

# oralhealth

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## Implantology

### Issue



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## IMPLANTOLOGY

**Table 3**  
Treatment selection after space opening

| Patient | Implant Number | Patient            | FPD Number |            |
|---------|----------------|--------------------|------------|------------|
| Male    | Central 1      | 1                  | Male       | Central 2  |
|         | Lateral 14     | 18 (4 bilateral)   |            | Lateral 4  |
|         | Canine 0       | 0                  |            | Cuspid 0   |
| Female  | Central 2      | 2                  | Female     | Central 0  |
|         | Lateral 232    | 248 (16 bilateral) |            | Lateral 12 |
|         | Canine 6       | 7 (1 bilateral)    |            | Cuspid 4   |
|         | 255            | 276                | 22         | 22 FPD     |
|         | 92%            |                    | 8%         |            |

**Table 4**

| Site    | Implant Diameter (mm) | Length (mm) | Total Number | Failed/Replaced |
|---------|-----------------------|-------------|--------------|-----------------|
| Central | 3.5                   | 12          | 1            | —               |
|         | 3.75                  | 13          | 1            | —               |
|         | 4                     | 12          | 1            | —               |
| Lateral | 3.50                  | 12          | 187          | 2               |
|         | 3.75                  | 13          | 25           | 2               |
|         | 3.75                  | 16          | 54           | —               |
| Canine  | 3.5                   | 12          | 1            | —               |
|         | 3.75                  | 13          | 2            | —               |
|         | 4                     | 12          | 4            | —               |

teeth, and 22 patients (8%) opted for a fixed partial denture (Table 3). A total of 276 implants were restored in 255 patients: three central incisors (one male, two female patients); 266 lateral incisors (14 male patients with four missing bilateral incisors and 232 female patients with 16 missing bilateral lateral incisors) and seven cuspids (six females with one bilateral treatment).

#### Treatment time

Prior to the restoration of the missing teeth, the dental and skeletal maturation were evaluated in function of the patient's age, hormonal changes (i.e. menstruation, facial hair and statural growth). In addition, the patients' orthodontic treatment was completed and stabilized before the implant or restorative phase of treatment was initiated.

The permanent teeth in the

premaxillary region had their final root position and angulation established along with stabilization of the occlusal relationship of the arches prior to implant placement. All implant patients remained in orthodontic retainers during the initial bone healing phase of the implant. During this period, the appliances also served as an esthetic tooth replacement using a bracket and denture tooth attached to the orthodontic appliance.

#### Implant size and design

Implant body diameter in these 255 patients varied from 3.5mm to 4.0mm based upon the mesiodistal dimensions of the missing tooth and the buccolingual dimensions of the bone (Table 4). Bone grafting to improve the implant site was performed as needed prior to implant placement to enhance hard tissue topography and ensure a harmonious crestal ridge

contour for a favorable esthetic outcome. All implants were inserted at least 1.5mm from the adjacent teeth. Implant length range was 12 to 16mm and was selected in function of the available bone height, which most often did not engage the opposing cortical plate.

All implant bodies were of a screw design with a resorbable blast media (RBM) or hydroxyapatite (HA) surface treatment. All implants had a two-piece design, with an abutment that was screw retained into the implant body after initial bone healing. All implants were left unloaded during the initial bone healing process.

#### Orthodontic retention

A six-month "stabilization" period was allowed between the debanding of the orthodontic appliance with the placement of an implant transitional crown and delivery of the final crown. A Hawley type orthodontic retainer was worn during this time frame. This period provided sufficient time for hard and soft tissue maturation around the implant and further occlusal stabilization of the natural teeth. In addition, it allowed most orthodontic relapse to occur prior to the final restoration, and occlusal adjustment of the prosthesis. The overall implant treatment time (from implant placement to final restoration delivery) lasted from 12 to 18 months.

#### Implant restoration

All implants were restored with porcelain fused to precious metal crowns cemented to the implant abutment. The occlusal concepts followed the implant protective occlusion philosophy.<sup>23</sup> For example, occlusal adjustment was performed with no contact on the implant crown during light occlusal force and some contact on the implant crown with a heavy bite force. Mandibular excursive contacts on the implant crowns were

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| <b>CASISTICA TOTALE DEI PAZIENTI</b> |                              |  |   |                            |                            |
|--------------------------------------|------------------------------|--|---|----------------------------|----------------------------|
|                                      | <b>INCISIVO<br/>CENTRALE</b> | <b>INCISIVO<br/>LATERALE</b>                   | <b>CANINO</b>                               | <b>TOTALE<br/>PAZIENTI</b> | <b>TOTALE<br/>IMPIANTI</b> |
| <b>UOMO</b>                          | <b>0,92%</b><br><b>3</b>     | <b>10,05%</b><br><b>33</b><br>(4 BILATERALI)   | <b>0</b>                                    | <b>36</b>                  | <b>40</b>                  |
| <b>DONNA</b>                         | <b>0,6%</b><br><b>2</b>      | <b>84,15%</b><br><b>276</b><br>(16 BILATERALI) | <b>4,27%</b><br><b>14</b><br>(1 BILATERALE) | <b>292</b>                 | <b>309</b>                 |
| <b>TOTALE</b>                        | <b>1,53%</b><br><b>5</b>     | <b>94,2%</b><br><b>309</b>                     | <b>4,27%</b><br><b>14</b>                   | <b>328</b>                 | <b>349</b>                 |

In press on “ORAL HEALTH” - “Anodontia and implant  
dentistry”



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| Trattamento                      | Dente                        | Paziente                    |                             |                   | Impianti   |
|----------------------------------|------------------------------|-----------------------------|-----------------------------|-------------------|------------|
|                                  |                              | Uomini                      | Donne                       | Totale            |            |
| Chiusura Spazi                   | Incisivo Centrale            | 0                           | 0                           | 0                 | 0          |
|                                  | Incisivo Laterale            | 15                          | 32                          | 47                | 47         |
|                                  | Canino                       | 0                           | 4                           | 4                 | 4          |
|                                  | <b>Totale Chiusura Spazi</b> | <b>15 P (4,6%)<br/>15 S</b> | <b>36 P (11%)<br/>36 S</b>  | <b>51 (15,6%)</b> | <b>51</b>  |
| Apertura Spazi                   | Incisivo Centrale            | 3                           | 2                           | 5                 | 5          |
|                                  | Incisivo Laterale            | 18 P<br>14 + 4x2 = 22 S     | 244 P<br>228 + 16x2 = 260 S | 262               | 282        |
|                                  | Canino                       |                             | 10 P<br>9 + 1x2 = 11 S      | 10                | 11         |
|                                  | <b>Totale Apertura spazi</b> | <b>21 P<br/>25 S</b>        | <b>256 P<br/>273 S</b>      | <b>277</b>        | <b>298</b> |
| <b>P = Pazienti<br/>S = Siti</b> | <b>Totale Pazienti</b>       | <b>36</b>                   | <b>292</b>                  | <b>328</b>        | <b>349</b> |

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| <b>SCELTA DEL TRATAMENTO DOPO L'APERTURA DEGLI SPAZI</b> |  |  |                         |  |
|--|--|--|-------------------------|--|
| <b>Impianti</b>  |  |  | <b>Ponti</b>            |  |
| <b>Pazienti</b>  | <b>Posizione</b>                         | <b>Casi</b>                                  | <b>Pazienti</b>         | <b>Posizione</b>                         |
| Uomini: 1<br>14<br>0                                     | Inc. Centrale<br>Inc. Laterale<br>Canino | 1<br>18 (4 Bilaterali)                       | Uomini: 2               | Inc. Centrale<br>Inc. Laterale<br>Canino |
| Donne: 2<br>232<br>6                                     | Inc. Centrale<br>Inc. Laterale<br>Canino | 2<br>248 (16 Bilaterali)<br>7 (1 Bilaterale) | Donne: 0<br>16<br>4     | Inc. Centrale<br>Inc. Laterale<br>Canino |
| 255 Pazienti<br><br>92%                                  |  | 276  | 22 Pazienti<br><br>7,9% | 22 Ponti                                 |

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| <b>MISURE DEGLI IMPIANTI</b> |                          |                           |                    |                                      |
|------------------------------|--------------------------|---------------------------|--------------------|--------------------------------------|
| <b>Posizione</b>             | <b>Diametro<br/>(mm)</b> | <b>Lunghezza<br/>(mm)</b> | <b>Casi</b>        | <b>Fallimento /<br/>Sostituzione</b> |
| <b>Incisivo<br/>Centrale</b> | 3,50                     | 12                        | 1                  | -                                    |
|                              | 3,75                     | 13                        | 1                  | -                                    |
|                              | 4,00                     | 12                        | 1                  | -                                    |
| <b>Incisivo<br/>Laterale</b> | 3,50                     | 12                        | 187                | 2                                    |
|                              | 3,75                     | 13                        | 25                 | 2                                    |
|                              | 3,75                     | 16                        | 54<br><b>(266)</b> | -                                    |
| <b>Canino</b>                | 3,50                     | 12                        | 1                  | -                                    |
|                              | 3,75                     | 13                        | 2                  | -                                    |
|                              | 4,00                     | 12                        | 4 (7)              | -                                    |

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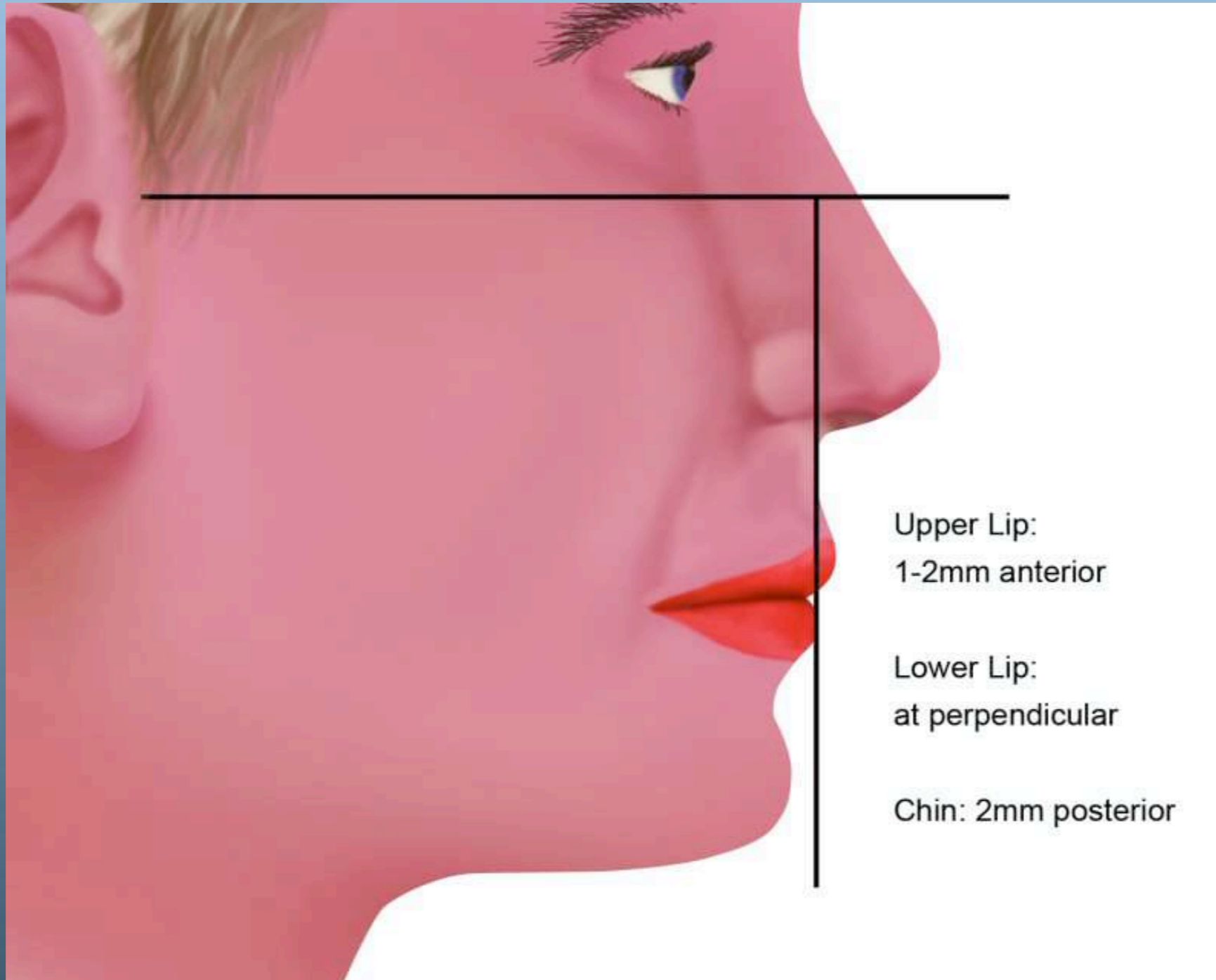
| <b>RIEPILOGO - 15 ANNI DI CASI CLINICI</b> |             |                 |
|--|-------------|-----------------|
| <b>Terapia</b>                             | <b>Casi</b> | <b>Successo</b> |
| <b>Chiusura degli spazi</b>                | <b>51</b>   | <b>100 %</b>    |
| <b>Ponte</b>                               | <b>22</b>   | <b>81,8 %</b>   |
| <b>Impianto</b>                            | <b>276</b>  | <b>98,6 %</b>   |

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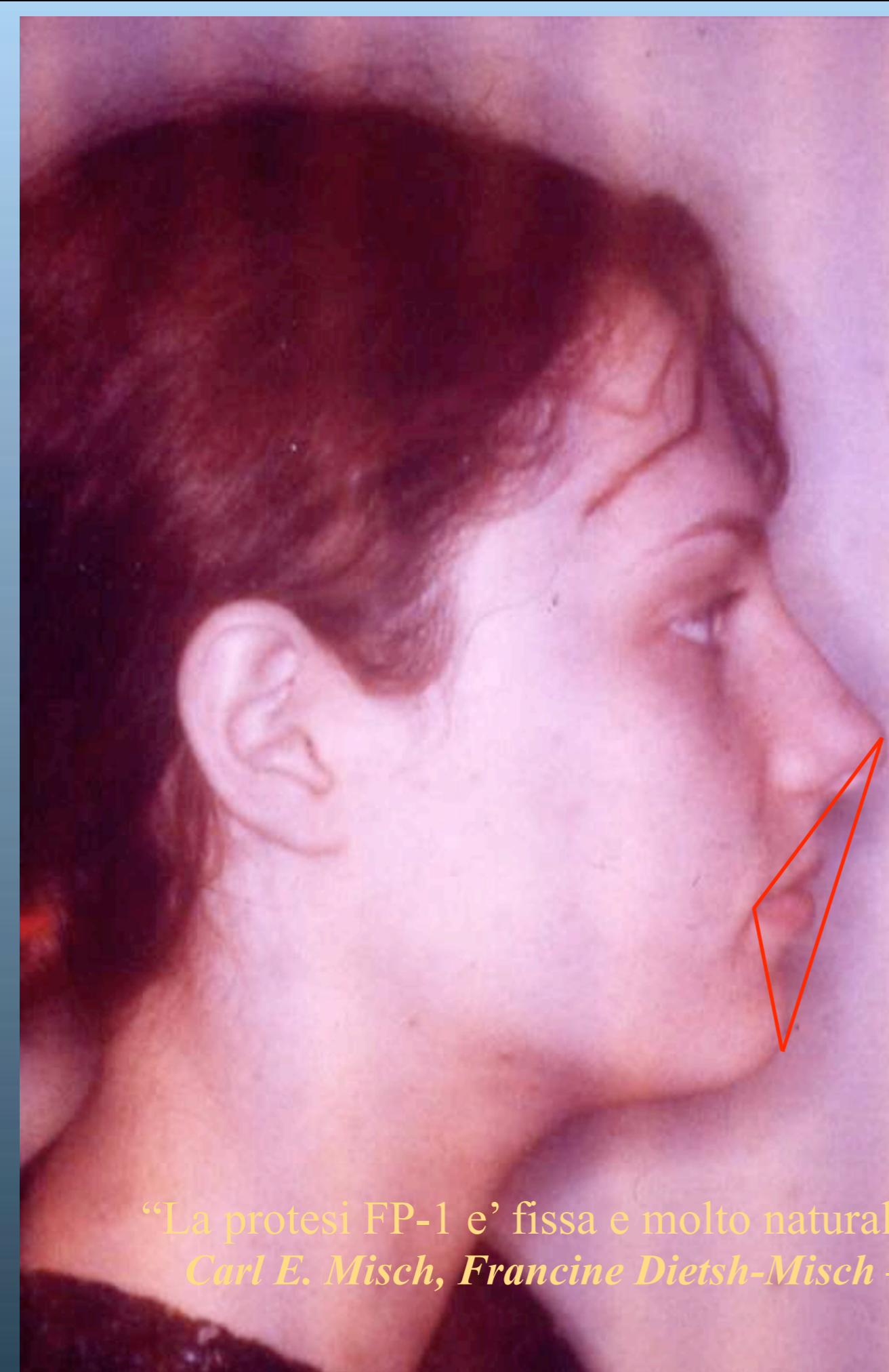
**Ateloblastodontia**



**XXX**







“La protesi FP-1 e' fissa e molto naturale ... e di ideale inserimento dei due impianti”  
*Carl E. Misch, Francine Dietsh-Misch – Contemporary implant dentistry 1999 p. 541*



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