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Background

In oral implantology, edentulous patients have several options of rehabilitation according to the oral and facial characteristics. The clinician can indicate a fixed or a removable prosthesis, or a convertible infrastructure prosthesis, which design allows for a fixed or removable prosthesis, partially or totally, using the same structure without the need for numerous modifications by screwing or unscrewing either, axial abutments or transocclusal screws. (Fig. 1).

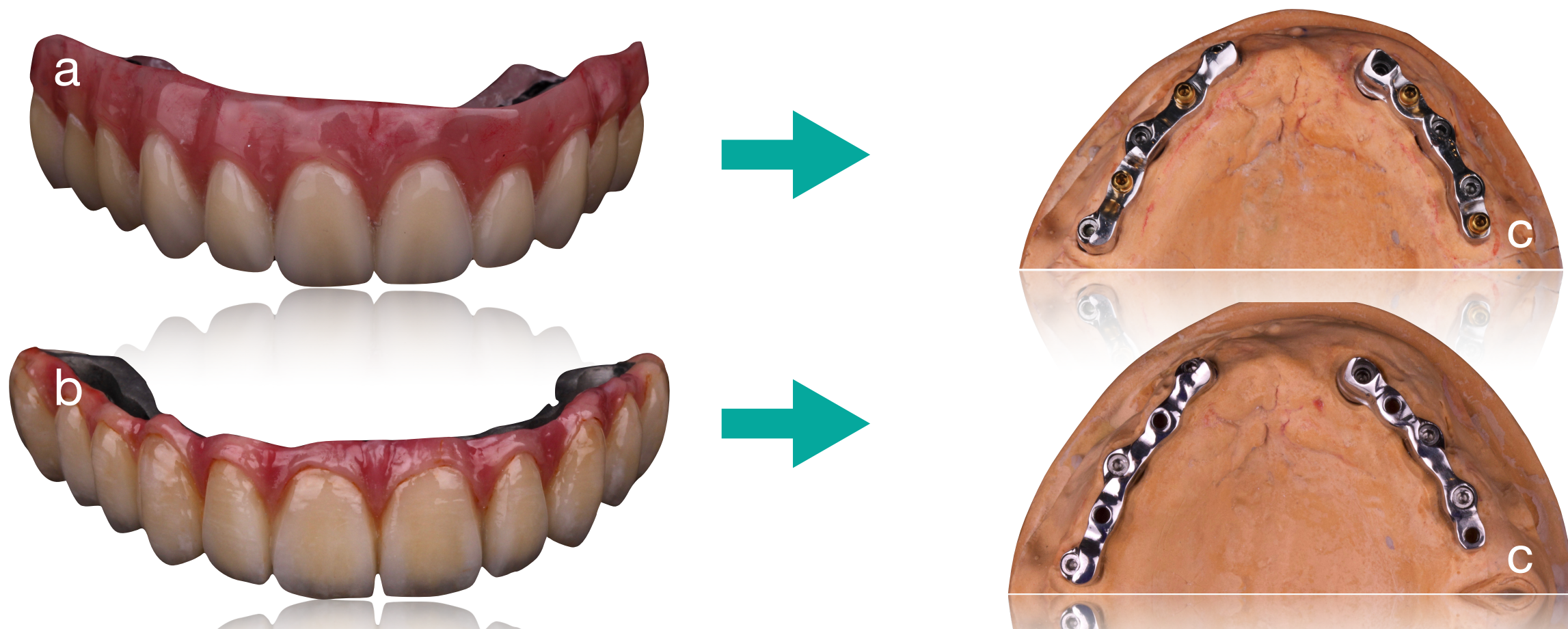


Figure 1. Removable prosthesis (a), fixed prosthesis (b), convertible infrastructure prosthesis (c).

Case Report

A 76-year-old totally edentulous in the upper jaw patient (Implantology Clinic, UNAM) based on the fabrication of an implant-supported fixed prosthesis with the possibility of becoming a removable prosthesis. The treatment plan consisted of adopting the protocol to design a FP3 metal-porcelain prosthesis and a RP4 metal-acrylic prosthesis according to the Misch (2015) classification. (Fig.2).

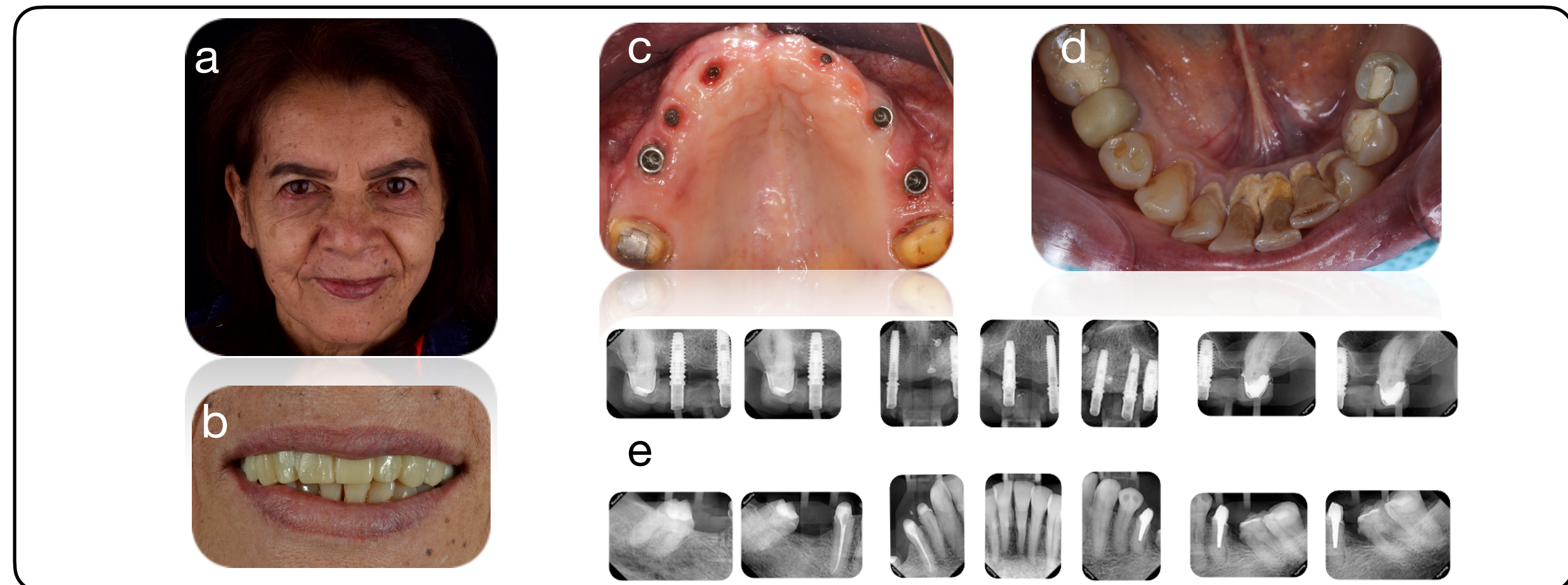


Figure 2. Clinical Situation, frontal facial photography (a), extraoral smile photography (b), upper (c) lower occlusal intraoral photography (d), periapical x-rays (e).

Impression

- Open tray technique impression
- Direct to the implant
- Multiple implants

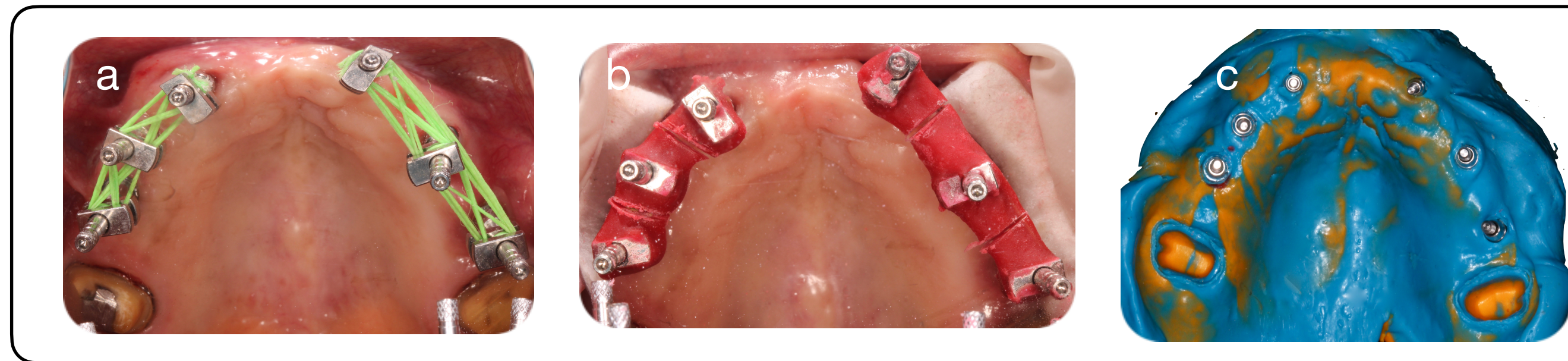


Figure 3. Dental floss joining of the transfer abutments (a), pattern resin joining of the transfer abutments (b), open tray polyvinyl impression (c).

Sheffield Test

To run the passivity test, the distal end was screwed and an orthoradial x-ray of the other end was taken (Fig. 4).

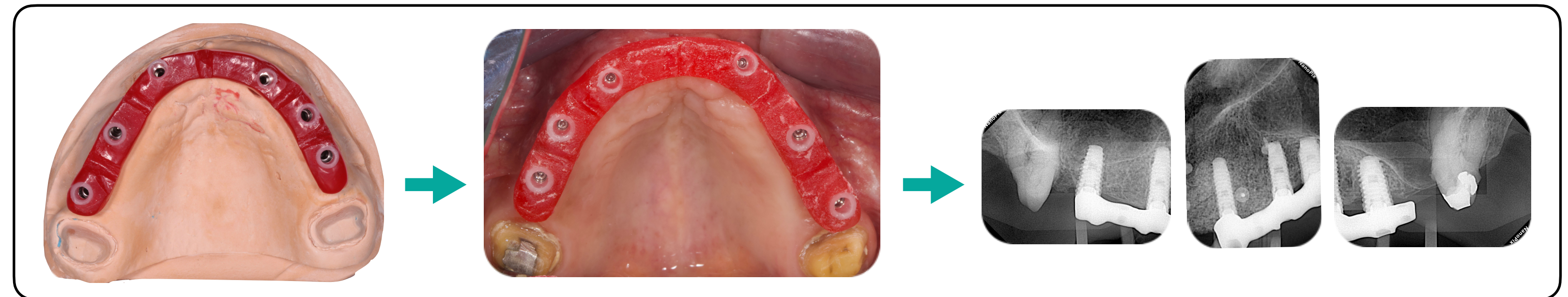


Figure 4. Resin pattern jig cast model (a), Resin pattern jig in patient (b), periapical x-ray(c).

Craniomandibular Relations

Figure 5.

- (a) Occlusal rim transfer bases
- (b) Teeth arrangement



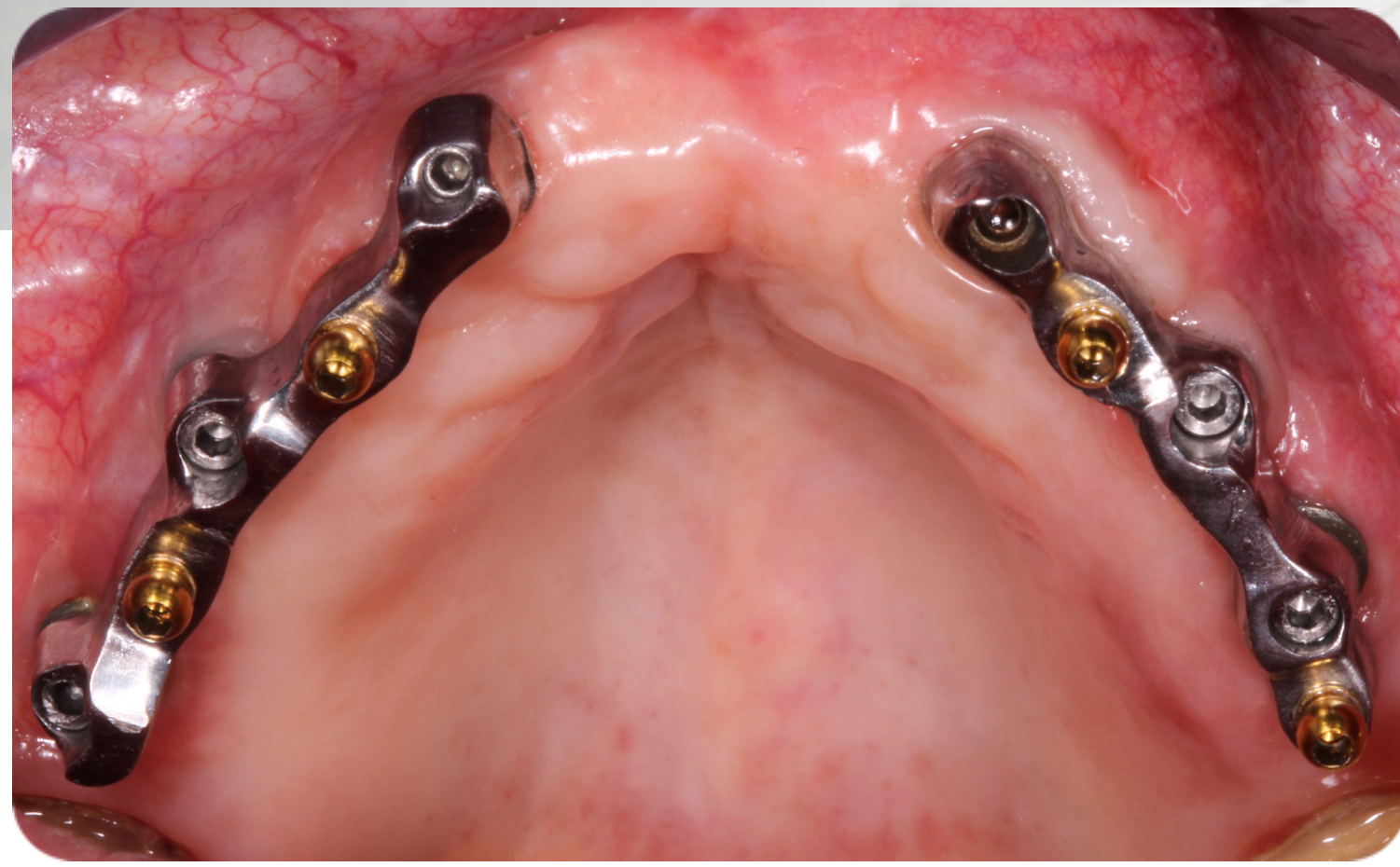


Figure 6.
2 upper bilateral bars with axial attachments for a RP4 fitting.

Infrastructures

The infrastructures were created for the FP3 and RP4, which consisted of 2 upper bilateral bars with a 6mm high Cr-Co alloy and an angulation of 6° to obtain mechanical retention since through this structure it was possible to screw the FP3 and ensure the possibility of converting it to RP4 by means of axial attachments without unscrewing the infrastructure.

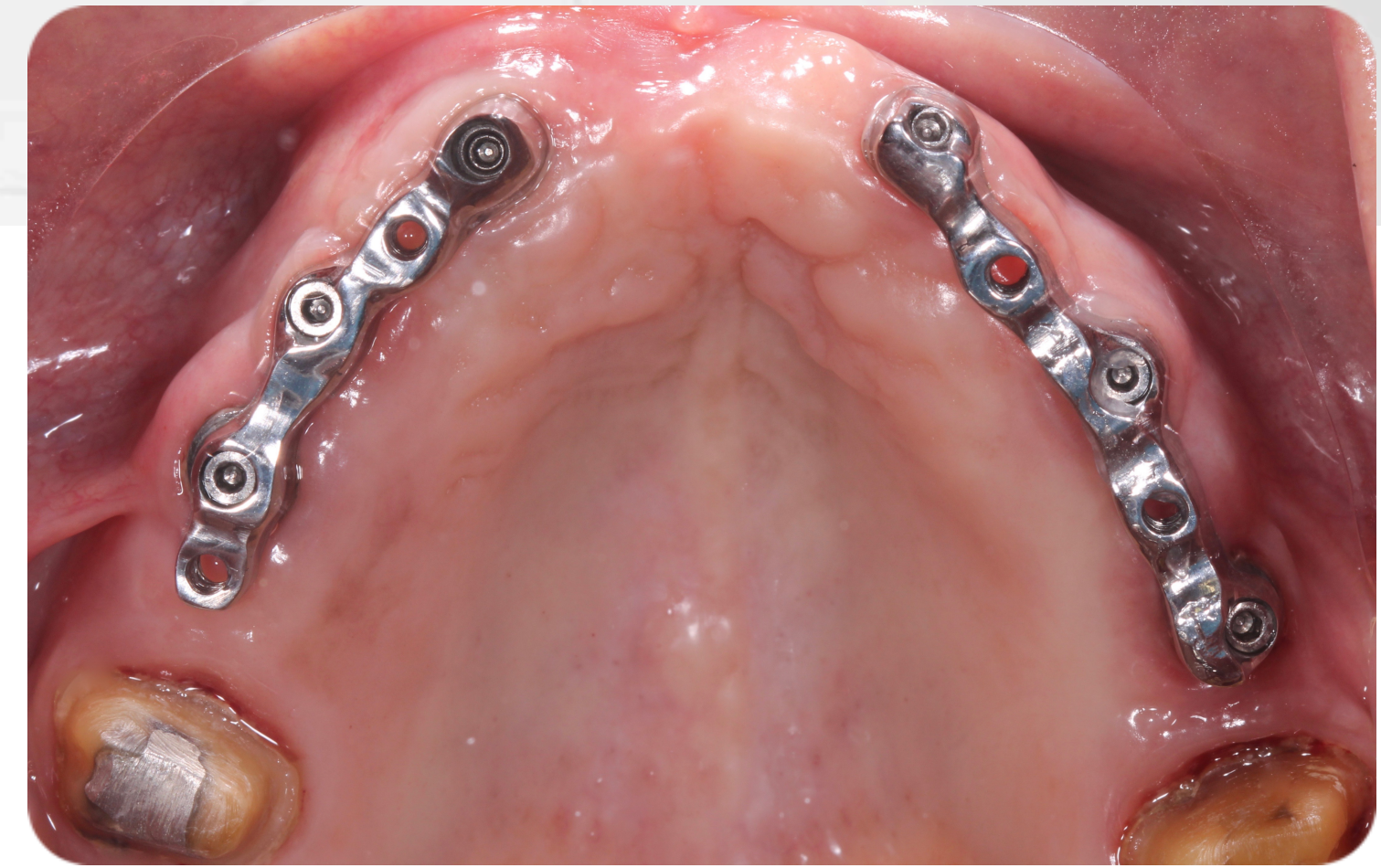


Figure 7.
2 upper bilateral bars for a FP3 fitting.



Figure 8.
(a) Cast model with 2 upper bars and the definitive RP4, (b) axial attachment.

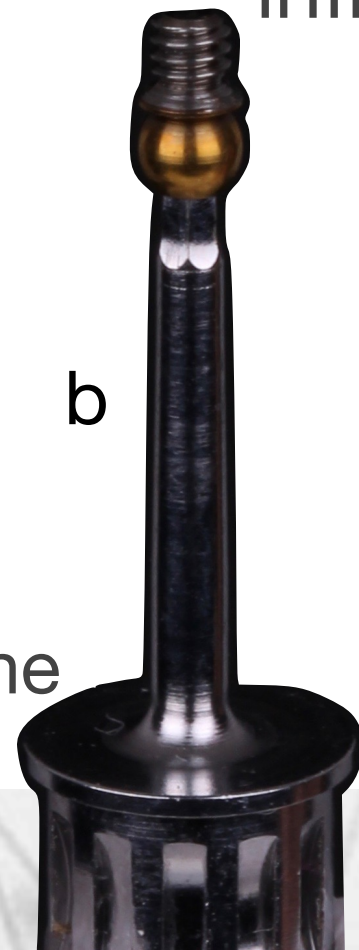


Figure 9.
Cast model with 2 upper bars and the definitive FP3.



Results

RP₄

The possibility to convert the FP3 to a RP4 prosthesis during maintenance checks when the patient cannot perform adequate hygiene when their motor ability to clean decreases, a change to RP4 is indicated.

This feature reduces the cost of treatment for the patient. Besides the parallelization of the implants was also achieved, obtaining a more predictable passivity, optimizing aesthetics, avoiding access to the screw through the vestibular, recoverability and effective repair.

FP₃



Conclusions

The treatment achieved function, aesthetics and balance of masticatory forces, meeting the patient's expectations and, despite having a degree of complexity and a high budget, it will continue to be a recommended alternative to replace lost teeth.



References

Fig. 10 Final Clinical Results (a) Clinical situation intraoral front, (b) extra oral smile photography (c) right and (d) left lateral, (e) lower occlusal (f) extra oral photography, smile evaluation and harmony of implant-supported rehabilitation.