

MIMI® (Minimally Invasive Method of Implantation) with Immediate Loading of a One-Piece Champions® Implant Square New Art to Replace a Central Incisor:

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A single – tooth gap restoration in the anterior site presents a big challenge for a dental surgeon. A treatment in a critical area can cause anxiety for a patient but can also be an area which is a priority for aspirational treatment.

Immediate loading of single-tooth implants in the esthetic zone can be the treatment of choice for both clinical and psychological reasons.

Good evaluation and techniques to achieve good primary stability are important to ensure a successful implantation, an optimal situation in the buccal and muco-gingival areas, occlusion with support and a functional temporary restoration. Transversal forces that are exerted on the implant should be as minimal as possible. Highly esthetic results can be achieved.

Implant-supported solutions such as a fixed temporary restoration and immediate loading contribute to the patients' quality of life at work and in their social lives. They meet the patients' expectations regarding esthetics and comfort. These advantages often outweigh the disadvantages and reduce treatment stress.

The choice of the treatment depends on the indication. With an implant treatment, the aim is to offer the patient an efficient, quick and esthetic solution, provided that the patient agrees to an implantation. In order to contribute to a successful implant treatment, the patient needs to participate actively. Patients should follow instructions regarding mastication during the first 6 weeks. To patients, MIMI® seems easy because surgery is relatively quick and non-traumatic without follow-up surgeries and sutures.

I would like to describe a case where we applied the minimally invasive implantation method. In the end of July 2010, a 25-year-old man had an accident during his vacation at the swimming pool, where his central incisor in the maxilla became loose. According to the diagnosis, the tooth had to be extracted. The patient had to accept it. He went home, and then he went to the dental office a few hours later because he could not remain in this state.

He was thinking about his accident for a few hours and was frustrated. Many years ago, a dentist provided him with a crown. He did not feel so comfortable with it. He hoped that dentists would prescribe him antibiotics instead of extracting the tooth. However, nothing else could be done than extracting the tooth. There was a suspicion of a fracture before the trauma since a fistula was observed a few months ago, but he got used to it. The patient accepted the situation. With the help of a periosteal elevator, Tooth 21 was gently extracted. The tooth was temporarily replaced by a resin tooth, which was glued to 22 and which had to be treated with care.



Three months later, the patient presented to the dental office. He still wore a temporary restoration. He followed my recommendations and participated well. He was seeking a permanent prosthodontic restoration. We were thinking about dental implant treatment, but the patient was afraid of further surgery in his front teeth site because he did not want to be reminded of his trauma in the summer. In addition, as a seasonal worker, he did not have so much time. Most of all, he could not afford an expensive treatment. That is why he looked for an implant treatment at a good price-to-performance ratio.

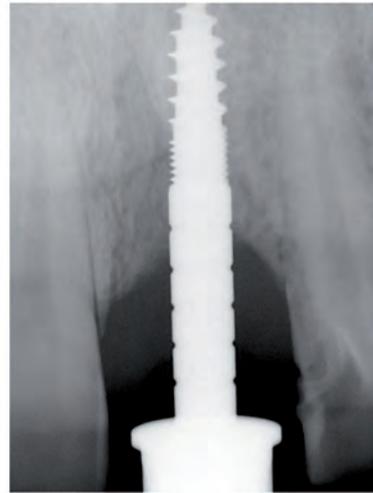
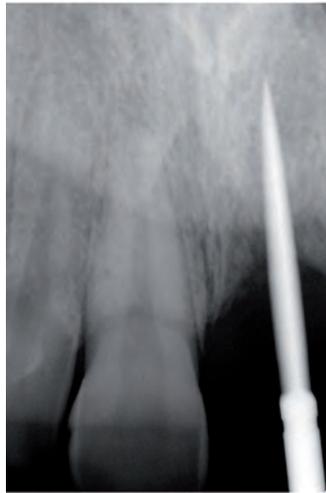
I treated this patient with MIMI® (Minimally Invasive Method of Implantation). This method has been highly developed in Germany, and I have applied it since 2009. Both one-piece and two-piece Champions®-implants can be placed transgingivally (flapless) with MIMI®. I have performed more than 400 implantations with this "simple" technique and documented it with X-rays. In my experience, I have not regretted performing implantation with this technique.

A one-piece implant can be prosthetically restored on the implant head, or a zirconium or titanium Prep-Cap can be set and cemented on it to adjust the emergence profile and to correct the axis up to 12 degrees.

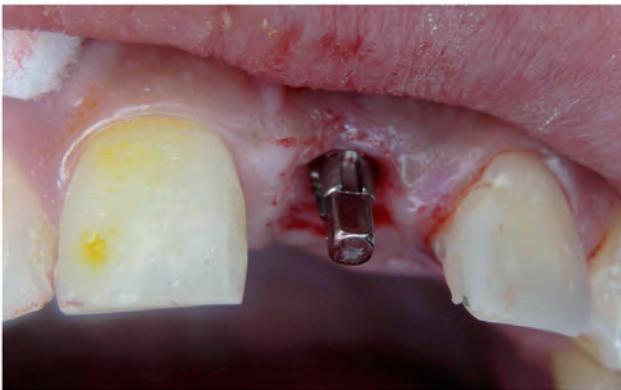
At this time, only the one-piece implants were available in the product range. Since Spring 2011, the product range has expanded to include the two-piece Champions Implant R(E)volution®, which can be placed with this surgery procedure. With this two-piece implant system, there are often no problems with immediate loading management.

The MIMI® procedure is an uncomplicated alternative. You can prepare the implant bed by performing trans-mucous drilling with a 2 mm-diameter pyramidal drill at low speed (300 rpm).

According to the "keyhole" ("Schlüsselloch") concept, the prepared bone cavity can be checked with a periodontal probe. After checking the bone cavity, the cavity is widened with bone expanders of 2 mm, 4 mm, and 3 mm like an osteotome. Using the Torque Wrench, you can feel bone resistance and see which torque value can be reached. The periosteum is not injured, and there are just a few or even no follow-up surgeries. Depending on bone type, there are different preparation protocols to ensure good bone condensation and to reach a sufficient torque for placing a Ø 3.5 mm implant or when necessary a Ø 4.5 mm or Ø 5.5 mm implant. In this case, we placed a Ø 3.5 mm and 16 mm - long one-piece Champions® Implant Square New Art mm at a torque of 60 Ncm.



After placing the implant, a straight zirconium Prep-Cap was cemented with glass ionomer base cement (GC Fuji 9) and immediately treated in the mouth of the patient.



A temporary restoration was made. Excellent esthetics and proper function could be restored: contact points were checked under functional occlusion, and no anterior guiding elements were set on this tooth.



For 6 weeks, during the bone remodeling phase, the patient should follow the instructions for mastication. The patient needs to participate actively. In case of doubt, the dentist/dental assistant should remind the patient of these recommendations during the healing time 3 weeks post implantation. Patients could get used to their implants to an extent that they do not notice them anymore.

As a rule, I wait 7 weeks until I make the impression. Then, I fit the prosthesis. However, since my patient had often been away, I was only able to see him 6 months later. I made a direct impression. Then, I fitted a full-ceramic crown on the zirconium Prep-Cap and implant. The X-ray images showed a good integration of the implant with good bone growth at the coronary micro-windings.



My patient was satisfied with the results. He said that MIMI® had been performed in only few sessions with very few constraints. He was happy to have a new central incisor and to smile again.



The MIMI®-technique avoids the 3 big barriers to dental implant treatment: fear of surgery, a long treatment time, and a high financial burden.

When offering patients a more efficient, uncomplicated and affordable treatment such as MIMI®, which does not require incisions, sutures, and many follow-up surgery sessions, most patients prefer MIMI® to the conventional flap implant placement. This also goes for patients who have already been treated with the conventional method with flap reflection.

MIMI® has become the standard of care in many tooth replacement situations since the intervention is minimally invasive and comfortable, and after anesthesia the function can be restored. Patients then feel more comfortable, can speak again, and enjoy their professional and social life.

A dental surgeon should not be showcasing that he or she can perform some complicated surgical procedures well. If the patient finds the treatment simpler and more comfortable because the gingiva is not incised, it will make for greater success for the dentist compared with the performance of a long-lasting, complicated and painful surgical procedure.

As is the case with endoscopic surgery, it is necessary that the dental surgeon has considerable dexterity, experience and skills in the field of Implantology, including traditional Implantology, in order to apply the current MIMI® method.

Dental surgeons who have incorporated Implantology as a treatment in their dental offices can perform implantations with immediate and delayed loading using MIMI®. This therapy is accessible to many patients.

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Senses Innovations Award 2013

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"One of the best surfaces!"

(Study at the University Clinic
in Cologne, 2010)

"No micro-gap!"

(Zipprich Study at the
University of Frankfurt, 2012)

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