



Immediate Loading of Full-Arch Fixed Prosthesis on 4 Template Guided Implants with the COMFOUR System.

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Aim:

Treatment of the edentulous maxilla with fixed full-arch prostheses on 4 immediately loaded implants has been discussed as a treatment option while general recommendations still require 5 implants for that indication. Precise transfer of the virtually planned position by 3D guided implant placement is an essential prerequisite for delivering the prefabricated temporary restoration at the time of surgery. Three-point-support on teeth or implants ensures that the template for the guided surgery is soundly seated during the operation.

Materials and methods:

In the described case the three-point-support was carried out by teeth and temporary implants in the molar region inserted prior to the Cone Beam CT. The virtual implant planning with a special software (SMOP, Swissmeda, Zurich, Switzerland) determines the best prosthetic implant position while using the available bone to avoid extensive augmentation. Following the metal based provisional restoration will be prepared by using the drilling template. Four implants (Camlog Screwline Promote Plus, Camlog Biotechnologies, Basel, Switzerland) were placed in the planned position with the aid of the teeth/implant supported guide. The angulated distal implants were aligned with 17 degree angulated abutments. After transferring the implant position to the dental laboratory the prepared restoration was finalized. The remaining teeth were extracted and the temporary restoration was delivered on the implants 3 hours after implant placement. The definitive fixed full-arch zirconia restoration with a thin veneered enamel layer was placed 9 months later in a stable situation when the mean bone changes following extraction were completed.

Discussion:

The remarkable accuracy of the implant placement with a surgical template generated from preoperative virtual planning of the implants, short treatment time, uneventful quick recovery with minimal discomfort and the immediate prosthodontic rehabilitation is a benefit not only to the patient, also to the treating team. The choice of screw-retained prostheses was based on the knowledge about biological complications due to cement remnants and the possibility of easy removal.¹ Monolithic zirconia restorations with facial porcelain provided satisfactory clinical performance in terms of mechanical complications when compared with other materials.²

¹Wilson, G.T. (2009) The positive relationship between excess cement and peri-implant disease: a prospective clinical endoscopic study. *Journal of Periodontology* 80: 1388–1392.
²Venezia P, Torsello F, Cavalcanti R, D'Amato S. Retrospective analysis of 26 complete-arch implant-supported monolithic zirconia prostheses with feldspathic porcelain veneering limited to the facial surface. *J Prosthet Dent* 2015;114: 506–512.

