

l a b l i n e # 1 8 (s u m m e r 2 0 1 5)

C A S E



DR. Cyril Gaillard | DT. Jérôme Bellamy

IMPLANTS AND TEETH
THINKING OUTSIDE THE BOX

In this clinical case, a 22-year-old patient with a genetic disease came to our practice looking for a solution for the esthetics of his smile. Many of the patient's permanent teeth had never erupted, except for the lower canines and molars.

The medical history of the patient shows:

- Orthodontics had been attempted but failed, lower incisors had been extracted,
- and a removable prosthesis had been tested without great success.

Because of his disease, the patient had already undergone multiple surgeries and was looking for a solution involving the least amount of surgery possible. He was looking forward to having fixed teeth, a normal smile, and finding a social life.





Diagnosis

Pictures of the teeth and 3-dimensional scans were taken in order to execute an esthetic analysis. At this step, the most important thing was to create the new smile (gum and teeth) regardless of the initial condition. The placement of the incisal edge, where the midline was supposed to be, the position of the gingival line, and proportions of the teeth were all taken into account. The new smile was digitally designed using the Digital Smile Design technique (DSD). The mesial angle of the upper incisor was distinguished as a landmark. The ideal tooth and gingiva placements were determined and measured using a digital strip. All esthetic planning had to be done digitally since the biology of the patient made performing a mock-up impossible.



Patient

KÖZÉPSŐ METSZŐFOGAK
ARCFORMA
ARC SZIMMETRIA
KÖZÉPVONAL
OKKLUZÁLIS SÍK
FOGSZÍN
FOGÍNY SZÍN
FOGÍNY SZINTEZETTSÉG
METSZŐ ÉL
FOGAK KÖZTI ARÁNYOK
AJKAK: MAGAS, KÖZEPES, MÉLY

Eshetics

Function

Support

KOPÁS
ABRÁZIÓ
SAVAS ERÓZIÓ
TÖREDEZETTSÉG
FOGSZUVASODÁS
IMPLANTÁTUMOK
HELYREÁLLÍTÓ KEZELÉS
PÓTLÁS
SZORÍTÓGYŰRŰK
ENDODONTÁLIS KEZELÉS
MINŐSÉG/MENNYISÉG

Biology

GINGIVITIS-PERIODONTITIS
SZÁJHIGIÉNYIA
HIPERSZENZITIVITÁS
MOBILITÁS
FOGÍNYSORVADÁS
FOGÍNY FENOTÍPUS
PERIAPIKÁLIS PATOLÓGIA



Reflection

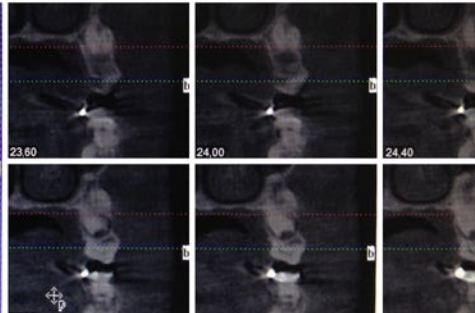
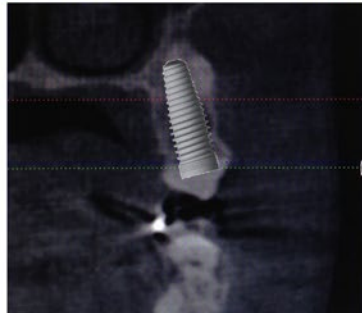
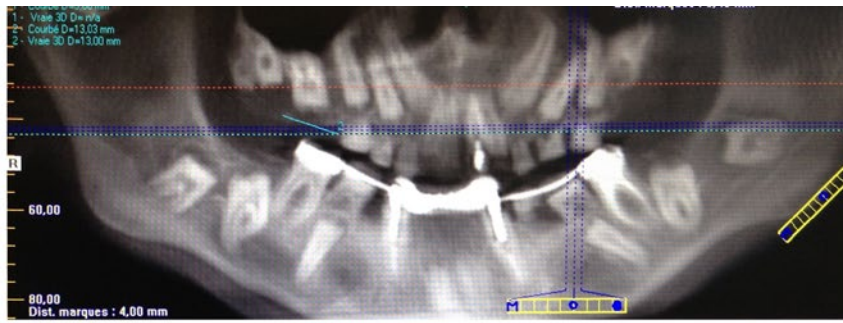
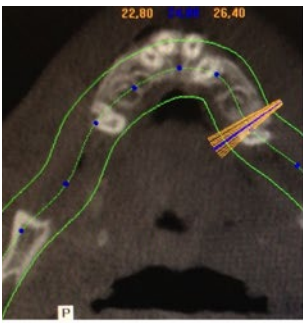
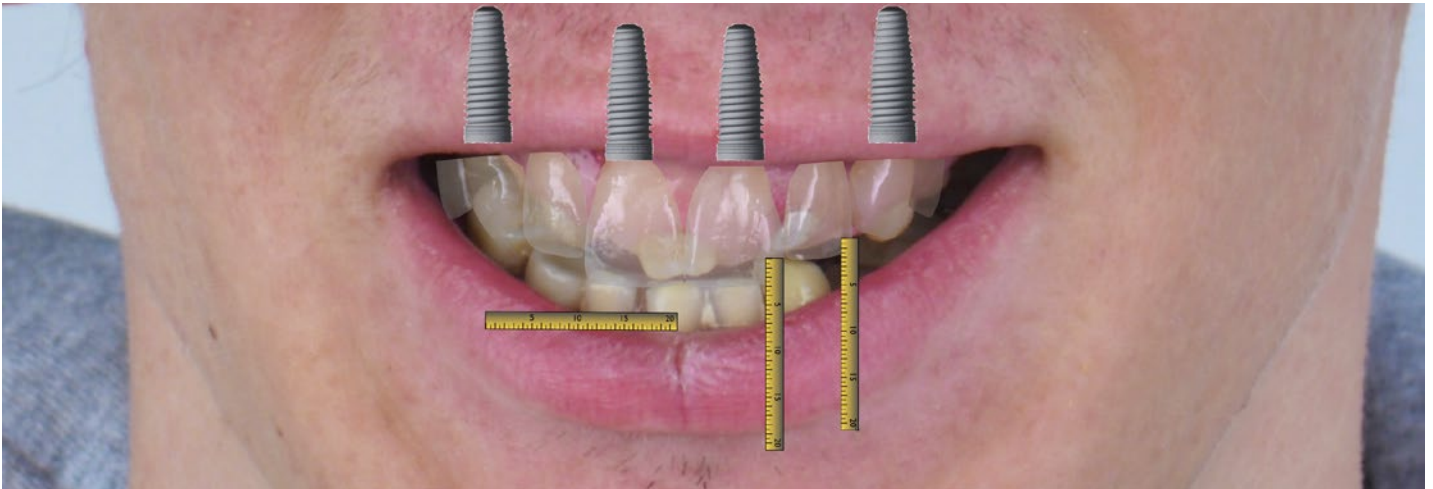
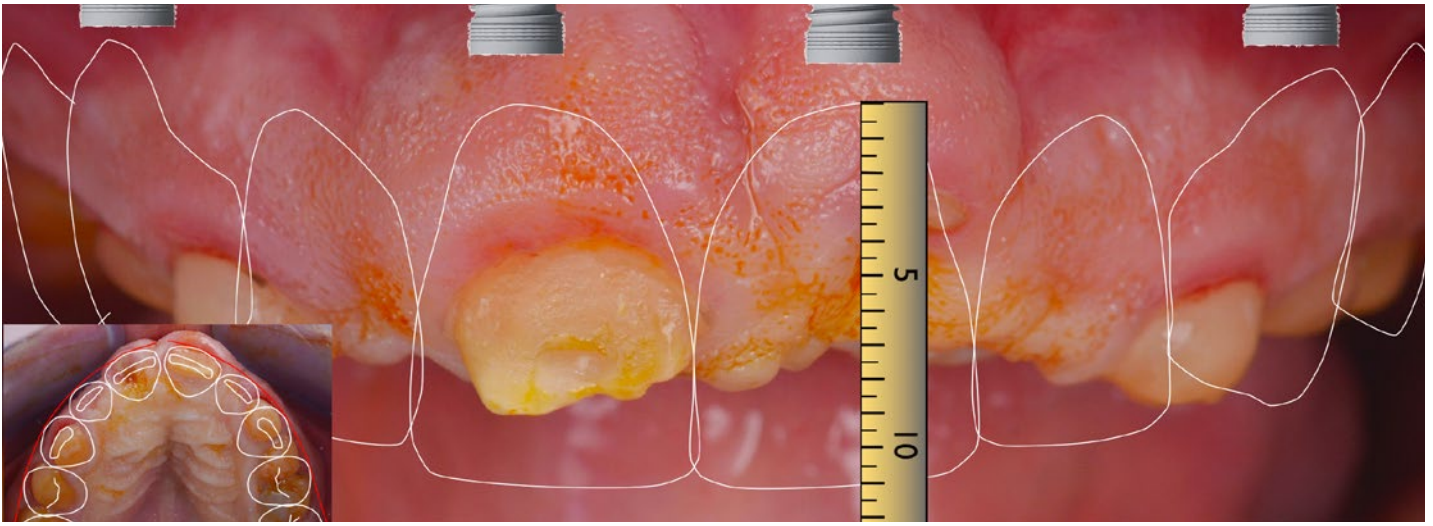
After this, the next step is to transfer the DSD to the X Ray. The measurements from the DSD were transferred to the 3D scan to help direct implant placement planning. We are able to see the relationship between the esthetic (DSD) (prosthetic) and the biology (X Ray)(bone, included teeth and implant).

The functional analysis confirmed the need to reconstruct the mouth with a completely new occlusion.

What can we propose to the patient? Orthodontics to extrude the teeth: this had already been tried and had failed.

Considering the biology and support options, two possible solutions were presented to the patient:

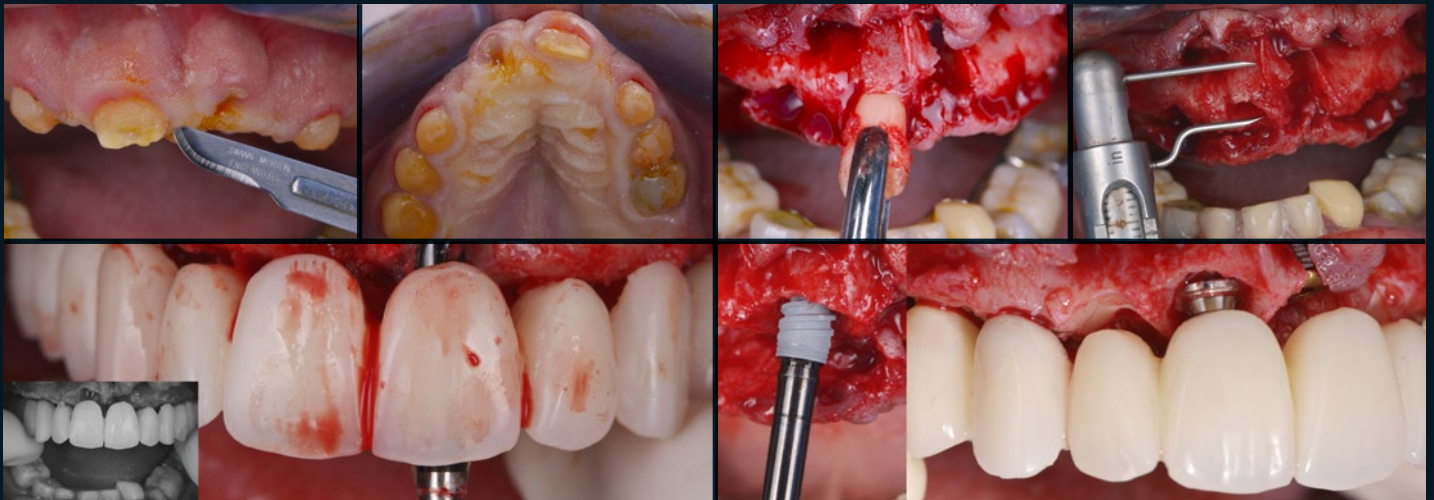
- 1: Extract all teeth, which would cause major bone loss and therefore require bone grafts in order to eventually place implants, **OR**
- 2: Based on what Hurzeler has published, place implants through the existing teeth so as to minimize the amount of surgery as well as the length of treatment. Since this approach involved less evidence-based dentistry, if it proved unsuccessful, it was proposed to remove the implants and proceed as described in option one.



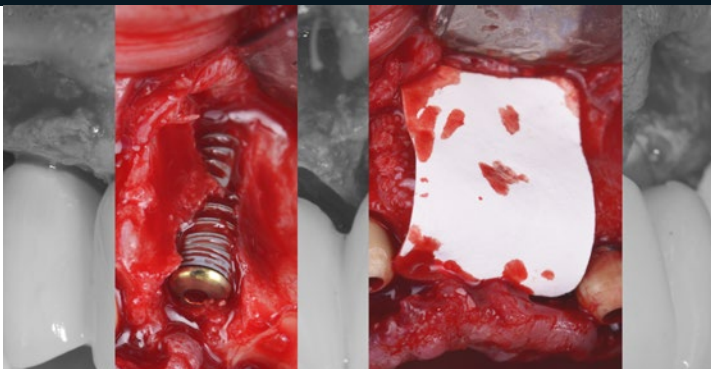
The patient chose the second approach, placing the implants through the teeth.

Surgery

The future surgery was simulated on plaster models using the same measurements and landmark from the 3D scans and the esthetic analysis. The bone resection was implemented, the gingival level was placed, the emergence profiles were created and the zenith of the teeth was determined. The new smile was designed and the implant positions were chosen. From this, the lab created the maxillary provisional prosthesis (Anaxdent), including a palate. It served as a guide for surgery and for immediate loading.



To begin surgery, a gingival flap was cut, then the deciduous teeth and the two upper central incisors were extracted. Next, the bone resection was measured at an average of seven millimeters and then performed. The provisional was placed and guided the drilling for the implants. Before placing the implants, the perfect periodontal anatomy was created by resecting the bone so as to leave 3 millimeters between the teeth and the bone. The bone was not carved flat, it was formed around the ovoid pontic. Finally, the implants Nobel Active (Nobel Biocare) were placed with multi-unit abutments.



On tooth 21 there was a large defect, so a resorbable membrane with Bio-Oss was placed and the implant was not immediately loaded.

The guide was then connected at the abutments with resin composite. During surgery on the lower jaw, the lab finalized the provisionals and they were screwed into place.





Six implants on the lower jaw were drilled and inserted. Once the upper provisionals were screwed in, the occlusion was recorded with wax that was screw-retained on the lower implants. An impression was taken of the upper prosthesis and the lab used this to finish the lower provisionals the following day.

As seen in the x-ray, some teeth were completely avoided, others came in contact with implants, and some were directly perforated by implants.



Conclusion

Sometimes it is necessary to think out of the box in order to treat certain patients. The treatment for this kind of patient has many shortcomings, but it is real dentistry. In this kind of case, the pictures and the analysis using DSD are an enormous help. Planning is the key to success.

After one year, a follow-up appointment was scheduled. It was decided to wait to complete the final restorations.



DR. CYRIL GAILLARD

- 1998 Degree from Bordeaux University
- 1998–2000 Certificate Fixed Prosthodontics
- 2000–2002 D.U Implantology (Bordeaux)
- 2003 Certificate Bone grafting (Yvan Poitras)
- 2005–2006 D.U Maxillo facial surgery (Paris 7)
- 2005–2008 Graduate from Las Vegas Institute in aesthetic, neuro muscular dentistry and full mouth rehabilitation.



Founder and President of Global Advanced Dentistry (www.gad-center.com)

Dr. Cyril Gaillard, graduated from the University of Bordeaux II in 1998, followed by numerous post-graduate trainings in cosmetic, implant and prosthetic rehabilitation complexes in France and in Europe, Canada and the USA, as well. The mission of Dr. Gaillard's Cabinet is to accompany the patient to regain health, beauty, confidence, helping them in their therapeutic choice. It aims to contribute to the dignity, appearance, quality of life, self-esteem and sociability. The main value of the offered treatments is represented by listening to their patients, the human relationships, and the multi-disciplinary approach to the best achievements of science.



JÉRÔME BELLAMY

- Graduated in 1995
- 2004–2007 Ceramist trainer for Ivoclar France
- 2007–2013 Director ceramist section
- 2013–now Member of Dr. Cyril Gaillard's team (Bordeaux)