

Creating a fixed denture in one day with the CST bar

Implant-supported fixed dentures are gaining popularity, amongst denturists as well as their clients; those who are made in one day¹ are even more appealing. Last fall, the Dental Implantology Academy presented a practical training course unlike any other: denturists were invited to attend a live workshop on the creation of an implant-supported denture. Here are the highlights of the first day of the event, from the surgery to the placement and the creation of the denture with the CST bar.

Eight denturists, some of which travelled more than 100 km, have been granted a place for this first training day on the making of a fixed denture in one day.

Some were already collaborating with Dr. Chaussé, whereas for others, this day was a first incursion in the surgeon's universe. A few had conducted fixed cases, but the use of the CST bar, which implies different steps for the prosthetic aspect, was a premiere for practically every participant.

Jo-Annie Boissonneault, D.D., had previously worked with Dr. Chaussé's team. She had already conducted a case of fixed dentures in one day, supervised by Éric Falardeau, D.D. "It was like having a private teacher. It was less stressful, especially since the first case is decisive to learn this technique", she stated.

If you attended one of Dr. Chaussé's conference, you probably know Éric Falardeau. This denturist, whose practice is located in Sorel-Tracy (QC), has been working closely with the surgeon from Beloeil (QC) for over two decades. Furthermore, he was the one in charge of the prosthetic aspect of the training that day, and one of his patients was the subject of this experience.

Patient under the scalpel

At 8:45 am, everybody was ready for the surgery, which seemed to be a routine operation for Dr. Chaussé's team. Neither the surgeon nor his assistants seemed to worry about the fact that they had to work in front of an informed public located in the next room. The denturists were seated in the boardroom of the clinic to watch the intervention by live video conference. Dr. Chaussé commented his interventions and answered the denturists' questions... while he was cutting, milling, filing and screwing! During the 45-minute intervention, the denturists

who wanted to see the work more closely put on caps and masks to access the surgical room (fig. 3).

Once the implants were placed (fig. 1), Dr. Chaussé prepared the index (fig. 2), to the delight of the denturist, who was discharged of this task. The surgeon's technique was rather unusual: pieces of cocktail sticks welded by acrylic act as a bridge between the implants. It was a far cry from the indexes braided in the mouth using dental floss, pointed out one of the participants.

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1. *To be made in one day, implant-supported dentures must previously be created by the denturist (without a framework nor a bar) and the trials in the patient's mouth must also be done beforehand.*

The craftsman denturist at work

A few minutes before 10 p.m., Dr. Chaussé had completed his overall work for the day. At that moment, his colleague entered the scene. The part of the course denturists were waiting for. Of course, attending a live surgery was quite interesting for them, but what they mostly learned from this exercise is the prosthetic aspect taught by one of their colleagues. Who better than a denturist to give them advice and tips on the creation of an implant-supported denture? "A denturist knows what we need to hear and understands our reality", said Mark Waked, D.D., with enthusiasm. Éric Falardeau still had plenty of work ahead of him, but the trainer, who has been around the block, was well prepared. His goal of the day: that, at the end of the workshop, his patient returns home with a new, final and fixed smile. While the denturist was concentrated on creating the denture in the small laboratory, the patient and her husband, who accompanied her for the surgery, were resting in privacy in the adjacent lounge, specially designed for clients who get dentures made in one day.

The secret behind creating a denture in one day

As a reminder, in order to make dentures in one day, they must first be created. "The denturist's work after the surgical intervention consists of a traditional relining, with the sole difference that we include the CST bar", explained Éric Falardeau. The steps are all the same until the preparation of the CST bar (Cable Stayed Technology). Developed by Synca, the creators of FIBER FORCE, the CST concept allows to create

a fiber structure for screwed retained dentures. This structure is the equivalent of a metallic bar, but its production process is faster and simpler. The CST framework can be made in approximately 30 minutes and does not require any moulding, scanning or milling.

The CST framework is braided by the dentist, this time, on titanium cylinders by Nobel Biocare (fig. 4). Éric Falardeau conducted a demonstration, precious advice included. The art of braiding can be learned quickly, but it must be conducted with meticulousness. While the students for a day were taking notes, the instructor reassured them: a step-by-step tutorial demonstrating how to make the bar is available online on the FIBER FORCE website.

While working on the CST bar, Éric Falardeau promoted its benefits. Not only does it require little time to create, but it is also less expensive than a metallic bar. "The price of a CST bar hovers around \$400 while we have to pay almost \$1000 for a metallic bar", he added. What about the durability? "So far, we only had one breaking because the framework had been braided too tightly, noted Dr. Chaussé, avid user of the product. The success rate of the fiberglass frameworks is therefore similar to titanium bars after more than three years of function", he stated.

According to Diane Lefebvre, D.D., Éric Falardeau generously provided very useful hints. An assessment that was shared by the denturists. Throughout the entire workshop,

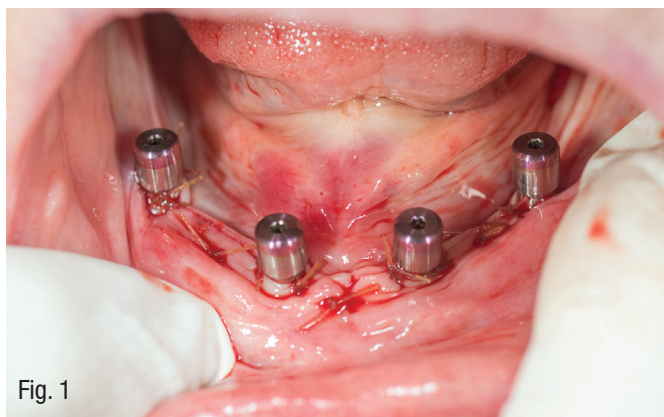


Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7

Éric Falardeau indeed gave valuable advice to his colleagues. He insisted on the importance of respecting every step, being meticulous and waiting the recommended time for this kind of work. "It is much faster to take our time!", he hammered.

The curing of the denture was done in a microwave oven to respect the one day deadline. This process lasted approximately 1.5 hour, giving the dentist a little time off during this rigorously planned day.

At lunchtime, Dr. Chaussé and Éric Falardeau joined the group to share the meal offered by the host of the day and exchange with the denturists. Denturology and implantology were the topics of discussion in a friendly spirit. Experiences, tips and hints were shared. What product to use? What is the ideal curing time? The convivial discussion was very beneficial for the participants.

The end of lunchtime coincided with the end of the curing process. It was now time to get back to work to complete the denture. This last phase included the delicate and precise

intervention that would provide a very solid dentition to the patient: the drilling of the holes to screw the new denture onto the implants that were placed earlier that morning (fig. 5). Once the polishing was done and the denture was clean as a whistle, the patient was invited to take a seat in the surgeon's chair for the anchoring of the denture on the implants (fig. 6). The intervention was commented by the two instructors of the day. Just before 4 p.m., the patient left Dr. Chaussé's clinic, happy with her new smile.

Attending a live surgery followed by the creation of an implant-supported denture in one day was an impressive experience. Based on the feedback of the participants, everyone was amazed by the efficiency and the quality of the work that was performed during the day. ■

Photo credit Alain Gauthier

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