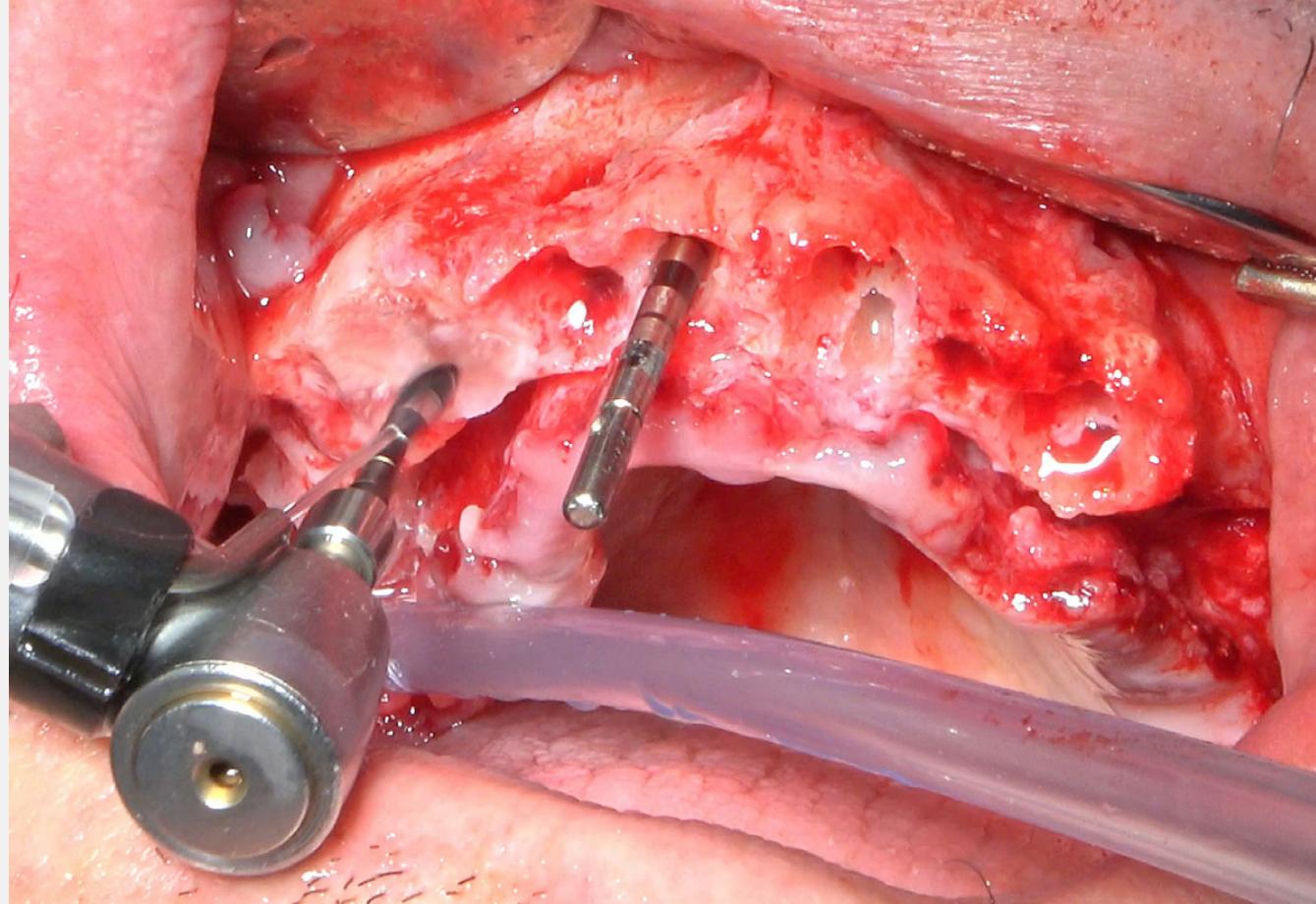


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



7. The drilling sequence began with the pointer drill, followed by the 2 mm drill, yielding very dense D1 bone.



8 / 25

axiomX3®

Initial
situation



Surgery

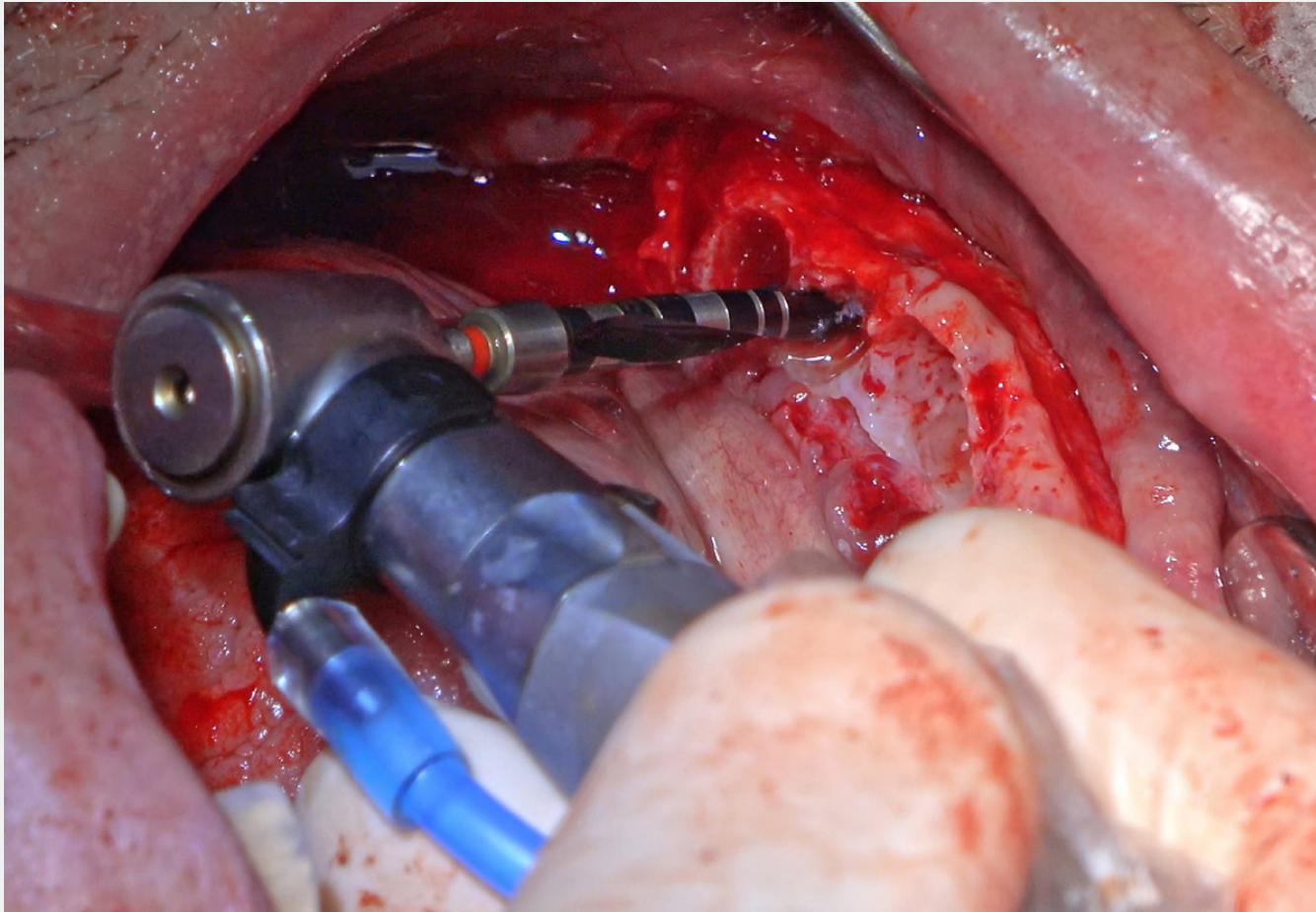


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



8. For the insertion of this Ø 3.4 mm implant, the Axiom X3® drilling protocol did away with the need for a bone tap despite the presence of D1 bone.



9 / 25

axiomX3®

Initial
situation



Surgery

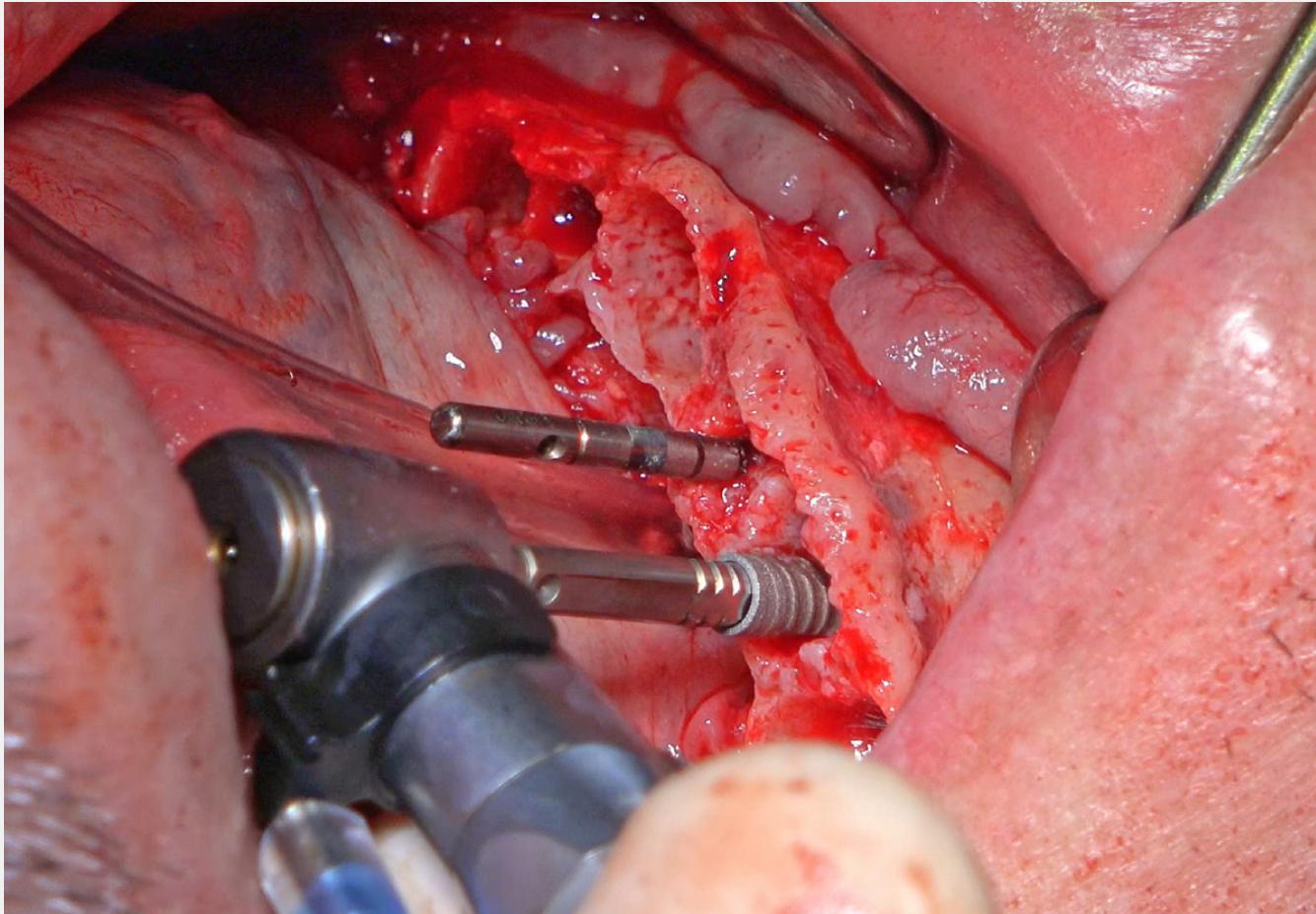
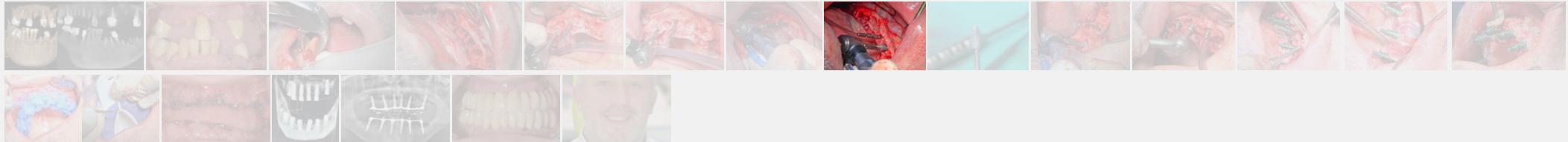


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



9. The implants screwed in very smoothly without blocking, despite not using a bone tap. Primary implant stability was very satisfactory, with a torque of between 35 and 45 Ncm.



10 / 25

axiomX3®

Initial
situation



Surgery

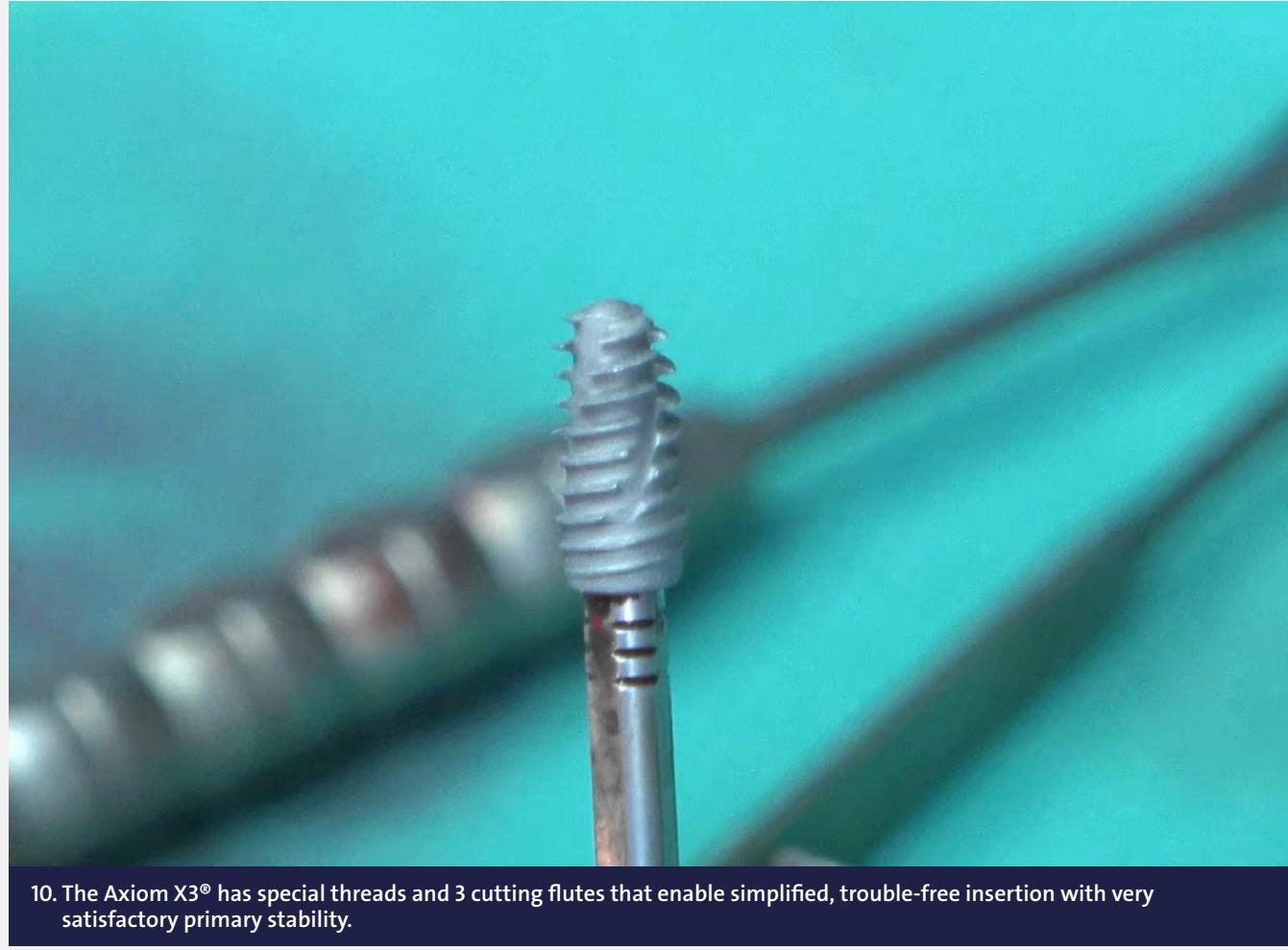
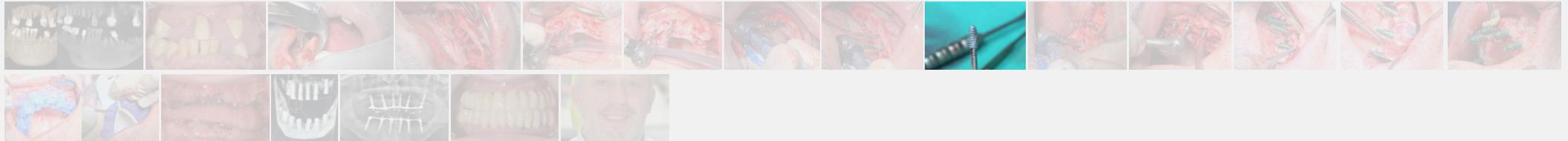


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



10. The Axiom X3® has special threads and 3 cutting flutes that enable simplified, trouble-free insertion with very satisfactory primary stability.



11/ 25

axiomX3®

Initial
situation



Surgery

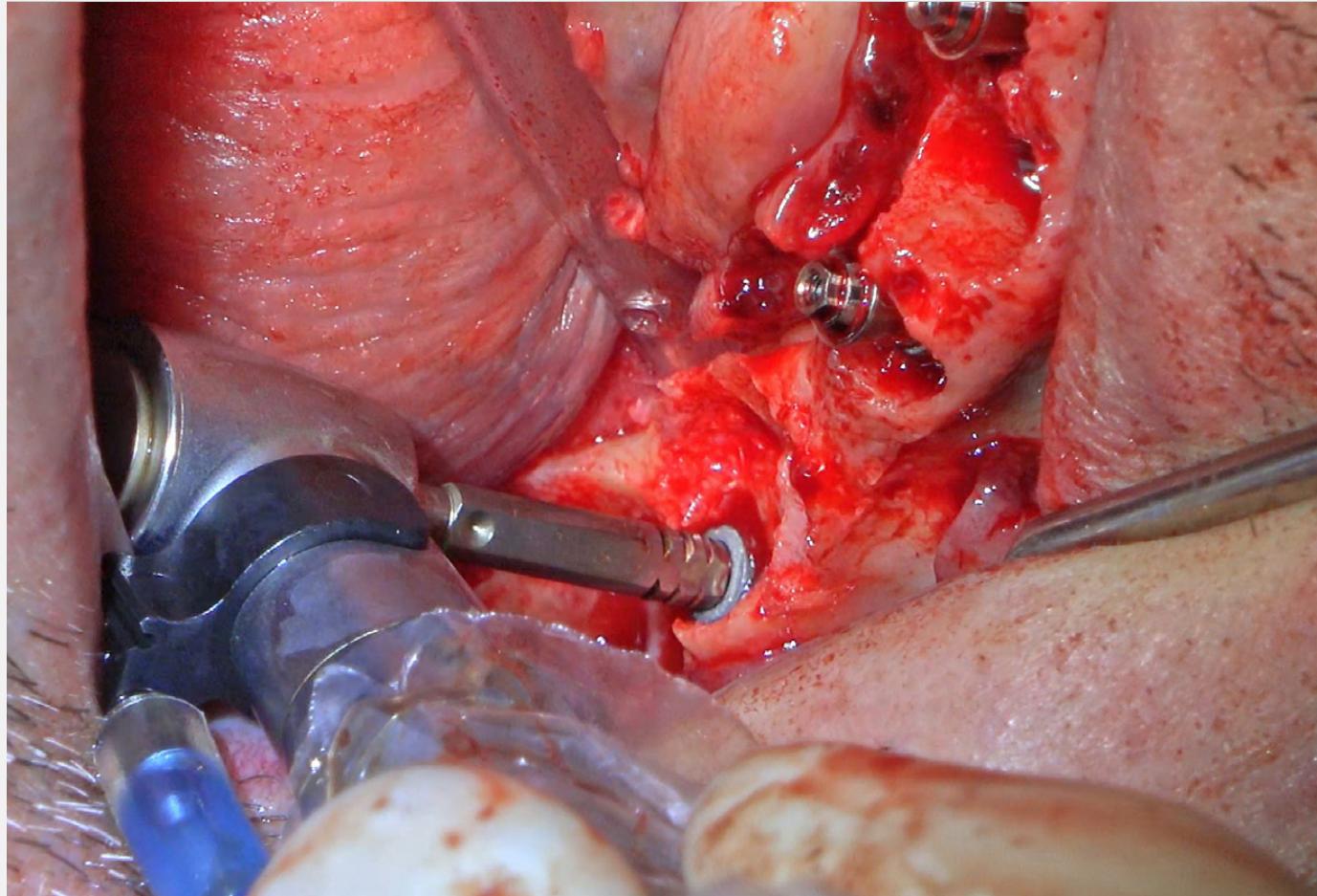


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



11. The cutting action of the implant, which allows for progressive stabilization in the mandibular bone, made implant insertion a smooth process.



12/ 25

axiomX3®

Initial
situation



Surgery

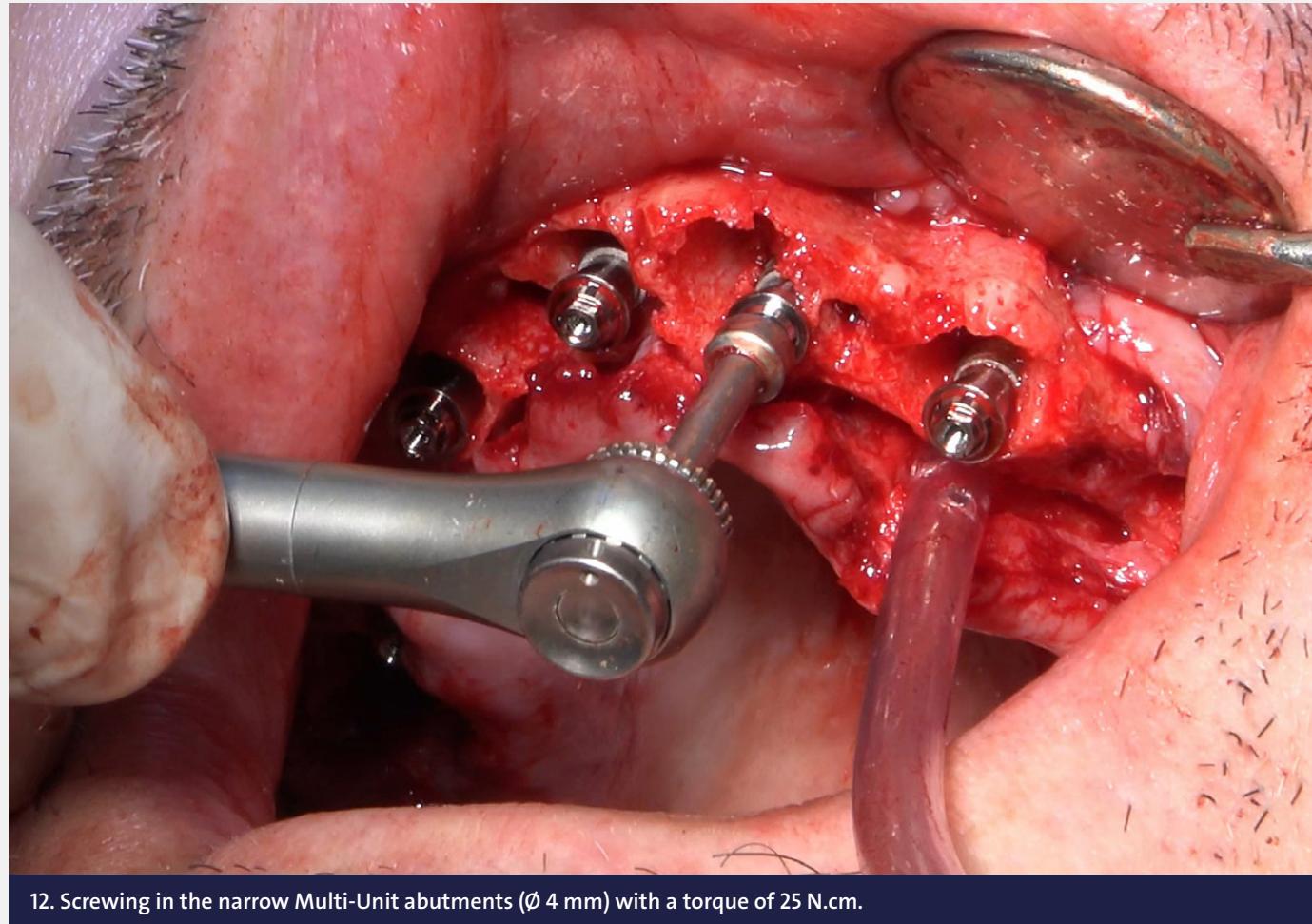
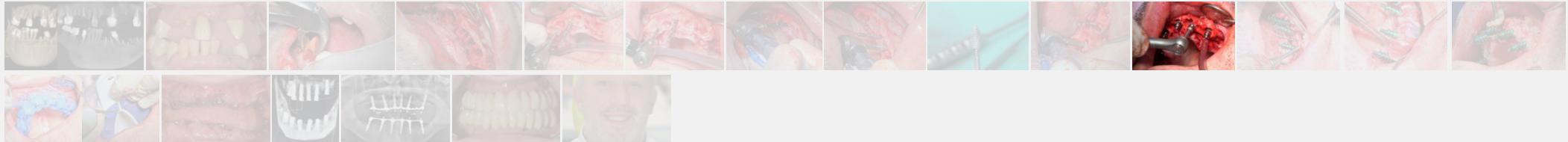


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



12. Screwing in the narrow Multi-Unit abutments (\varnothing 4 mm) with a torque of 25 N.cm.

13 / 25

axiomX3®

Initial
situation



Surgery

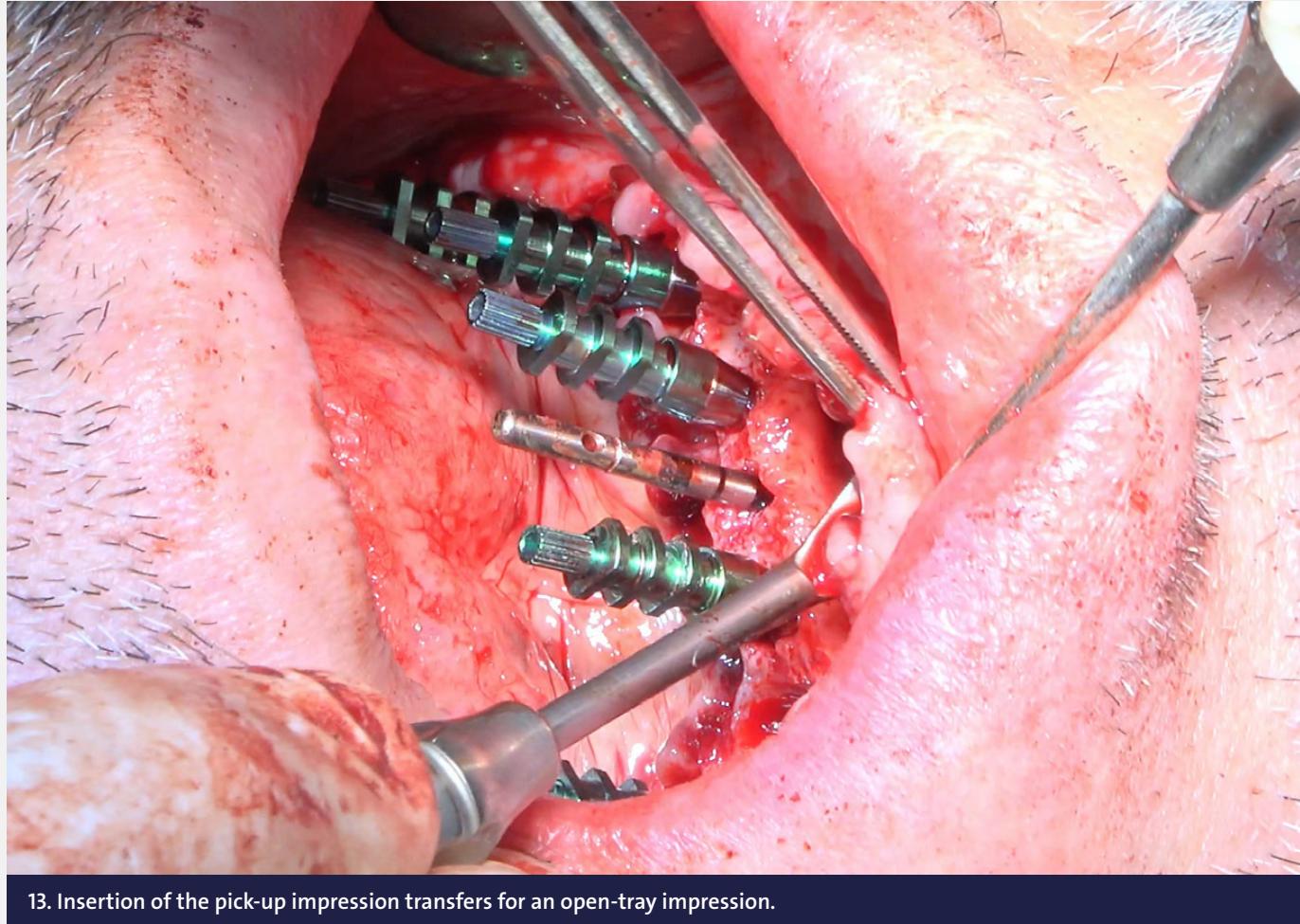


Prosthetic
restoration

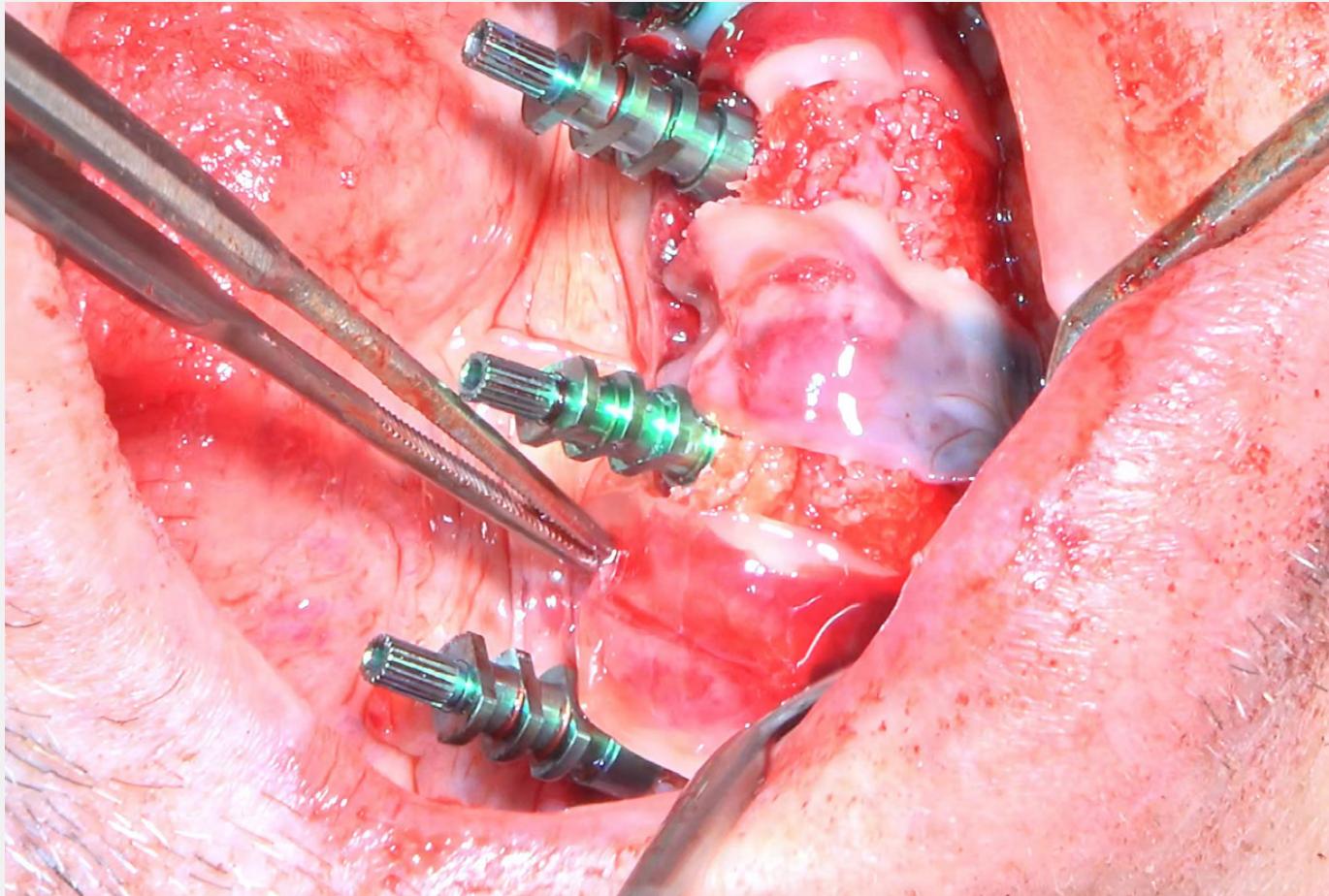


Final
situation

Anthogyr
A Straumann Group Brand



13. Insertion of the pick-up impression transfers for an open-tray impression.



14. Bone graft comprising allogenic bone mixed with injectable PRF and PRF membranes (3 cc of allogenic bone and 6 PRF membranes per arch).



15 / 25

axiomX3®

Initial
situation



Surgery

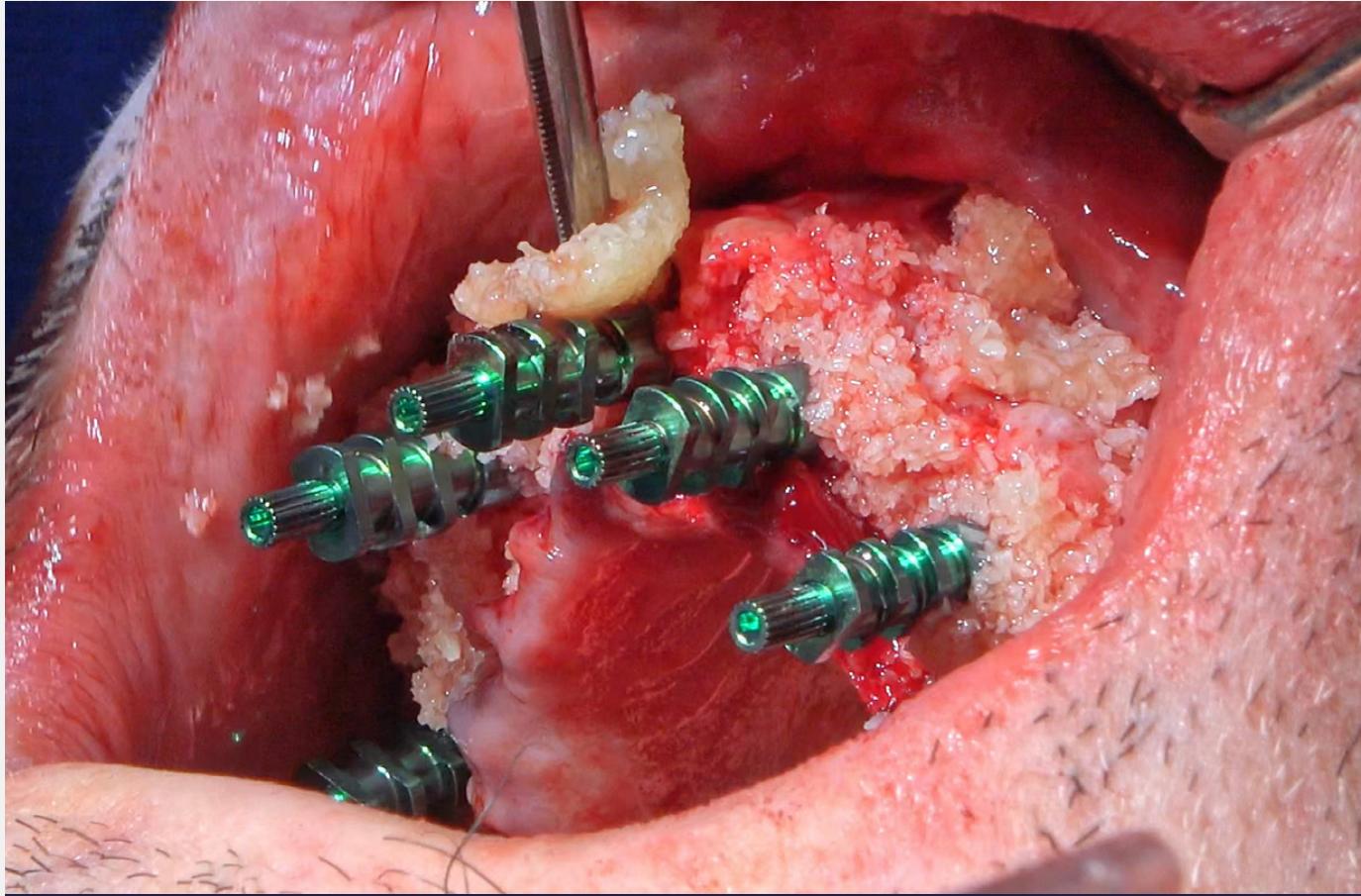


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



15. The drilling protocol in the maxilla was simpler than in the mandible, as we were dealing with D3 bone. We dispensed with the use of 2 drills that would have been used in an Axiom® REG drilling sequence.



16 / 25

axiomX3®

Initial
situation



Surgery

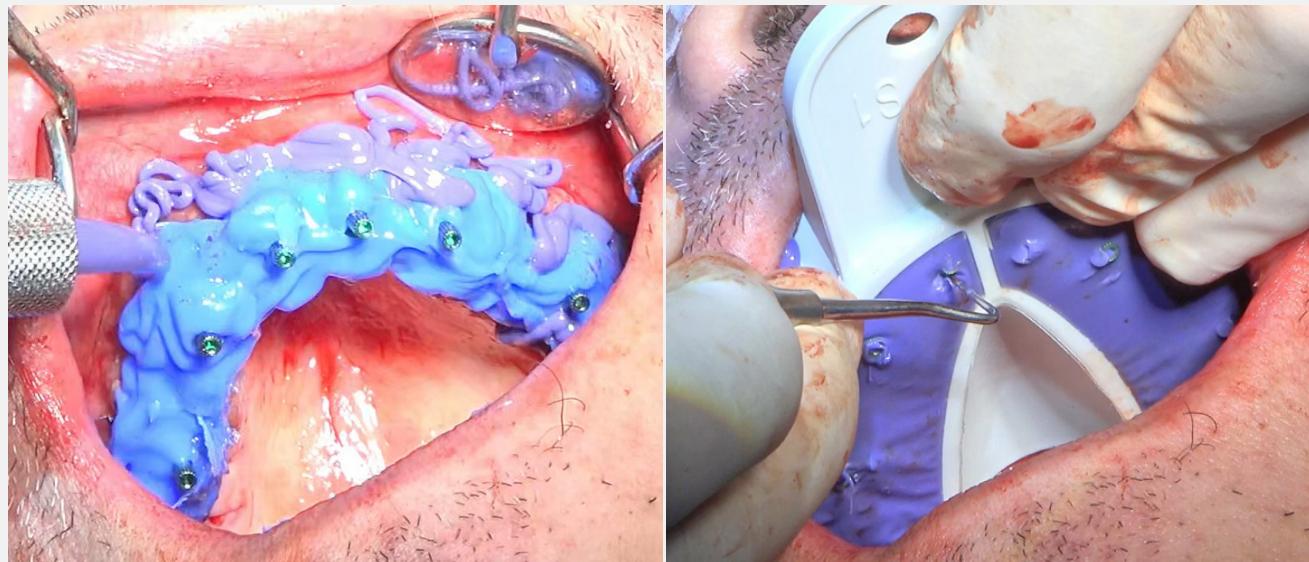
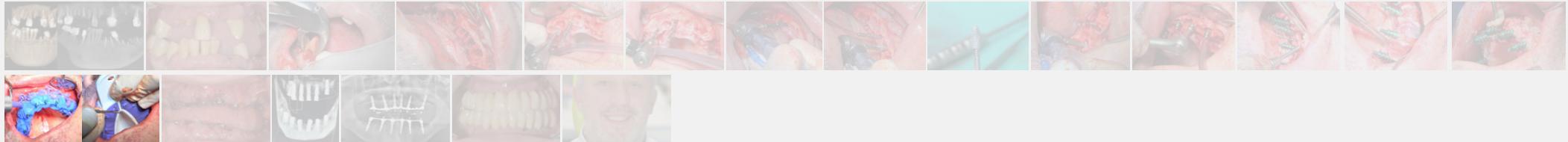


Prosthetic
restoration



Final
situation

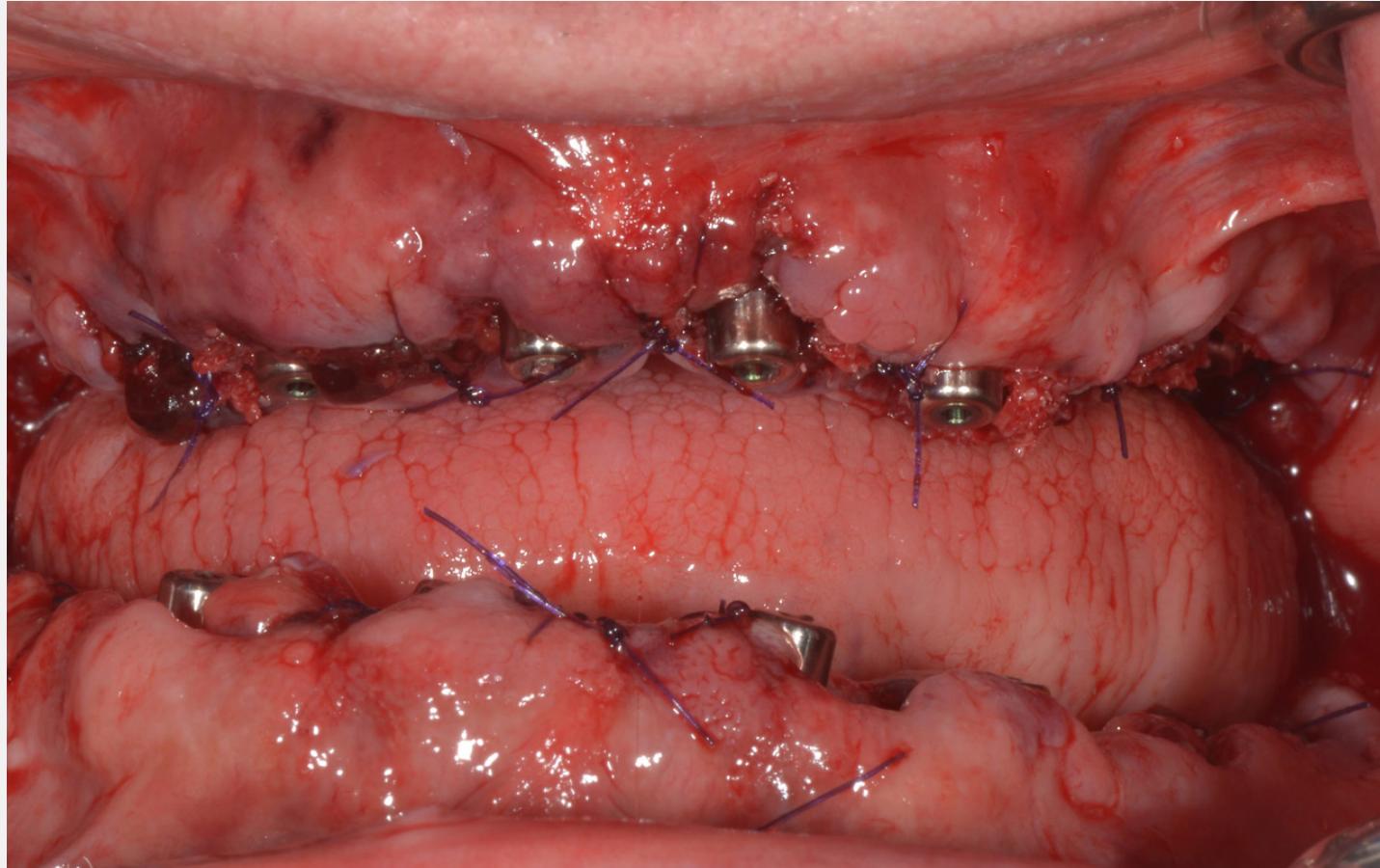
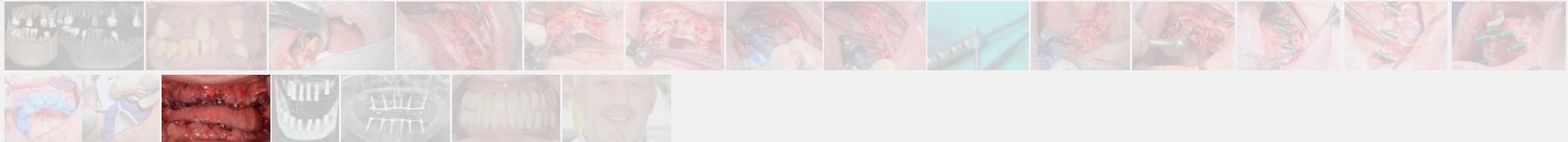
Anthogyr
A Straumann Group Brand



16a. Splinting the pick-up transfers using the bite registration material. This completely locked the transfers into position relative to each other and during casting.

16b. Use of a perforated impression tray.





17. Healing at 48 hours before fitting the temporary bridges. Note the quality of the soft tissues and absence of inflammation. The temporary bridges would be fabricated using a cast framework and resin teeth.



18 / 25

axiomX3®

Initial
situation



Surgery

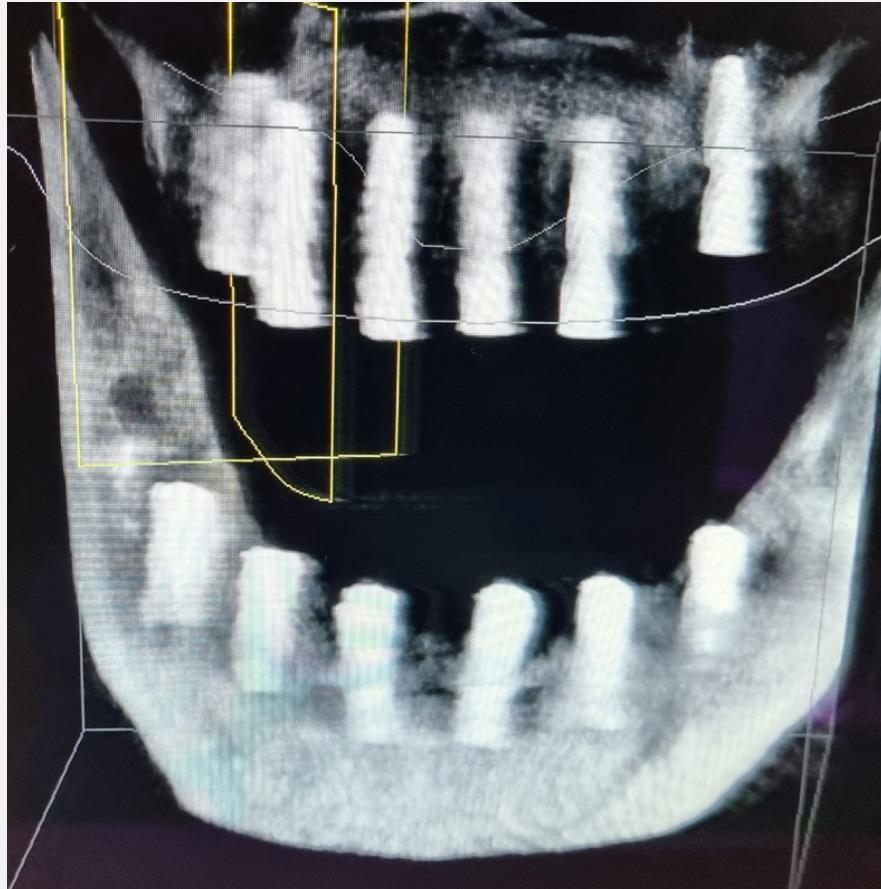


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



18. Follow-up cone beam scan after surgery.



19 / 25

axiomX3®

Initial
situation



Surgery

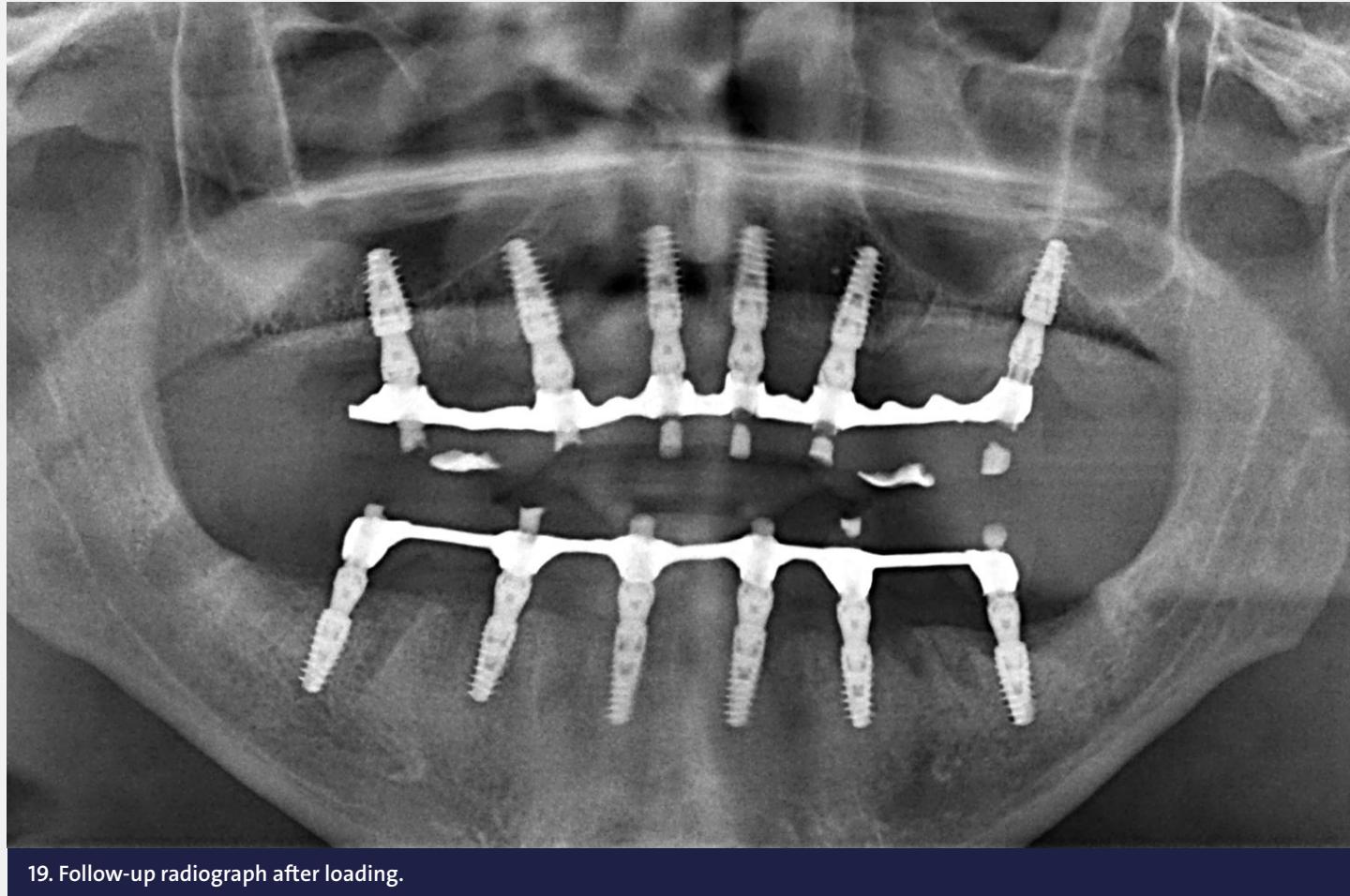
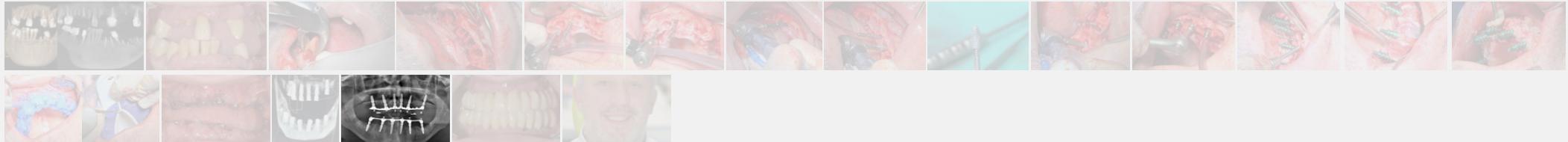


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



19. Follow-up radiograph after loading.

20/ 25

axiomX3®

Initial
situation



Surgery

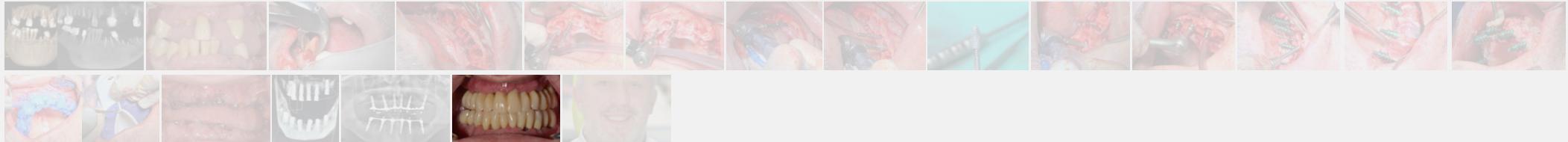


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



20. Four months after surgery, the temporary bridges had guided the healing of the soft and hard tissues.

axiomX3®

Initial
situation



Surgery

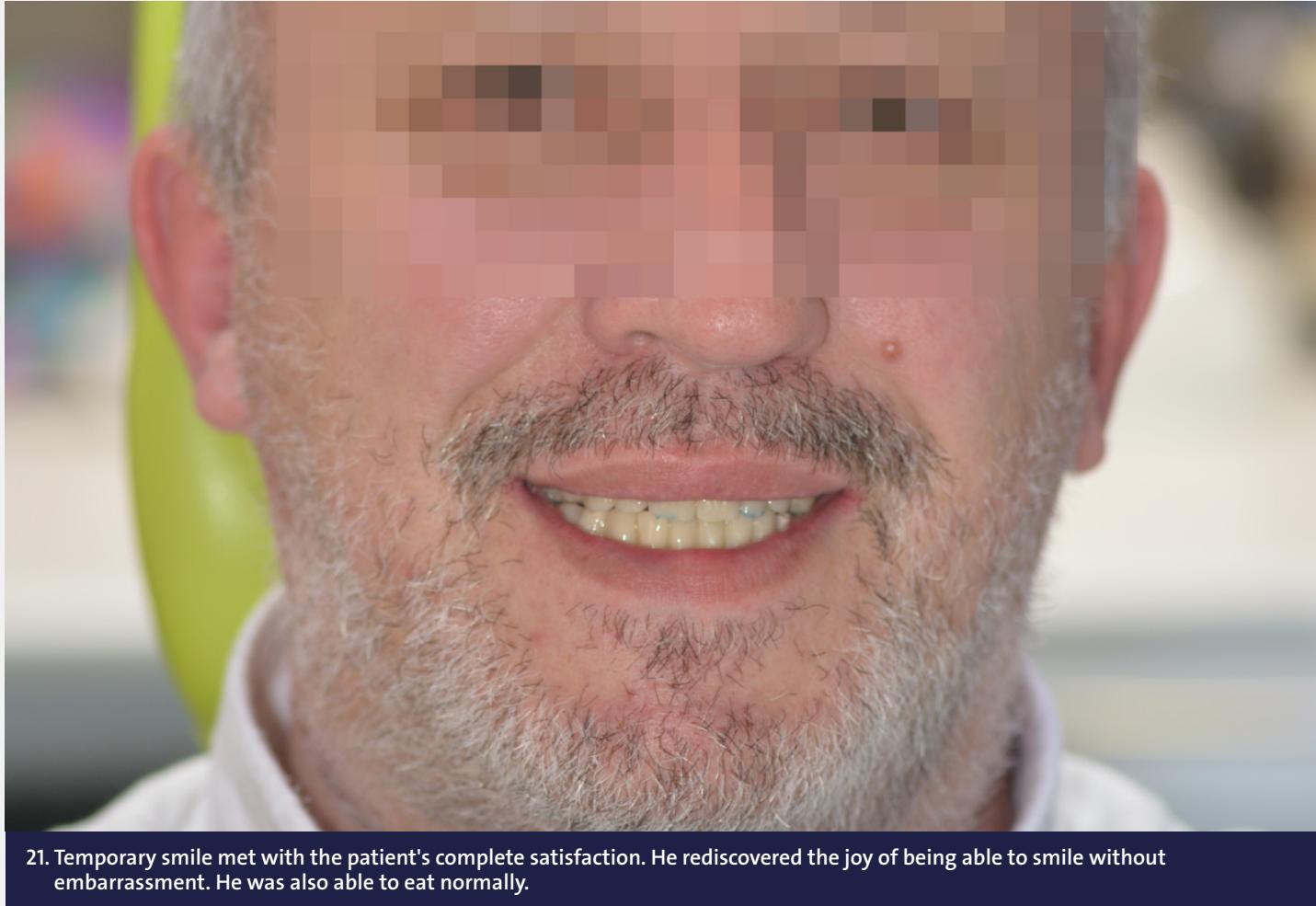
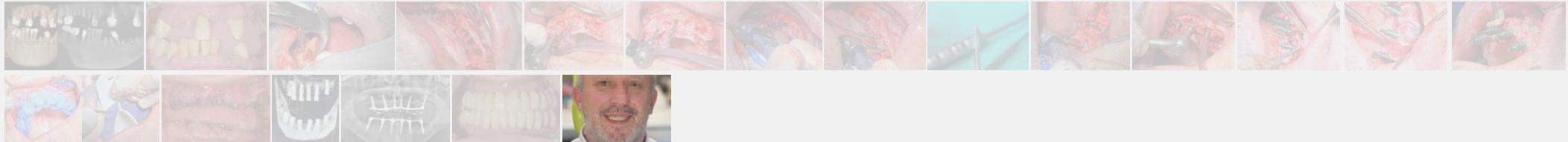


Prosthetic
restoration



Final
situation

Anthogyr
A Straumann Group Brand



21. Temporary smile met with the patient's complete satisfaction. He rediscovered the joy of being able to smile without embarrassment. He was also able to eat normally.



22/ 25

axiomX3®

Initial
situation



Surgery



Prosthetic
restoration



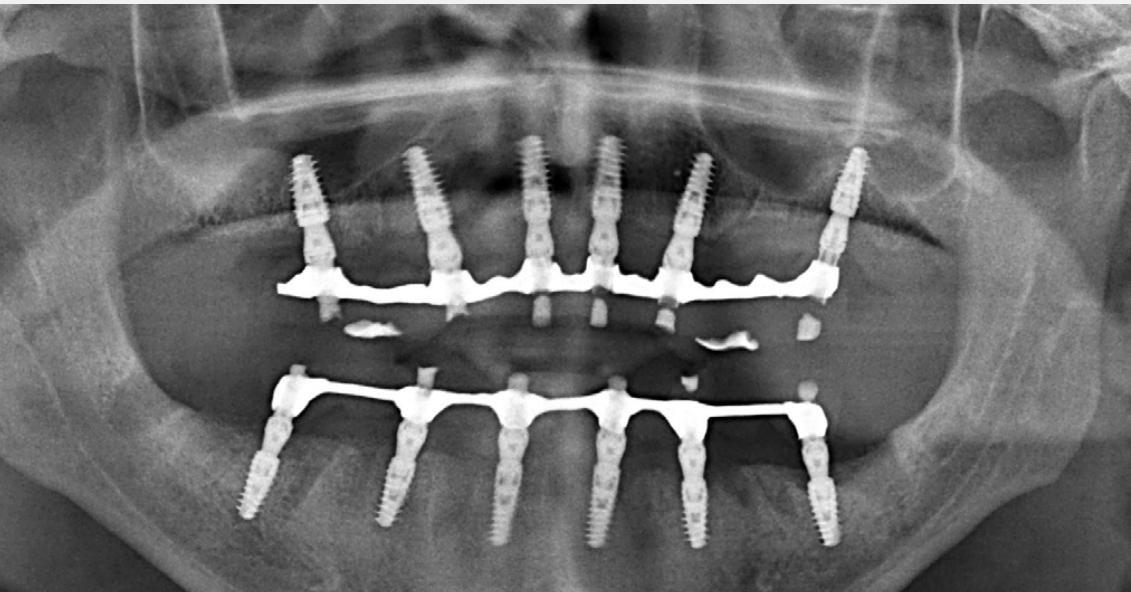
Final
situation

Anthogyr
A Straumann Group Brand

axiomX3®

BEYOND FRONTIERS

Conclusion



The case of Mr. V. demonstrated the capacity of Axiom X3® to achieve good stability in bone tissue without damaging it, both in dense and softer bone densities like D1 and D3.

The simplified drilling protocol made the use of this implant very convenient and reassuring, particularly in the immediate loading setting.

The Axiom X3® implant is an extremely useful implant as it combines bone tissue preservation with the proven benefits of the prosthetic connection of the Axiom® Bone Level range.



23 / 25

axiomX3®

Anthogyr
A Straumann Group Brand



DR. PIERRE BRUET

France

- Implantologist, Moulins, France
- Higher Education Certificate in Biomaterials
- Postgraduate Diploma in Surgical and Prosthetic Implantology, Paris VII University, France
- Postgraduate Diploma in Pre- and Peri-Implant Surgery, Paris XI University, France



24 / 25



Photo credits: Anthogyr, Dr. Bruet. All rights reserved. Products may differ from photos.

2022-09

Medical devices intended for use by dental professionals. Not reimbursed by Social Security. Classes IIb and IIa. CE0459. LNE/
G-MED - Manufacturer: Anthogyr. Read the instructions in the manuals and user guides carefully.

Follow us!



www.anthogyr.fr


A Straumann Group Brand