

## A Paradigm Shift in Immediate Implantation?

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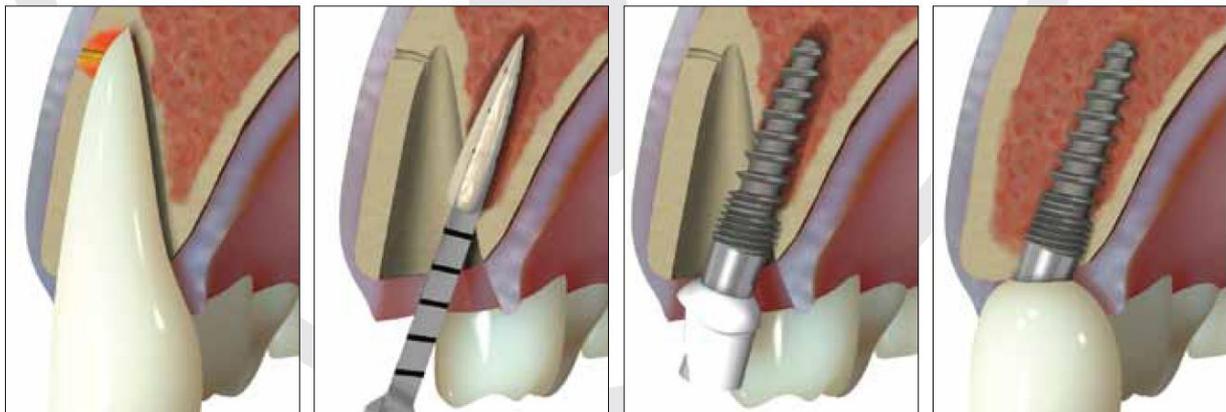
**Immediate implantation is becoming integrated into dental care in dental offices and clinics. In order to respond to increased demand for immediate implantation, there is a need to continuously update and review continuing education course contents in the field of Dental Implantation.**

**I have had good experience with the CIIC concept for more than 15 years. "CIIC" is the abbreviation for "Champions® Immediate Implantation Concept". "CIIC" is based on an old but successful concept, and patients can benefit from this treatment: the implant is inserted in solid and healthy bone that does not need to be augmented.**

Literary sources and studies have shown that the incision in the mucosa, especially a vestibular mucoperiosteal flap, should preferably be avoided (flapless surgery would be the preferred procedure). In recent years, the one-piece Champions implant has made an excellent name for itself in Germany. This implant is a high-quality, cost-efficient osteotome implant, which can be restored easily after surgery. Due to the crestal micro-thread design of this type of implant, surrounding bone can be condensed laterally, and good primary stability can be achieved. The implant surface is blasted with zirconium and etched.

The implants are manufactured in one of the biggest implant production plants near Mannheim in Germany. The European CE marking has been affixed to the implants, and the implants have also been approved by the FDA. According to this concept, the implants are not inserted in acute inflammatory areas (also after a thorough curettage of the alveoli). Usually, the drills are prepared lingually/palatally in healthy, inflammation-free alveolar bone with a conical, yellow three-square drill and eventually with the corresponding osteotome condenser. The primary stability of over 40 Ncm can almost always be achieved with 3.5 mm - diameter implants. The secrets of success of delayed implantation and of immediate implantation with this implant system are:

The yellow and black conical (!) three-square drills with laser markings (every 2 mm), which do not "slide down" the bone wall, but instead – like the implant itself – even allow to condense bone. The implant is inserted and condensed at a minimum of 40 Ncm and at a maximum of 70 Ncm of force to achieve primary stability.



**Fig. 1–4** Practical procedure: The alveoli are not just filled by the implant itself. After drilling a thin bone cavity in the oral direction with a conical, triangular drill, the Champions® implant is inserted with a torque of at least 40 Ncm to achieve primary stability, and bone can be laterally condensed.

The insertion torque can be intra-operatively checked with the torque wrench, which indicates torques of up to 120 Ncm. As a dentist, you can see exactly at which force you are inserting the implant by using this torque wrench. The micro-thread should be approx. 1-2 mm below the imaginary line between the palatal alveolar wall and the vestibular one and the line between the distal alveolar wall and the mesial one. In this way, the implant can be osseointegrated subcrestally after a few months.

### Case Study

The patient presented to the dental office with a deep subgingival fracture of tooth 22. The tooth could not be preserved. After having gently extracted the tooth while the vestibular bone lamella could be preserved, I inserted a 12 mm-long Champions® implant. In this case, primary stability was achieved at a torque of more than 60 Ncm. That is why we started with a 3.5 mm-diameter implant. After a bone cavity check ("BCC") with a sterile periodontal probe, we inserted the implant 2 mm subcrestally. The implantation was ready when the metal insertion aid reached a depth of 2 mm subgingivally.

After having fitted the optimal zircon Prep-Caps (at present, the Prep-Caps are available in 10 combinations of shapes, angles and cementation heights), we cemented them 2 mm subgingivally with Glasionomer Base Cement. Usually, the excess cement can only flow out in the oral direction but not in the axial direction. Serving as a permanent membrane, the zircon Prep-Caps allow quick Guided Tissue Regeneration and Guided Bone Regeneration, which ensure bone growth and prevent the downgrowth of the gingiva. After the X-ray check-up, the Impregum impression was taken. The 40-year old patient was immediately treated with a fixed temporary restoration. This temporary restoration and the approximal surfaces of the adjacent teeth were temporarily splinted together by hand with composite. In this way, lateral shear forces were not exerted on the implant, and primary osseointegration stability could be upgraded to secondary osseointegration stability. Eight weeks post extraction and implantation, the temporary was removed (which should not irritate the gingiva and which should generally be 1 mm "too short"). Then, the zircon crown was fitted. To a large extent, the Minimally Invasive Method of Implantation (MIMI®) has proven highly beneficial and reliable for patients since it ensures almost 100% preservation of the periosteum.

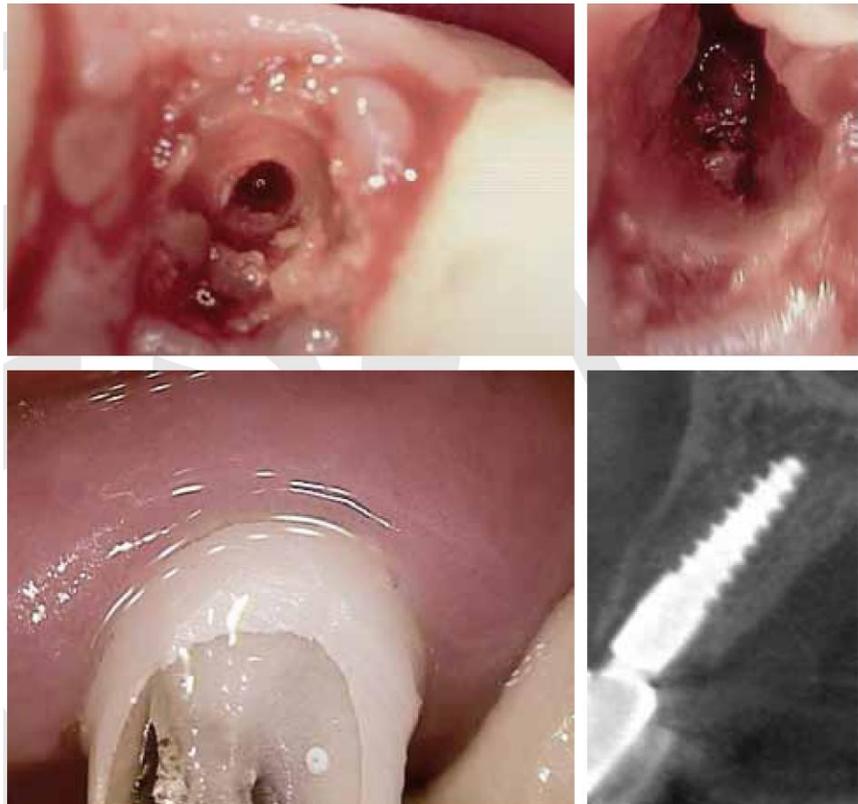


Fig. 5–8: The figures show the following:  
 - View of a dental root that could not be preserved  
 - View of the drill in the palatal direction and of the peri-implant soft tissue with zircon Prep-Caps 8 weeks after surgery  
 -View of the 3-D-sagittal section and the cemented crown 8 weeks post surgery

While preserving still available alveolar bone and vestibular bone lamella, a "ridge and socket preservation" procedure should be performed. As dentists, we should strive to meet the needs of our patients regarding current treatment concepts in Implantology and Prosthodontics: preferably a short treatment, a minimally invasive procedure, first-class aesthetics and also an affordable treatment. The minimally invasive implantation treatment has had a success rate of more than 95% (these statistics – unlike other statistics - have not just been recorded after the fitting process of the final supraconstruction, but also at the beginning of the implantation procedure) –the same success rate that the delayed implantation technique has had for ten years. So far, approximately 2000 implants per year have been inserted and restored in our practice. Since 1994, we have been inserting and restoring endosseous implants, which can usually be immediately loaded.

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