

Treatment of Edentulous Patient with Two Roxolid® Soft Tissue Level Implants

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Initial situation

In August 2009, a 57-years old caucasian woman attended the dental practice, asking for an upper and lower oral rehabilitation with two complete removable prosthesis. She was non-smoker and not taking

biphosphonates. She showed a systemic good health and was not suffering from any disease that would contradict implant therapy.

The patient had been already wearing two complete removable prosthesis; her main complaint was about the great instability of the lower prosthesis. Therefore, she was interested in the possibility of increasing the stability of the new lower prosthesis by using dental implants, and, if possible, avoiding an extensive surgery for bone augmentation.

The oral examination showed the absence of the

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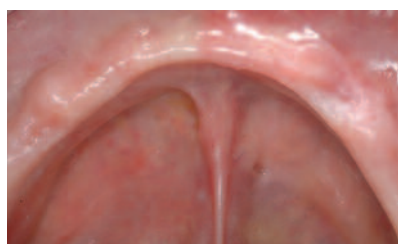


Figure 1.

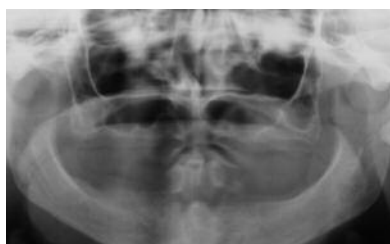


Figure 2.



Figure 3.

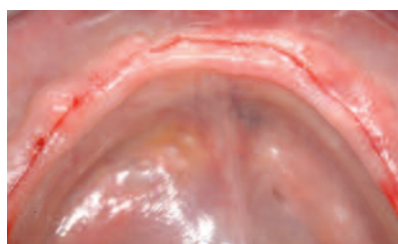


Figure 4.

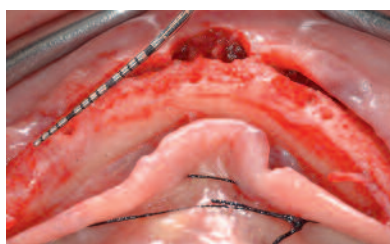


Figure 5.

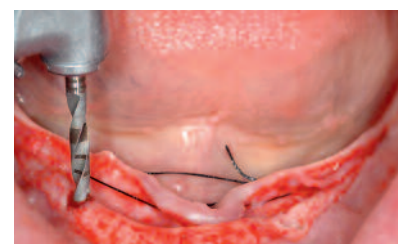


Figure 6.

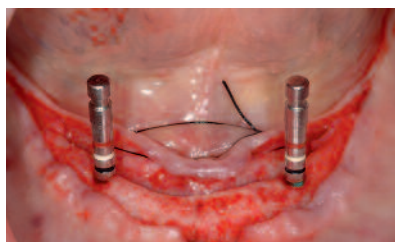


Figure 7.



Figure 8.



Figure 9 and 10.



Figure 11.

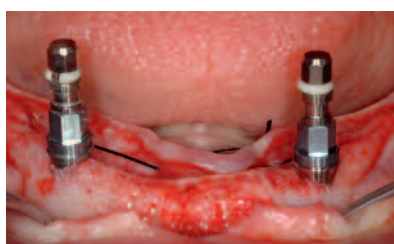


Figure 12.



Figure 13.

complete dentition and a good condition of the mucosa (Figure 1). The orthopantomography (Figure 2) and the teleradiography (Figure 3) did not reveal any pathological aspect of the bone. The thin alveolar crest was an indication for the application of Roxolid® small diameter implants. The patient's request for a minimal invasive surgery avoiding a larger bone augmentation procedure also has to be considered as a priority.

Treatment plan

Based on the situation found, the treatment plan was set up as follows: placement of 2 Straumann® Roxolid® Soft Tissue Level implants (Standard Plus RN Ø 3.3mm, SLActive®, 10mm) in the lower jaw (in the area between the two mental nerves), implant retained removable denture with LOCATOR® abutments in the lower jaw and a traditional prosthesis in the upper jaw.

Surgical procedure

Oral surgery was performed in local anesthesia with infiltration and block anesthesia of the two mental nerves, executing an incision through keratinized mucosa in the interforaminal region of the edentulous

mandible (Figure 4). Moreover, an incision along the midline was realized to enhance the mobility of the mucoperiosteal flap. The mental foramen were identified in order to place the implants 5 mm mesial of each mental nerve (Figure 5). After bone exposure, implant site preparation was done using rounds burs and spiral drills according to the surgical protocol (Figure 6). The parallel pins into the implant's sites clearly showed a narrow ridge situation, a good indication for the use of two narrow implants without GBR procedure (Figures 7–10).

The implants were inserted with an adapter attached to a special contra-angle (Figure 11). After the insertion (Figure 12), the transfer parts were removed and two healing abutments (3 mm height) were screwed in (Figure 13).

A fine atraumatic suture material (Polyamide 5-0) was used (Figure 14). After surgery, the patient was discharged with chemical plaque control using chlorhexidine-digluconate (0,12 %) and anti-inflammatory treatment. No complications (such as pain or edema) were reported and the sutures were removed after 7 days.

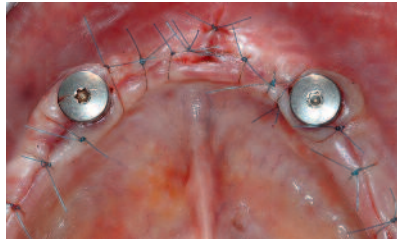


Figure 14.



Figure 15.



Figure 16.



Figure 17.



Figure 18.



Figure 19.

Prosthetic procedure

After 6 weeks of healing (Figure 15) the orthopantomography showed a good osseointegration of both implants (Figure 16). Therefore, it was appropriate to start the prosthetic phase. Using an individual cast tray, a polyether precision impression was made. A mounted cast and teeth setup were used to evaluate aspects of design, occlusion, phonetics, esthetic and facial support (Figure 17). Six weeks after surgery, a good soft tissue healing was reached around both implants (Figure 18), which made it possible to place two LOCATOR® abutments (2mm height, Figure 19). A complete removable prosthesis was attached in the upper jaw and the LOCATOR® kit with soft retention (blue) in the lower (Figure 20). Occlusion, function and esthetics were checked with the patient's satisfaction (Figures 21, 22).

Outcome

The patient did not report any complication with one of the prosthesis at the 1-month follow-up. Her expectations could be satisfied completely – through a simple, affordable and minimal invasive implant-based restoration.

Acknowledgment

I would like to express my gratitude to the C & P Dental Lab for the highly accurate technical support they have provided in this case.

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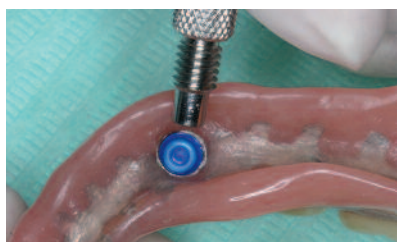


Figure 20.



Figure 21.



Figure 22.