



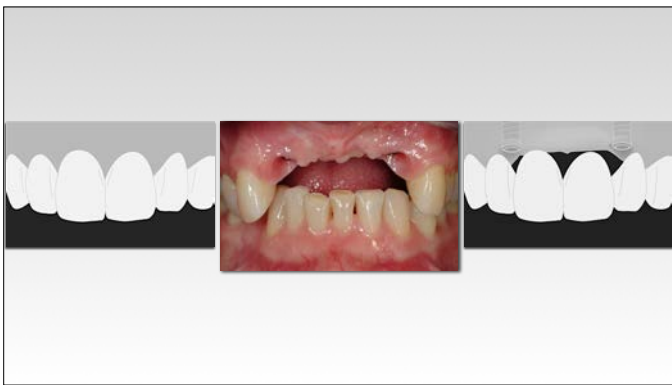
Taiwan Academy of Osseo-integration TAOi
Taipei 22-23 July 2017

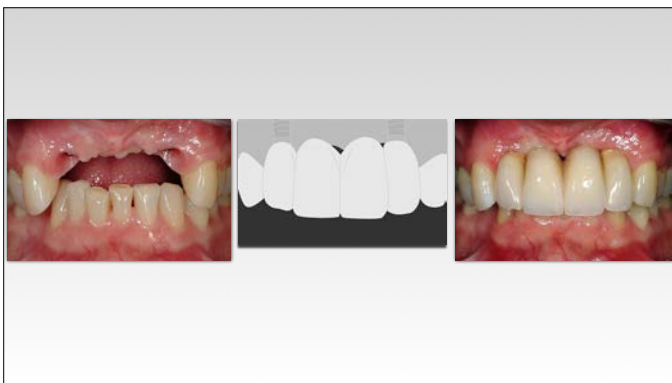
PINK CERAMIC TO COMPENSATE PERI-IMPLANT SOFT TISSUE DEFICIENCIES

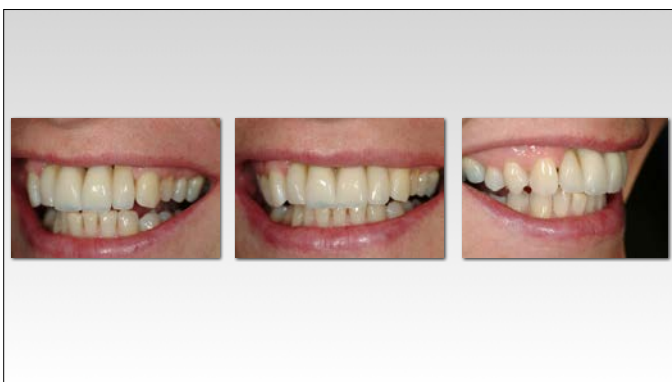
Definition of Design Principles

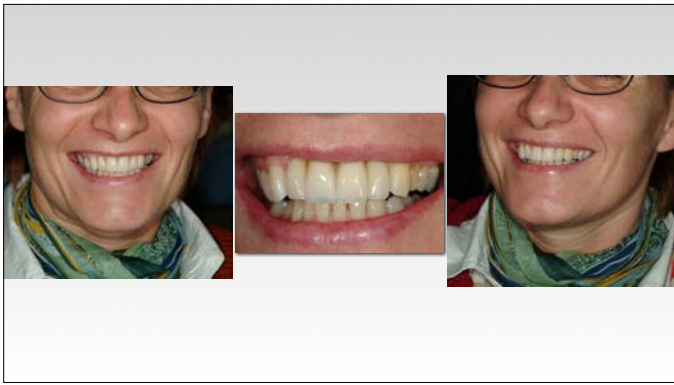
Urs | Belser













TOPICS

- Introduction and Scope
- Implant prosthodontics in extended anterior edentulous spaces
- **Guidelines for the use of “pink ceramics”**
- Conclusions and perspectives 



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ITI
Treatment Guide
 Extended Edentulous Spaces
 in the Esthetic Zone

Vailati F & Belser UC 2011, ITI Forum Implantologicum
 Belser UC & Buser D 2012, ITI Treatment Guide 6

“Pink Power Concept (PPC)”

Vailati F & Belser UC 2011, ITI Forum Implantologicum
 Belser UC & Buser D 2012, ITI Treatment Guide 6





Moráquez O, Vailati F, Grütter L, Sailer I, Belsler UC.
Four-unit fixed dental prostheses replacing the maxillary incisors supported by two narrow-diameter implants – a five-year case series. Clin. Oral Impl. Res. 00, 2016, 1–6.

The **5-year survival rate** of the 4-unit anterior metal–ceramic FDPs and the supporting implants was **100%**...

No technical complications...

High degree of **patient satisfaction**...

FOUR-UNIT ANTERIOR MAXILLARY FDPs BASED ON TWO NARROW-DIAMETER IMPLANTS: A 5-YEAR CLINICAL STUDY

case 1

5 yrs after surgery

case 2

5 yrs after surgery

case 3

5 yrs after surgery

case 4

5 yrs after surgery

case 5

5 yrs after surgery

case 6

5 yrs after surgery

case 7

6 yrs after surgery

case 8

6 yrs after surgery

case 9

7 yrs after surgery

case 10

7 yrs after surgery

Moráquez O, Vailati F, Grütter L, Sailer I & Belsler UC (accepted COIR 2016)

Moráquez O, Vailati F, Grütter L, Sailer I, Belsler UC.
Four-unit fixed dental prostheses replacing the maxillary incisors supported by two narrow-diameter implants – a five-year case series. Clin. Oral Impl. Res. 00, 2016, 1–6.

5-year follow-up

Material and Methods

Clinical examination (1, 3 and 5 year after implant surgery)

Technical complications

- Chipping of the ceramic
- Abutment loosening; loss of retention

Biological parameters

- modified plaque index (mPI)
- modified sulcus bleeding index (mSBI)
- probing depth (PD)
- width of facial keratinized mucosa (KM)

Mombelli A. et al (Oral Microbiol Immunol 1987)



Moráguez O, Vailati F, Grütter L, Sailer I, Belsler UC. Four-unit fixed dental prostheses replacing the maxillary incisors supported by two narrow-diameter implants – a five-year case series. Clin. Oral Impl. Res. 00, 2016, 1–6.

...two soft tissue-level NDIs supporting a four-unit FDP to replace the four missing maxillary incisors may be considered a **predictable treatment modality**, including the potential of becoming the **treatment of choice**...

Costello, F.W. (1995) Real teeth wear pink. Dentistry Today 14: 52–55.

Literature on Compensation of Vertical soft-tissue Deficiencies...

The reconstruction of pink and white softtissue

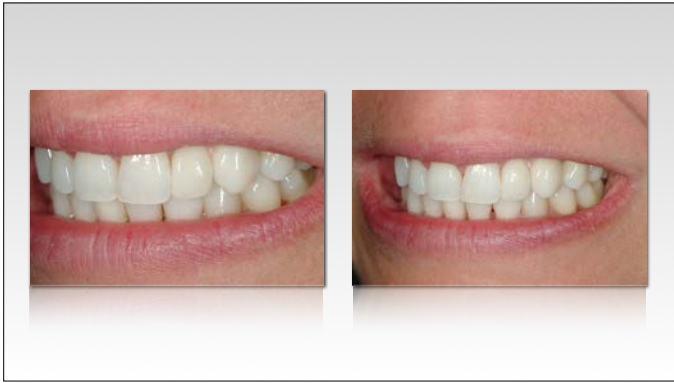
Coachman C. & Calamita M. International Dentistry Sa Vol. 12, No. 3

Sharp-edged, **convex** profile ... Cleanability?!





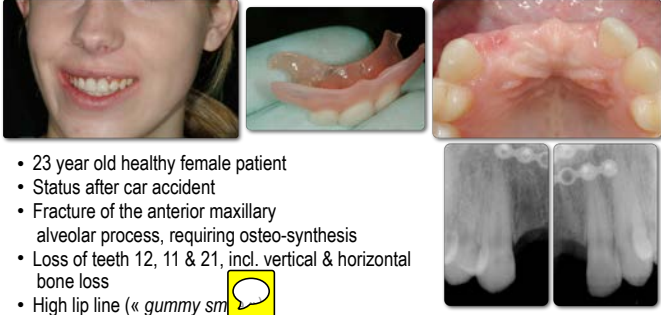






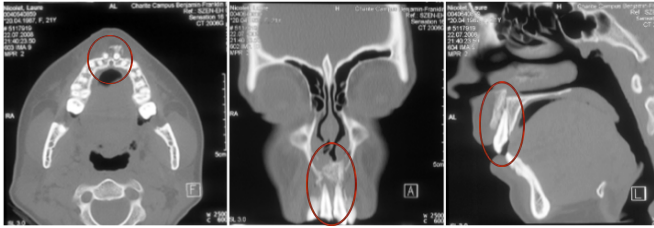


Interactive Case Discussion



- 23 year old healthy female patient
- Status after car accident
- Fracture of the anterior maxillary alveolar process, requiring osteo-synthesis
- Loss of teeth 12, 11 & 21, incl. vertical & horizontal bone loss
- High lip line (« gummy smile»)

Digital Volume Computed Tomography (DVCT)



22.07.2008 (day of the accident)

Initial Documentation



12.01.2009



Initial Documentation



12.01.2009

Initial Documentation



12.01.2009

Patient's Expectations:
"Fixed teeth with normal function and nice appearance"
"Just as it was before the accident"



What overall treatment do you propose?



1. Conventional fixed bridge (FDP) 13xxx22(23)
2. Adhesive "Maryland-type" FDP 13xxx22(23)
3. Implant-supported FDP replacing 12,11 & 21
4. Implant-supported removable overdenture replacing 12,11 & 21
5. Other

What overall treatment do you propose?





1. Conventional fixed bridge (FDP) 13xxx22(23)
2. Adhesive "Maryland-type" FDP 13xxx22(23)
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5. Other

Diagnostic Template – Presurgical Stent



What kind of additional imaging do you need?



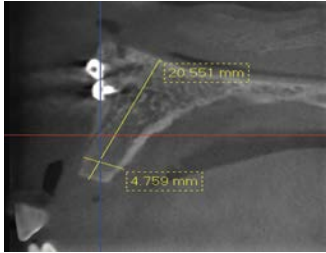
1. Orthopantomogram 
2. Cone beam of the anterior maxilla (4 x 4 cm)
3. Lateral cephalometric Rx 
4. Full CT

What kind of additional imaging do you need?



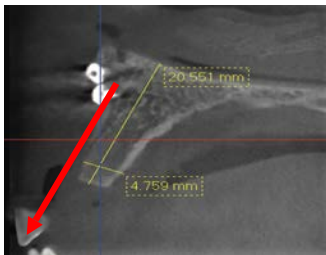
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- 2. Cone beam of the anterior maxilla (4 x 4 cm)**
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Digital Volume Computed Tomography (DVCT)



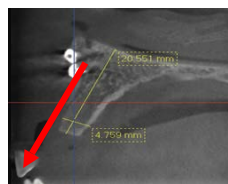
12.01.2009

Digital Volume Computed Tomography (DVCT)



12.01.2009

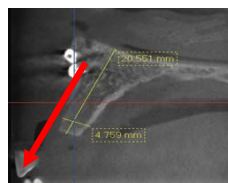
What type of bone augmentation do you recommend?



1. Distraction osteogenesis of the edentulous segment
2. Horizontal contour augmentation (GBR) using a bone filler
3. Onlay saddle bone graft from the iliac crest
4. Other



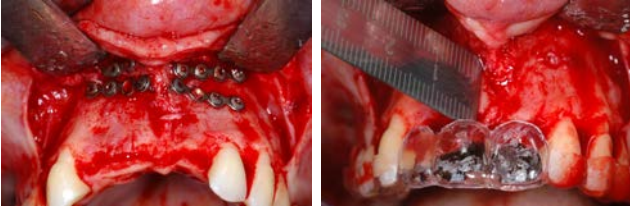
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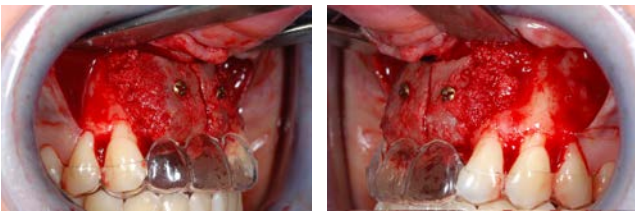
Pr Paolo Scolozzi

Service de Chirurgie Maxillo-Faciale et Chirurgie Buccale



Pr Paolo Scolozzi

Service de Chirurgie Maxillo-Faciale et Chirurgie Buccale



Post Bone-Grafting - Radiographic Documentation



Before Bone-Grafting



After Bone-Grafting



In case of an implant FDP:
how many implants do you
recommend?



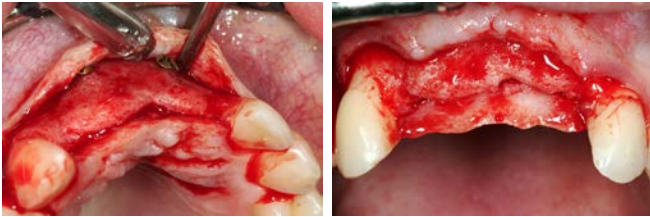
1. Three implants: in positions 12, 11 & 21
2. Two implants: in positions 11 & 21
3. Two implants: in positions 12 & 21

In case of an implant FDP:
how many implants do you
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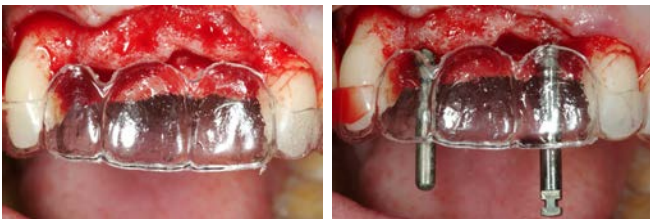


1. Three implants: in positions 12, 11 & 21
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3. **Two implants: in positions 12 & 21**

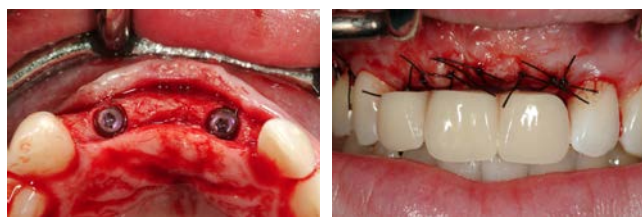
Implant Surgery



Implant Surgery



Implant Surgery



Impression Taking



Provisional, directly screw-retained 3-unit FDP



What decision do you take at this point?



1. Go ahead and complete the final restoration similarly as the provisional
2. Perform some additional diagnostics, i.e. use of "pink"
3. Perform muco-gingival surgery
4. Improve form, profile and overall volume of the provisional

What decision do you take at this point?



1. Go ahead and complete the final restoration similarly as the provisional
2. **Perform some additional diagnostics, i.e. use of "pink"**
3. Perform muco-gingival surgery
4. **Improve form, profile and overall volume of the provisional**



Additional diagnostics applying « pink »



Final, directly screw-retained 3-unit Implant FDP



Final, directly screw-retained 3-unit Implant FDP



Final, directly screw-retained 3-unit Implant FDP



Final, directly screw-retained 3-unit Implant FDP





6-year follow-up

TOPICS



- Introduction and Scope
- Implant prosthodontics in extended anterior edentulous spaces
- Guidelines for the use of "pink ceramics"
- **Conclusions and perspectives**

Conclusions

- Relevance of objective esthetic parameters
- Validity of early implant placement protocol
- Significance of simultaneous contour augmentation
 - Esthetic potential of "platform-switching" design
 - Well-defined treatment strategies for extended edentulous spaces in the anterior maxilla
 - Integration of artificial gingiva - "the pink power concept"

PROSTHETIC SOLUTIONS FOR VERTICAL TISSUE DEFICIENCIES

- **Anterior maxillary single-tooth replacements: possibilities are limited**
 - > comprehensive preoperative diagnosis & search for alternative tff



Conclusions

PROSTHETIC SOLUTIONS FOR VERTICAL TISSUE DEFICIENCIES

- **Anterior maxillary single-tooth replacements: possibilities are limited**
 - > comprehensive preoperative diagnosis & search for alternative tff
- **Multi-unit FDPs: "Pink Power" is a concept, not a "last resort"**
 - > importance of strictly implementing the design rules



Conclusions

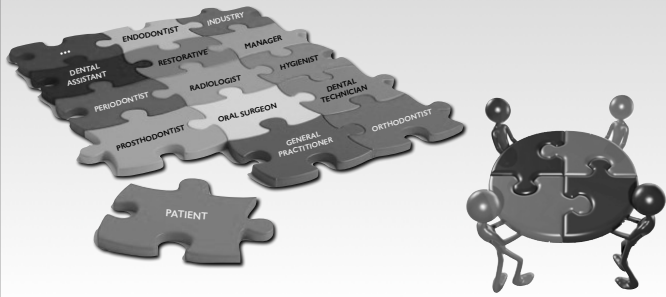


Convex Profile
No "double" papillae
Pink as "pale" as possible
Screw-retention

Cleanability...



TEAM PERSPECTIVE



TEAM PERSPECTIVE

Excellence appears when the pieces of the puzzle connect so well that they become invisible...



TEAM PERSPECTIVE


yet when you look close you can see it is the result of teamwork.



TEAM PERSPECTIVE

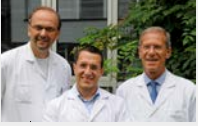


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Thank you for your kind attention
