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PROSTHETIC REHABILITATION WITH BIMAXILLARY IMPLANT-SUPPORTED FIXED DENTAL PROSTHESES USING THE CAMLOG® VARIO SR SYSTEM

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IMPLANTS USED

Tooth	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Impl. type				SL		SL	SL			SL	SL		SL			
Impl. length				13		13	13			13	13		11			
Impl. Ø				4.3		4.3	4.3			4.3	4.3		4.3			
Impl. surface				PP		PP	PP			PP	PP		PP			

Tooth	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Impl. type					SL	SL	SL			SL	SL	SL				
Impl. length					13	13	13			13	13	13				
Impl. Ø					3.8	3.8	3.8			3.8	3.8	3.8				
Impl. surface					PP	PP	PP			PP	PP	PP				

Impl. type: ROOT-LINE (RL)/SCREW-LINE (SL) **Impl. surface:** Promote® (P)/Promote® Plus (PP)

PROSTHETICS

- [x] standard
- [ ] platform switching
- [ ] removable
- [x] fixed
- [ ] crown
- [x] bridge
- [ ] cement-retained
- [x] screw-retained
- [ ] partially edentulous
- [x] fully edentulous
- [ ] other

- [ ] Universal abutment
- [ ] Esthomic® abutment
- [ ] Telescope abutment
- [ ] Gold-plastic abutment
- [ ] Ceramic abutment
- [ ] CAD/CAM abutment on titanium base
- [ ] Temporary abutment
- [ ] Logfit® abutment
- [ ] Locator® abutment
- [ ] Bar abutment
- [ ] Ball abutment
- [x] Vario SR abutment
- [ ] other

INFORMATION ON PATIENT AND TREATMENT

The patient, a 63 year old smoker (15 cigarettes a day for 40 years) presented himself with a severe periodontal compromised situation of the residual dentition. In the upper jaw he has a fixed restoration from 15 to 24 with a porcelain to metal fused bridge presenting a mobility of grad 3 based on the now irreversibly damaged periodontal situation. In the lower jaw despite the lingual splint we find mobility between 33 to 43, the dental elements 34 and 35 present a second grade mobility and tooth 48 is mesially inclined. The patient reports a disturbed TMJ function with audible noise during mouth opening and closure, besides pain which is diffusing into the facial muscles and paravertebral region.

After an appropriate and adequate clinical and radiographique evaluation (panoramic x-ray, CT scan) the choice was to extract the remaining teeth in both jaws with a provisional rehabilitation by means of two removable dentures to :

- Functionally re-educate the patient
- Recover the horizontal and vertical dimensions
- Resolve the mal coordination condyle meniscal eliminating the muscular and articulation disturbances through possible modifications of the removable dentures

During gnatologic therapy the patient was treated surgically with the insertion of 6 implants per jaw to support, after successful osseo integration, an adapted fixed restoration to recover the exact mastication with correct occlusal tables. The gnatological situation resolved, during the phase of osseo integration of the implants the occlusal parameters are reproduced with prosthetic guides which duplicate perfectly the provisional restorations transferring thus the individual therapeutic data. The impression for the realization of the provisional dentures is created by underlining the prosthetic guide with silicon. The precision and passivity of the final prosthetic supra structures are achieved using splinted plaster transfers. The provisional resin dentures with a metal reinforcement are screw- retained on the abutments with a torque of 25 Ncm.

Initial situation

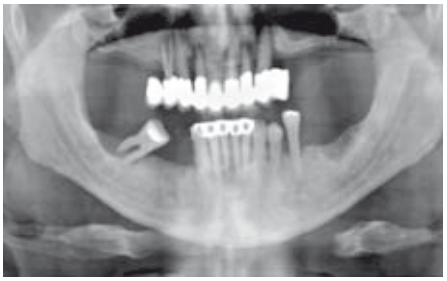

Fig. 1: Radiographic evaluation of the initial situtation.

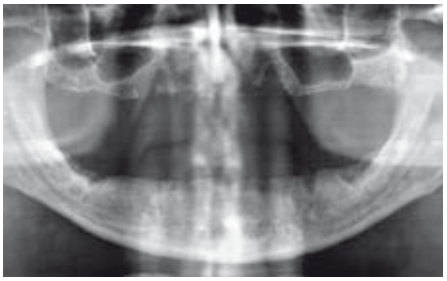

Fig. 2: Panoramic radiograph after tooth extraction.

Fig. 3: Removable temporary dentures.

Impression taking

Fig. 4: Soft tissue healing after tooth extraction in the mandible.

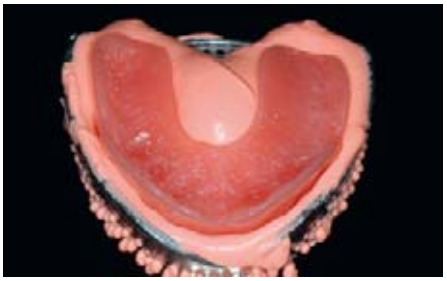

Fig. 5: Impression with the temporary dentures to create the radiographic and surgical templates.

Fig. 6: Lab-putty impression to duplicate.

Fig. 7: Upper surgical stent.

Fig. 8: Upper prosthetic guides.

Fig. 9: Upper and lower prosthetic guides.

Implant placement

Fig. 10: Upper and lower surgical stents.

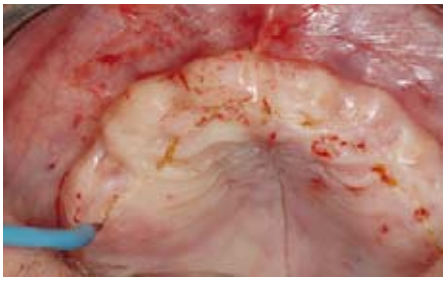

Fig. 11: Flap preparation with a Quantum Molecular Resonance Bistoury.

Fig. 12: Alveoplasty with piezosurgery.

Fig. 13: Window preparation for sinus grafting.

Fig. 14: Careful implant insertion in the area of the sinus floor elevation.

Fig. 15: 6x CAMLOG® SL 4.3 mm implants in the maxilla.

Bone Augmentation procedure

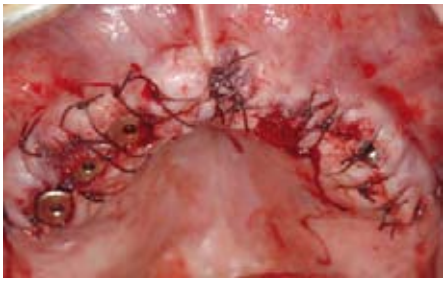

Fig. 16: Healing caps and sutures with an apically repositioned flap.

Fig. 17: 6x CAMLOG® SL 3.8 mm implants in the mandible.

Fig. 18: Autogenous bone and Bio-Oss®.

Fig. 19: Submerged healing with matrice and continues sutures in the mandible.

Fig. 20: Radiographic control.

Fig. 21: Healing after the second stage surgery in the mandible.

Fig. 22: Try-in of prosthetic guides.

Fig. 23: Prosthetic guides with implant position references.

Fig. 24: Inserted Vario SR abutments.

Impression taking on abutment level

Fig. 25: Open tray impression in the maxilla.

Fig. 26: Silicon rebased prosthetic guide with the transfer copings attatched with resin to it in the maxilla.

Fig. 27: Silicon rebased prosthetic guide with the transfer copings attatched with resin to it in the mandible.

Fig. 28: Master cast with Vario SR analogs.

Fig. 29: Vario SR impression copings splinted with plaster for a passiv-fit/precision try-in.

Fig. 30: Vario SR impression copings splinted with plaster for a passiv-fit/precision try-in.

Fig. 31: Verification of passivity and precision of both impressions.

Fig. 32: Upper and lower master cast with tooth set-up in wax.

Fig. 33: Try-in of the tooth set-up, verification of esthetics.

Fig. 34: Test of the teeth over the metal reinforcement on the model.

Fig. 35: Basal view of the final denture.

Fig. 36: Softtissue healing in the maxilla.

Fig. 37: Screw retained temporary in the maxilla.

Fig. 38: Softtissue healing in the mandible.

Fig. 39: Screw retained provisional in the mandible.

CONCLUSIONS

The use and positioning of Vario SR Abutments helps to stabilize the soft tissues at gingiva level due to the fact that the abutments will not be removed anymore once the provisional restoration is inserted.

The passivation, first of the provisional and then the final restoration on the implants is supported by the conical characteristics of the Vario SR Abutments. This prevents any tension, which, if present, might be responsible for a prosthetic failure due to overload, even with correctly positioned implants. I addition, perfect passivity insures the preservation of the aesthetics, short and long terms stability. The convenient removability of the screw retained prosthesis, if necessary, is possible without interfering with the gingival seal.

The stability is granted by the screw retaining system: screws with adequate dimensions combined with a large number of threads and appropriate depth avoiding thus any friction or tension of the screw joint, granting therefor the stability of the fixation.

The possibility to remove the rehabilitation will provide inspection over time, either at prosthetic level or at the implant-prosthetic emergence. This applies as well to the professional hygiene recalls.

This type of rehabilitation, on 6 implants, in accordance to the international literature shows great restorative efficacy in edentulous patients, in single ore both jaws. The correct positioning of the implants will help to preserve the marginal bone and simple routine maintenance of the restoration for the patient to his greatest satisfaction.

Final restoration in situ

Fig. 40: Buccal view final restoration.

Fig. 41: Detailed view of anterior teeth and artificial gums.

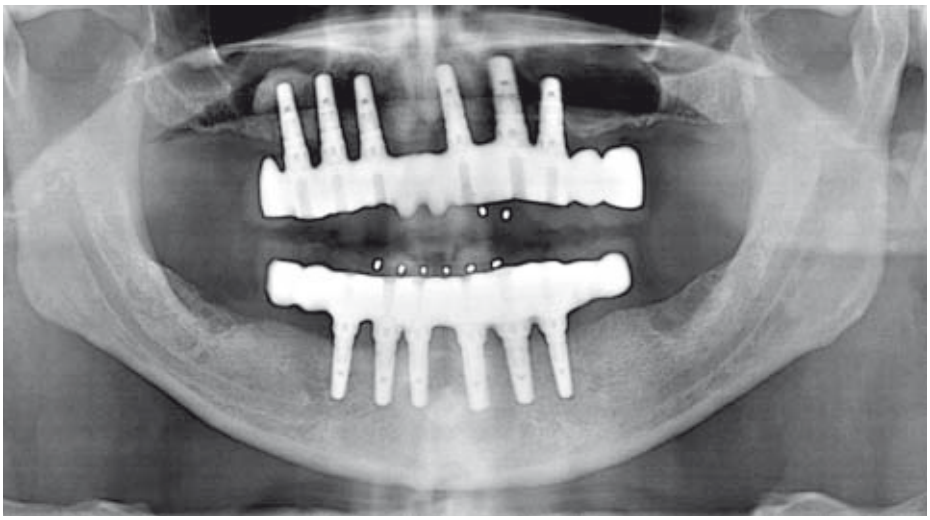

Fig. 42: Radiographic evaluation after insertion of the final restoration.

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