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Vincent Fehmer, MDT
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Editor-in-Chief
Vincent Fehmer, MDT

Clinic for Fixed Prosthodontics and Biomaterials
University of Geneva
Geneva, Switzerland

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Meet the New Editor-in-Chief

QDT 2023 is the inaugural issue with Master Dental Technician Vincent Fehmer at the helm. Under his editorship, QDT maintains its signature look but with a more fluid design and larger images to showcase the beauty of the work. Read on to learn more about our new editor-in-chief. We are excited to see where QDT goes under his direction!

Vincent Fehmer received his dental technical education and degree in Stuttgart, Germany, before completing fellowships in Great Britain and the United States in Oral Design-certified dental technical laboratories. After working several years in such a laboratory in Berlin, he received his MDT degree and became the chief dental technician at the Clinic for Fixed and Removable Prosthodontics in Zurich, Switzerland. Since 2015, he has been a dental technician at the Clinic for Fixed Prosthodontics and Biomaterials in Geneva, Switzerland. He also runs his own laboratory in Lausanne.

Mr Fehmer is a Fellow of the International Team for Implantology, an active member of the European Academy of Esthetic Dentistry (EAED), and a member of the Oral Design group as well as the European

Association of Dental Technology (EADT) and the German Society of Esthetic Dentistry (DGÄZ). He is a sought-after international speaker and has received many honors for his work, including the Kenneth Rudd Award from the American Prosthodontic Society. He has published more than 50 articles in peer-reviewed journals within the field of fixed prosthodontics and digital dental technology, contributed to many books, and recently coauthored the book *Fixed Restorations: A Clinical Guide to the Selection of Materials and Fabrication Technology* with Irena

Sailer and Bjarni Pjetursson. Mr Fehmer also serves as Editor-in-Chief for the *International Journal of Esthetic Dentistry*, Section Editor for the *International Journal of Prosthodontics*, and Co-Chair for the 26th International Symposium on Ceramics (June 2023).



Vincent Fehmer, MDT, on the lecture circuit.



QDT



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“It is an honor to continue the legacy of such a unique publication...”



EDITORIAL: SIMPLICITY MEETS ESTHETICS



As the new editor-in-chief of QDT, I am following the vision and work of the outstanding previous editors—Prof John A. Sorensen, Prof Avishai Sadan, and Prof Sillas Duarte—who developed QDT over the last 44 years into a one-of-a-kind, cutting-edge annual publication. Like them, my aim is to connect the leading experts in the field of restorative dentistry and dental technology to elevate this unique publication to the highest standard in our profession.

Important to *my* vision for QDT is the feasibility of the presented work and its actual application to daily practice. My hope is that the articles in these pages inspire clinicians and technicians to apply the techniques they see here for the benefit of all their patients. Therefore, the motto “simplicity meets esthetics” is more than just a connection of words; I truly believe it is essential to take dentistry and dental technology to its next level. The beautiful outcomes we strive for in our daily practice and routines should be made available to as many of our patients as possible—not just the ones who have the financial means to afford comprehensive treatments. As a realist, of course I understand that there will always be

certain limitations to this. However, advancements in digital technology, workflows, and highly esthetic dental materials continue to bring this dream closer to reality. And we should embrace that.

You might ask yourself now if there will be any changes to the previous format and style of QDT. The short answer is no. It is an honor to continue the legacy of such a unique publication with its extraordinary and highly visual content; any major changes would eliminate important parts of QDT DNA. So the only change you will experience over the coming years is a greater variety of international authors. Some of them may even be new to you, but I promise that you will not regret reading and marveling at what they have to share. Finally, and most importantly, I hope to encourage more female dental technicians and clinicians to submit their outstanding (but clearly underrepresented) work to QDT.

Having said all this, it gives me great pleasure to invite you to enjoy this 45th volume of QDT. Stay healthy!

Sincerely yours,
Vincent Fehmer
vincent.fehmer@unige.ch

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Enhancing Anterior Esthetics: A Patchwork of Different Types of Ceramics

Carola Wohlgenannt, MDT*



One of our tasks as dental technicians is to have sufficient knowledge and command of the materials that we use in our practice to achieve an esthetically integrated solution for our patients.

In the case described here, I felt that the most sensible thing to do was to use a variety of different ceramic materials because I had to take three different dental substrates into account.

INITIAL SITUATION

The patient complained of pain on the maxillary right lateral incisor. She was also dissatisfied with the appearance of the post-retained crown on the contralateral left lateral incisor. To make matters worse, the central incisors were different shades following endodontic treatment on the left central incisor in the past (Figs 1 to 3). In addition, she had a slight crossbite in the region of her mandibular right canine and first premolar. These minor issues together considerably affected her overall esthetic appearance.

What made this case particularly challenging was the fact that this patient worked as a dental hygienist at her dentist's practice and could spot all the minute details of the soft tissues and teeth that the untrained will not see. Her expectations were therefore high for me and for her boss.

FIRST APPOINTMENT: DESIGNING THE MOCK-UP

After taking the first impression, I created a wax-up (Fig 4). In the process, I paid particular attention to establishing a symmetric balance and determining the amount of space needed for esthetic improvement in the given clinical circumstances. Therefore, I extended the crown length toward the apical with gingivectomy and modified the labial arch to such an extent that I could correct the crossbite. With the help of a silicone key, these modifications could then be transferred directly to the patient's mouth (Figs 5 and 6).

This kind of mock-up gives me the advantage of being able to immediately assess if the planned modifications will lead to a harmonious integration into the overall appearance. Compared with digital before-and-after visualizations, the mock-up enables the patient to see how the new dental situation looks and feels and also allows her to speak normally.

In this case, the patient was pleased with the new esthetics and feel right away. The slightly extended labial arch of the maxilla suited her, and the optimized proportions of the central incisors with gingivectomy were equally successful. We both agreed to the plan to reconstruct all six maxillary anterior teeth.

The central incisors and canines would be restored with veneers to increase their volume slightly and to redress the slight crossbite on the right side. The maxillary lateral incisors would receive crowns, but the right lateral incisor would first need to be replaced with an implant due to extensive tooth resorption (Fig 7).

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Figs 1 to 3 Initial situation. Note the different shades of the central incisors in the oblique view.



Fig 4 Wax-up.

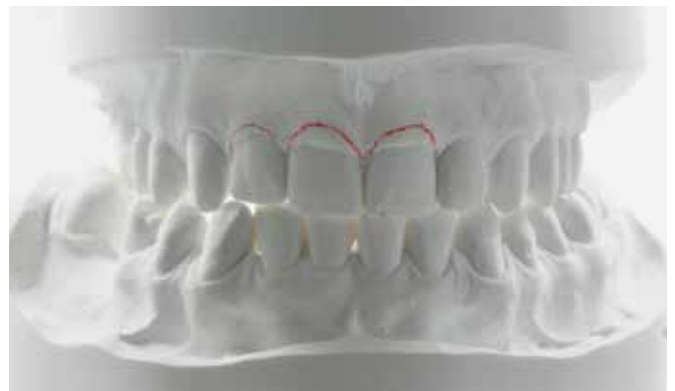


Fig 5 Gingivectomy planning.



Fig 6 Placing the mock-up in the patient's mouth.



Fig 7 Radiograph of the maxillary right lateral incisor showing extensive root resorption. This tooth must be replaced with an implant prior to crown restoration.

SECOND APPOINTMENT: PLACING THE IMMEDIATE IMPLANT

The maxillary right lateral incisor was removed surgically, and an implant was placed immediately into the extraction socket (Figs 8 and 9). The implant (Camlog Screw-Line Promote Plus, 3.8 × 13 mm) was placed slightly to the palatal, and the gap between the buccal bone wall and the implant

was filled with a heterologous bone mixture (OsteoBiol MP3) and collagen (Fig 10). After careful wound closure, a glass fiber–reinforced Maryland bridge was placed (Fig 11). Just to be prudent, we prepared this bridge prior to the second appointment (Figs 12 to 14).

This choice of treatment provided our patient with some crucial advantages: (1) It eliminated the need for a palatal plate, and (2) it prevented any shifting movement from occurring and therefore protected the newly placed implant effectively.



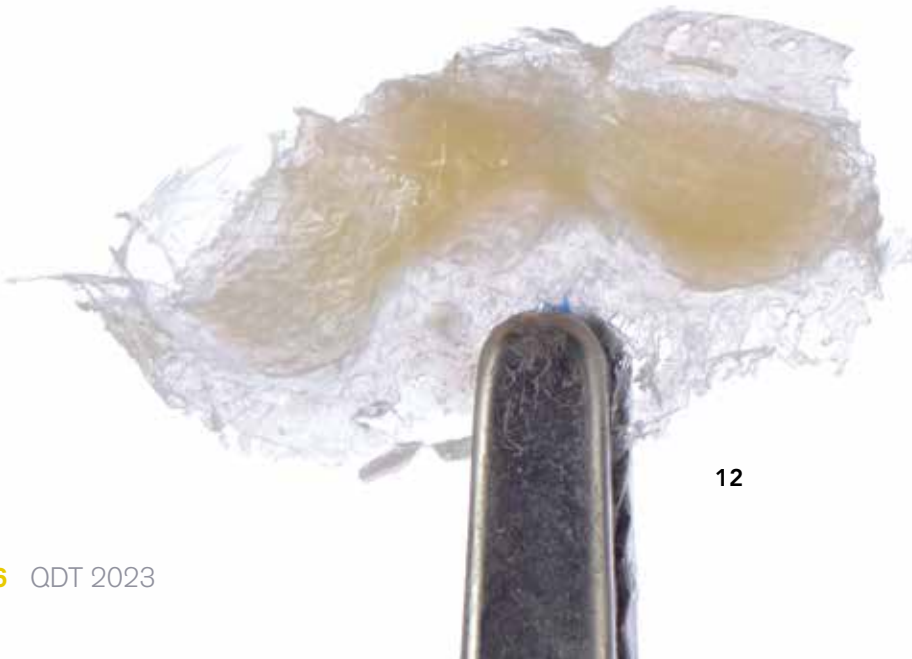
Figs 8 and 9 The implant is placed slightly to the palatal. Note the gap between the implant and the buccal bone wall.



Fig 10 The gap is filled with a heterologous bone mixture (OsteoBiol MP3).



Fig 11 Glass fiber-reinforced Maryland bridge in situ.



Figs 12 to 14 Laboratory fabrication of the glass fiber-reinforced Maryland bridge with SR Ivocron prior to the second appointment.

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UNCOVERING THE IMPLANT

Following a 3-month healing phase, the implant was uncovered and provided with a 4-mm cylindrical gingiva former (Figs 15 and 16). In the process, a gingivectomy procedure was performed using an electrotome (Fig 17), and the labial frenulum was moved toward the apical region (Fig 18).

An improvement in the esthetic appearance of the patient could be observed already at this stage.

PRELIMINARY WORK IN PREPARATION FOR IMPRESSION TAKING

The gingiva former was left in place for 4 weeks before it was replaced with a customized abutment to help establish the emergence profile. The implant was restored with a temporary crown milled from acrylics (Figs 19 and 20). The crown was given a completely nonoccluding design to protect the implant from any unnecessary stresses.

PREPARATION

The teeth were prepared utilizing a supragingival, minimally invasive approach. This step was performed with the help of the silicone key derived from the wax-up (see Fig 21). Because all the teeth involved in the restoration were being slightly augmented, precious tooth structure could be preserved. In my opinion, however, preparing appropriate interdental spaces was indispensable in this case. I was able to design the contact areas in a targeted fashion and achieve a clean transition between the veneers and the tooth structure by lightly preparing the contact areas in the dorsal area.

Fig 15 Uncovering the implant.

Fig 16 Healing cap.

Fig 17 Gingivectomy using an electrotome.

Fig 18 Cutting the labial frenulum.



Figs 19 and 20 The temporary crown is built up.

The available space was assessed (Fig 21), the teeth were prepared (Figs 22 and 23), and a customized impression post was placed (Fig 24). Subsequently, an impression was taken (Fig 25), and a temporary restoration was placed (Fig 26).



Fig 21 Space available prior to preparation.



Fig 22 Preparing the two central incisors.



Fig 23 Completed preparation.

Fig 24 Completed preparation with individualized gingiva former and customized impression post for impression taking.



Fig 25 Impression.



Fig 26 Temporary restoration in situ.