



Introduction

The extraction of a tooth is always accompanied by the resorption of the surrounding support tissues, a problem with which the dentist is inevitably challenged as the loss of soft tissues limits the aesthetic and functional prognosis of rehabilitation.

The socket-shield (SST) technique is a promising complement to the treatment of patients with fixed rehabilitation, preserving the supporting tissues of the periodontal bone-ligament complex, especially in aesthetically challenging cases such as total rehabilitation.

The use of digital implant placement planning tools and surgical guides provides greater accuracy and precision in implant placement.

In this poster, we present the digital planning performed, the surgical technique of implant placement and total fixed upper rehabilitation of partially edentulous patient.

Case description

- C. S., female, 56 years old
- Healthy

DIAGNOSIS:

- Absence of several dental parts
- Root remnants of teeth 14, 22 and 24

PLANNING:

- Data collection with extra and intra-oral photographs
- Scan
- Digital planning for guided surgery
- Implants placement in 17, 23, 25 and 27
- Implants placement with SST in 13, 11 and 21
- Surgical guide with space for SST in 13, 11 and 21
- Implants placement in 36, 45, 46 e 47

SURGICAL PROCEDURE:

1. Anesthesia
2. Tooth root extraction 14, 22 and 24
3. SST in tooth 13, 11 and 21
4. Placement of surgical guide
5. Placement of Biohorizons implants in 17, 13, 11, 21, 23, 25 and 27
6. Placement of Biohorizons implants in 36, 45, 46 and 47.
7. Suture
8. Provisional prosthesis in PMMA
9. Healing and osteointegration of the implants
10. Impressions for definitive prosthesis
11. Definitive prosthesis in metal - ceramic



Fig 1. Digital planning of implant placement and preparation of surgical guide.

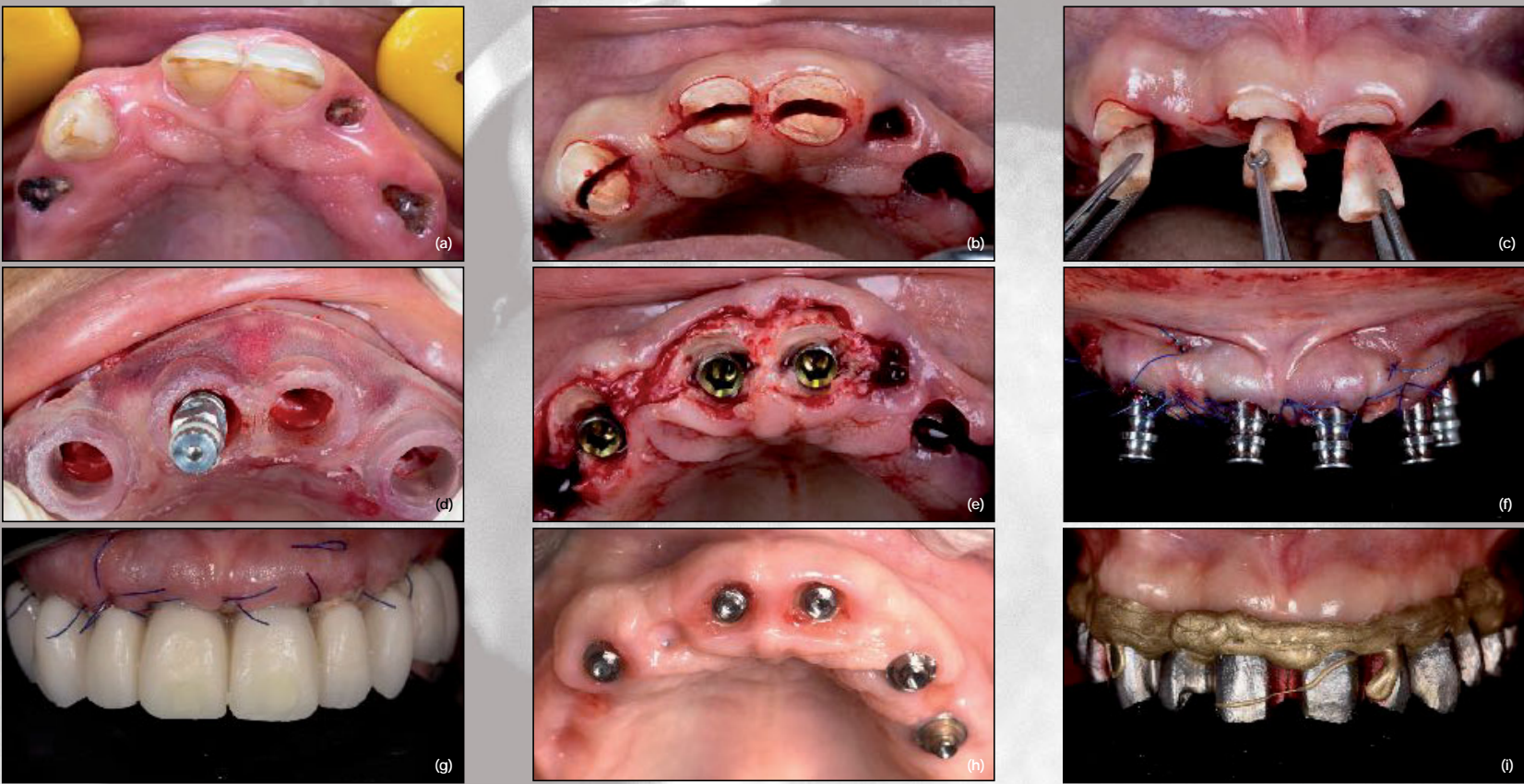


Fig 2. Surgical implant placement procedure - (a) initial intraoral photograph, occlusal view; (b) SST in roots 13, 11 and 21, occlusal view; (c) removal of palatal fragments, frontal view; (d) implant placement with surgical guide, occlusal view; (e) implants after SST, occlusal view; (f) impressions for provisional prosthesis, frontal view; (g) provisional prosthesis in PMMA; (h) implants after healing and osteointegration, occlusal view and; (i) impression for definitive prosthesis.

Discussion and conclusions

The success of surgical techniques in total edentulous patients, whether conventional implant placement or SST, is closely related to the clinician's experience as well as the careful selection of cases and their indications^(1,2).

However, it must be understood that the osteointegration of an implant and its consequent rehabilitation are not the end point of the patient's treatment process; factors such as the volume, health and aesthetics of supporting tissues need to be kept stable and controlled over the long term⁽³⁾.

We concluded that the combination of conventional technique with SST combined with the use of digital tools, constitutes a rehabilitation option for complex cases and of great aesthetic demand.

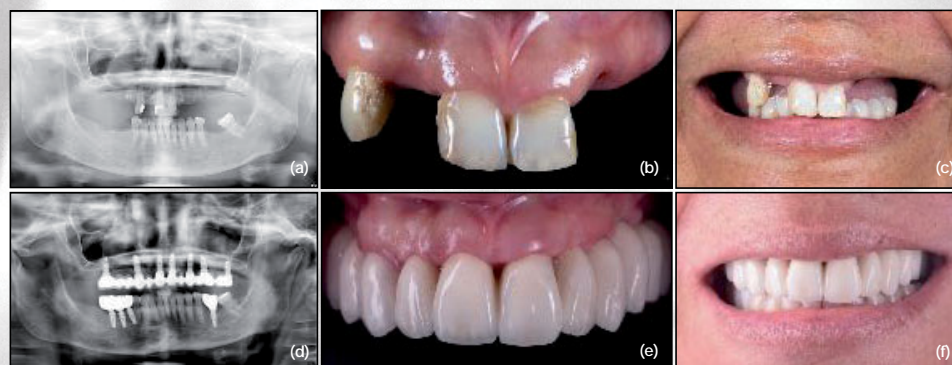


Fig 3. Before and after - (a) initial OPG, (b) initial intraoral photograph, (c) initial smile, (d) final OPG, (e) final intraoral photograph and (f) final smile.

Bibliography

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- (2) Gluckman, H., Salama, M., & Toit, J. Du. (2016). Partial Extraction Therapies (PET) Part 1: Maintaining Alveolar Ridge Contour at Pontic and Immediate Implant Sites. *The International Journal of Periodontics & Restorative Dentistry*, 36, 681-687.
- (3) Chappuis, V., Buser, R., Bragger, U., Bornstein, M. M., Salvi, G. E., & Buser, D. (2013). Long-Term Outcomes of Dental Implants with a Titanium Plasma-Sprayed Surface: A 20-Year Prospective Case Series Study in Partially Edentulous Patients. *Clinical Implant Dentistry and Related Research*.