

Fitting Prostheses on Champions® Implants According to MIMI®

Treatment with endosseous implant-supported dental prostheses is becoming more and more integrated into dental care. Nontraumatic surgical methods have been growing in importance to meet the needs of an aging patient population, as well as to address medication substitutions (incl. ASS and Marcumar). The MIMI® method (the Minimally Invasive Method of Implantation) with Champions® implants has proven very beneficial for patients.

Author: Dr. Armin Nedjat, Implantology specialist, Diplomate ICOI

Translation: Celina Jelonek

At present, more than 50.000 Champions® implants are placed every year in Germany alone. In recent years, the MIMI® implantation method with Champions® implants has been growing in popularity throughout the world.

In 2006, a 68-old patient was provided with two implants using the conventional implantation method at a specialty clinic.

This surgery included complicated and expensive procedures such as navigation, augmentations, and periosteum detachment, and also required a healing time of several months. Unfortunately, the patient lost the two implants a few months later. After hearing about MIMI®, the “key-hole surgery” of Dental Implantology (www.mimi-info.de), the patient wanted to learn more. Once he had been fully

informed, the patient decided to have the MIMI® treatment.

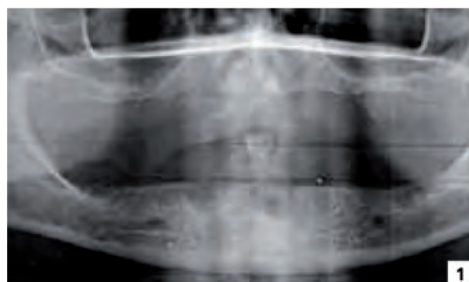


Fig. 1 - 6: We have placed the implants according to the MIMI® method: if the periost is not iatrogenically injured, there is very little risk of complications, and the patient will normally not feel any post-surgery pain. This is the secret of MIMI®: The bone and the periost, which nourishes bone, will remain intact! Usually, a day after implantation, the patient will not feel pain, and the removable prosthesis will be fitted. The implants can be immediately loaded if there are at least four teeth/implants in the mandible and at least six implants/teeth in the maxilla. You can also combine natural telescopes with tulip-headed implants.

First, the implants were inserted in the mandible. Placing tulip-headed Champions® is optimal in this clinical case since the Champions® tulips can be kept in very good hygienic conditions on a long-term basis. After decades, care for the prosthodontic restoration can still be provided, even for patients with physical handicaps.

While planning surgery, we perform a DVT or a CT when we need further important information about the anatomy of the patient, beyond what is provided by OPG-2-dimensional X-rays. I would not recommend standard diagnosis through 3-D X-rays because patients risk being exposed to high radiation doses. In addition, you can work without a standard

drilling template under a clear line of sight and with constant palpation possible.

Drilling templates are not 100% reliable. There is no software program that can evaluate and analyze bone better than the dentist who performs the surgery and who can feel and palpate the bone cavity. Actually, performing excellent

surgery is something of an art. As a beginner in Dental Implantology, you should not overestimate the simplicity of the Minimally Invasive Method of Implantation. Should you not be able to touch and palpate the bone cavity (also with your fingers), you should refer the

patient to a specialist. In fact, you need to change your surgical planning in some cases. If you can't feel hard bone in an ideal prosthodontic position while you are examining the part transgingivally with a pointed triangular drill, you should examine it within a 1 mm-radius until you

reach a hard part. Then, you drill the bone cavity with the yellow drill (in general, the only drill used for the maxilla) at a rotation speed of 250 rpm (see blue arrow in Fig. 8).

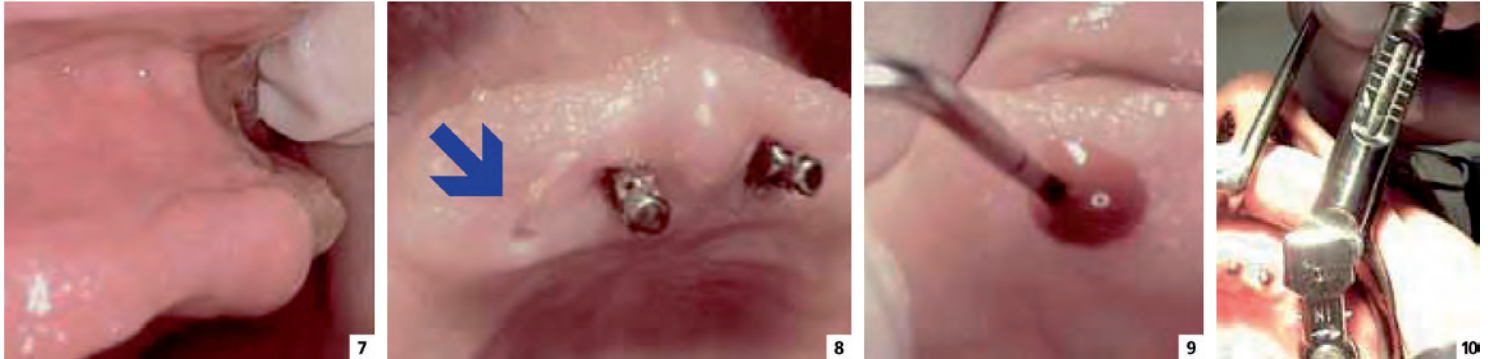


Fig. 7 - 10: Since Champions® are not self-tapping implants (like certain „Mini“ implants, which are made of Grade V-titanium, you have good control over surgery. By using a sterile BCC probe (Bone Cavity Check probe), you can check the bone cavity in all five dimensions. Then, the implants can be slowly inserted with determined force (preferably at a torque of 40-60 Ncm). In this way, the implants can serve as an osteotome. You can see at which force the Champions® are inserted to achieve primary stability. If the middle line moves from 20 Ncm to 40 Ncm and if the torque wrench bends at a torque of 40 Ncm (Fig. 10), you will achieve 40 Ncm.



Fig. 11 and 12: Please note: if the tulip does not stick out enough from the gingiva and if the gingiva risks „growing“ over the tulip, you should set a semi-permanent matrix on the implant. In this way, the gingiva can be „shaped“ around the implant. Later, the matrix can be fitted without any problems (see blue arrow)...



Fig. 13 - 16: A long-term temporary and/or an impression for the MMT matrices with the corresponding O-rings (or optionally, the Preci-Clix matrices) is/are made with Impregum. It is important to take the impression with the prosthodontic restoration in the mouth (while in closed occlusion) so that there are a) no pressure areas and b) no occlusion changes. Impregum is suitable for relining of long-term temporaries. In addition, Impregum is more suitable for prosthodontic restorations than other soft synthetic material types, as it does not cause soft tissue to get irritated...



Fig. 17-18: Even many years later, the long-term clinical and radiological results have proven beneficial. Of course, a good prosthesis is necessary. The implants have an average success rate of more than 95% (over 10 years). Champions® users collaborate with excellent certified master dental laboratories in Germany (you can find a list of certified dental laboratories at: www.champions-implants.com and www.mimi-info.de).



Fig. 19: Taking an X-ray image of the tooth that is going to be extracted and obtaining the tooth clinically as well (after extraction) is an optimal measurement procedure. If you do not perform an immediate implantation, you should document the length of the extracted tooth or of the dental root in the patient file. This procedure is particularly recommended when you extract a molar in the maxilla since you have a 3-dimensional view of it then. In this way, certain DVTs, for example, can be avoided before the implantation.

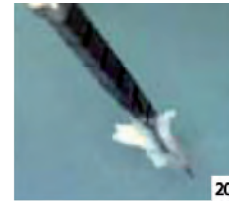


Fig. 20 - 22: While drilling, autologous bone chips are collected on sterile glass plates. They are treated with a sterile hyaluronic acid solution, and eventually, collagen can be added to it. Before the implantation, we implant them in the prepared soft bone cavities. In this way, you can avoid a lot of augmentations with alloplastic material (indirect sinus lift). This is more comfortable for the patient. You can fill the remaining alveoli if you perform an immediate implantation.



Fig. 23 - 26: The telescope tooth 43 and tooth 42 could not be preserved [Please note: The tooth numbers mentioned refer to the FDI Notation System (Dental Chart)/ Two-Digit World Dental Federation Notation, and the US uses a different notation system]. The patient wanted to keep his old prosthodontic restoration. We extracted the teeth and placed the implants according to the MIMI® in the healthy bone areas. Then, we took an impression with Impregum and filled the alveoli with hyaluronic acid, autologous bone and collagen.



Fig. 27 - 30: After taking the X-rays, we took an Impregum impression and placed the laboratory analogs in the impression (we did not need impression copings). Then, the model was made in the dental laboratory ...



Fig. 31 - 34: ... We widened the available prosthesis, then, set the passive-fitted and lasered MMT matrices in the available model cast. Even after many years, the old prosthodontic restoration remained intact. The 4th quadrant and the telescopes in the 3rd quadrant were stabilized thanks to the MIMI® implantation..



The Minimally Invasive method of Implantation is efficient, but we shouldn't underestimate its difficulty. In my view, the standard conventional implantation method is sometimes easier, but with the conventional treatment, there is a higher risk of complications and poor bone nutrition.

Good surgeons should be able to perform both conventional implantations and MIMI® implantations. As dentists, our slogan is: "Minimal Incisions Are the Keys to Successful Surgery!" For instance, a small crestal incision can be considered minimally invasive for a mucosa thickness of more than 5-6 mm. In this case, the periost will not be injured, which will avoid poor bone nutrition. This procedure is also very beneficial for extremely thin jaws.

In addition, the Champions® are available in one-piece and two-piece implants.

The new two-piece Champions® (R) Evolution implants have the following features:

- Integrated „Hexadapter“ (patent-pending), preventing the abutment from rotating.
- Internal cone and a micro-gap that is smaller than 0.6 µm, which prevents bacterial penetration
- Shuttle (previously: the healing cap), which protects the inner part of the Champions®-(R)Evolution implants (in general, the screws do not get loosened as is the case with some other two-piece implant systems)

These Champions® implant features and the MIMI® implant and prosthodontic treatment are innovative, excellent, beneficial and affordable for many patients.

If necessary, bone augmentations can be performed, though they can be avoided in most cases. According to our experiences, TCP-collagen and hydroxylapatite-collagen (for example, Biom'up products) and the combination of pure collagen with hyaluronic acid (Hya-Gel), have

proven clinically beneficial on a long-term basis (these products can also be obtained via Champions®). This material is resorbable, and after a few weeks or months, bone and soft tissue can be regenerated. The implants are not only innovative but also affordable, making excellent prosthodontic treatment available to many patients for the first time. Treatment with Champions® implants can easily be incorporated into the day-to-day work of most dental offices while increasing profitability. Thanks to the MIMI® implantation treatment with the Champions® implant systems, your patients will become your practice's greatest fans.

Champions-Implants GmbH

Bornheimer Landstraße 8
D-55237 Flonheim

Tel.: +49 (0) 67 34 / 91 40 80

Fax: +49 (0) 67 34 / 10 53

E-Mail: info@champions-implants.com

www.champions-implants.com