

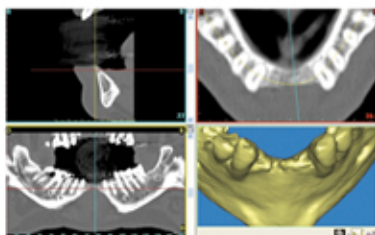
# FLAPLESS COMPUTER GUIDED SURGERY AND CAD/CAM CUSTOMIZED ABUTMENTS IN CRITICAL PROSTHETIC SITUATIONS: CASE REPORT

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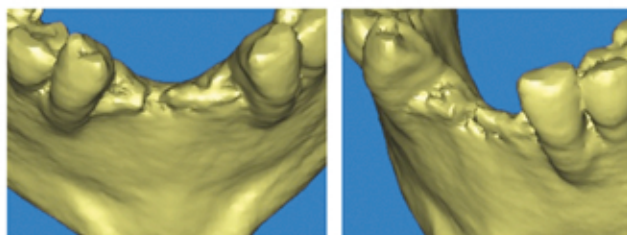
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## INTRODUCTION

We reported a one year follow-up clinical case regarding a rehabilitation of four lower incisors. In this case the rehabilitation was complex from the surgical and prosthetic points of view. Infact the residual ridge presented a small bone quantity in the horizontal dimension due to the buccal bone resorption and a reduced prosthetic space in the mesio-distal aspect.



Facilitate software: the initial situation



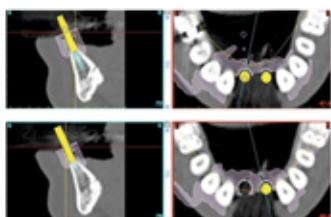
Initial situation on 3D model showing the reduced bone volume in horizontal dimension

## MATERIALS AND METHODS

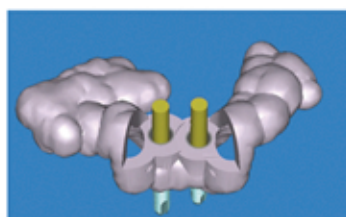
During September 2009, a male patient 51-year old came to our observation with the absence of all lower incisors. The patient presented a removable prosthesis with mesio-distal little teeth dimensions unsatisfactory in the esthetic and the functional aspects.

After the CT DentaScan examination we noted a reduced quantity of bone in the residual ridge horizontal aspect due to the buccal bone resorption. After a diagnostic wax-up accepted from the patient we planned the insertion of two implants (3,5x11 e 3,5 x 13 mm - Astra Tech, Sweden) using Facilitate software.

After the computerized planning and the plaster model realization we obtained a resin surgical guide with a dental support in order to perform a flapless surgery. After 60 days from the first surgery we taken an impression in order to realize customized abutments using CAD/CAM Atlantis technique (Astra Tech, Sweden) and 4 metal-ceramic crowns.



Surgiguide planning for the fixtures in region 4.2 and 3.1



Computer-aided design for the surgiguide with dental support



Placement of Surgiguide



Drilling was guided from the drill-keys



Implant holder after the final placement



After the Surgiguide removal

## CONCLUSIONS

By means of CAD/CAM procedures we solved a complex clinical case from the surgical and prosthetic points of view performing a minimally invasive flapless surgery with a satisfactory esthetic result.

After a clinical and radiographic one year follow-up the patient presented the soft tissues in perfect conditions and an excellent maintenance of marginal bone.

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Healing abutment connection showing the fixtures lingual position



Computer-Aided Design for Atlantis Abutments



Atlantis Abutments (Computer-Aided Manufacturing)



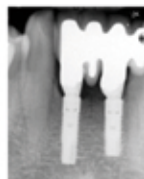
Atlantis Abutments (Computer-Aided Manufacturing) lingual aspect



Final prosthesis at the buccal aspect



Final prosthesis at the lingual aspect



Radiographic follow-up after 1 year showing excellent maintenance of marginal bone