

# Clinical Case Report on Usefulness of Comprehensive Digital Solutions of Camlog Implant for Examination, Treatment Planning, Prosthetic Design, Surgical Procedure and Prosthesis

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## OBJECTIVES

Until the recent years, skill and experiences of the surgeon were the main factor of the implant treatment for the cases of edentulous jaw. The healing period until set of the provisional restoration may have elapsed a few months from the time of surgery. Also the cases were limited due to amount of the surgical stress considering the patient's load. Since the technology has been improved in the recent years, safe, precise and less time consuming implant treatments have been accomplished by using a guided surgery method. In this case, this guided surgery method was implemented for a full mouth reconstruction of a diabetic patient. Moreover, CAD/CAM technology was used to fabricate the abutment and the provisional restoration which were set on the same day as one-day treatment, in order to achieve the recovery of masticatory function.

## MATERIALS AND METHODS

### PATIENT INFORMATION

Age & Sex : 61 years-old, Male Medical History : Diabetes  
Chief Complaint: Masticatory disorder due to the unfitted denture  
Treatment Plan: Implant Bridge Restoration



In this case, a Guided Surgery Method was implemented considering the following factors;

- infection risk of wounded site
- incomplete healing
- improvement of masticatory disorder for improvement of quality of life
- Setting of an abutment and a provisional restoration on the same day was planned, in order to enhance early healing and improvement of masticatory disorder.

In order to implement the guided surgery, GALAXIS(SIRONA Dental System, Bensheim, DE) was used for the virtual planning software.

Also Camlog guide made by SICAT was used in this surgery.(Fig.2,3) Camlog Implant System was chosen because of the following reasons;

- Availability of Titanium Base Abutment
- Able to cover wide range of surgical and prosthetic case within the system

A Zirconium abutment and a provisional restoration were fabricated prior to the surgical procedure in the laboratory by using the surgical guide made by SICAT. And they were set immediately after the implant placement. The final prosthesis were set at the time of healing and achieving stable occlusion..

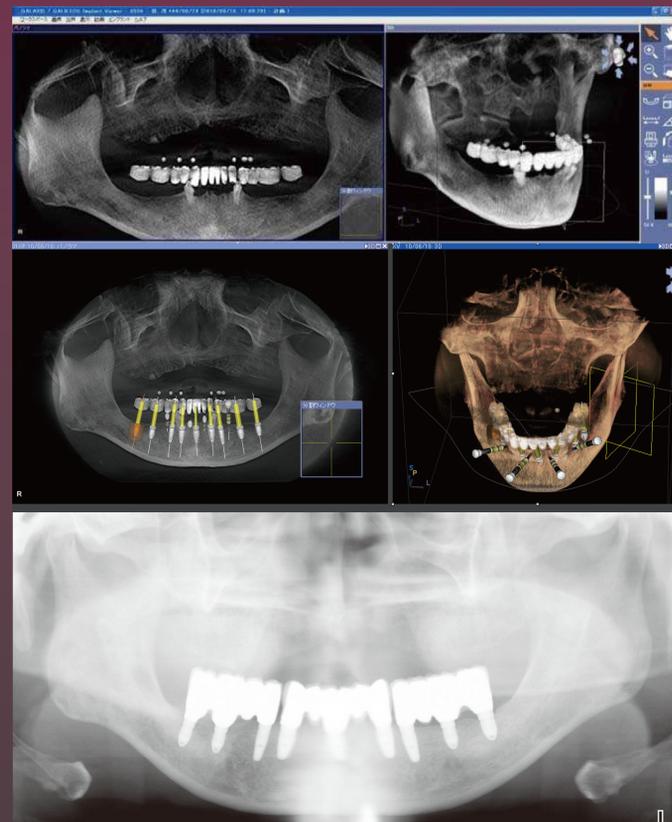


Fig. 1 : Virtual Planning on the Software and Panorama X-ray of final prosthesis

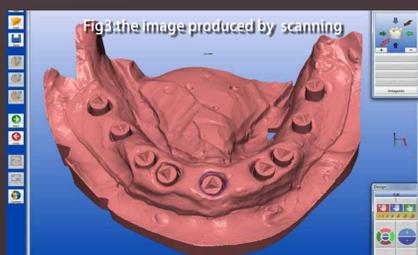
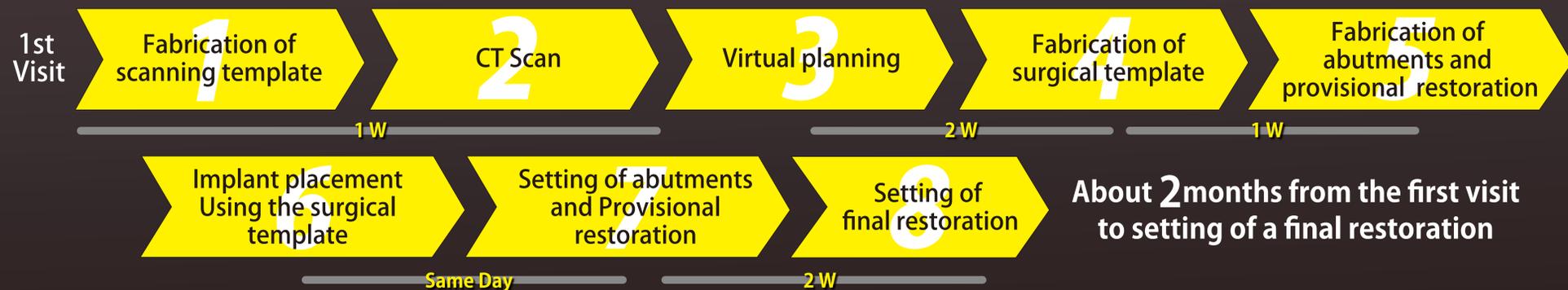
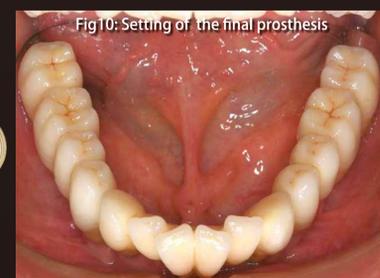


Table 1 Procedure of the guided surgery



## RESULT

The implants were actually placed identically with the virtual planning. (Fig.6,7) This has led to the result which the abutments and the provisional restorations were fit without any difficulty immediately after the implant placement. It also enhanced the surgery more safely and simply. By implementing this procedure, shortening the duration of wound healing and occlusal stabilization made it possible to shorten the time of setting the final prosthesis (Fig8,9)



## CONCLUSION

In this case, the Guided surgery was the most suitable procedure when considering the chief complaint and the patient's medical situation. Setting of the zirconium made abutment immediately after the implant placement was the key factor of this procedure. However there was a difficulty in the area of abutment planning of the edentulous patient such as it is difficult to consider the most optimal shape of the supra-structures. At this point, it is difficult to say yet that the cases which the implant placement and the abutment fabrication based on the virtual planning on the computer not established procedure, but this kind of state-of-the-art technology will become the key factor for the optimal treatment, credibility and outcome.