# logo

**Issue 11 | 2015**
CAMLOG Partner Magazine


## CAMLOG FOCUSES ON GROWTH


# IDS REVIEW

## A GOOD MOOD AND AN IMPASSIONED SHARING OF EXPERIENCES

Once again the International Dental Show (IDS) in Cologne from March 10 to 14, 2015, broke all records. The 36th presentation of the world's largest dental trade fair reported more exhibitors, a larger exhibition area, and even more visitors from Germany and abroad than ever before. CAMLOG presented the CAMLOG®, CONELOG®, and iSy® Implant Systems under one roof on more than 250 square meters.

The CAMLOG booth was a fixed point of contact for many visitors where they came to learn about the innovations from CAMLOG, to see familiar CAMLOG faces and to meet friendly colleagues. It was not just trade talk that was the center of attention. Sharing personal experiences and knowledge between colleagues and partners in particular was a huge plus and boosted the good mood at the booth. The booth deliberately created lots of space for sharing experiences, opportunities that were made good use of at the bar or one of the bistro tables. Refreshing drinks and delicious snacks catered for the well-being of our guests and provided the necessary strength for a long day at the trade show.

One of the hottest topics at the CAMLOG booth was the iSy Implant System. We will be expanding the prosthesis portfolio of the iSy Implant System from July 2015 with several prefabricated components. The new iSy® Esthomic® Abutments allow esthetically cemented reconstructions. Screw-retained healing caps and impression posts at the level of the implant will also be available. At the same time, CAMLOG will release the final restoration directly on the implant base. iSy users will therefore have three different treatment options available in the future: transgingival healing with the final restoration on the implant base, transgingival healing with replacement of the implant base with an individual abutment, and subgingival healing with prosthetic components at the level of the implant. You can read more about iSy on page 20.

**We would like to thank all our partners and guests for the many stimulating conversations and the impassioned sharing of professional and personal knowledge and experience at IDS 2015.**


DA PASST EINFACH ALLES.
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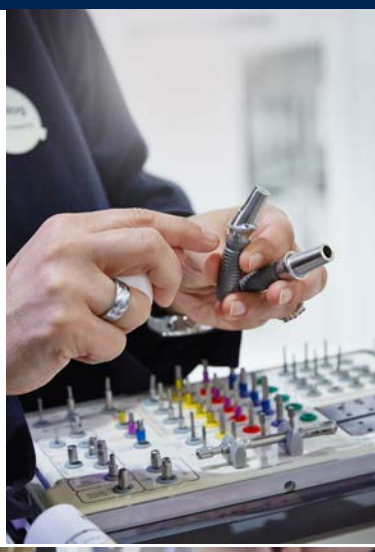
INNOVATION

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# SCIENTIFIC DOCUMENTATION OF THE CONELOG® IMPLANT SYSTEM – FACTS AND FIGURES AT A GLANCE

Françoise Peters BSc MPH, CAMLOG Biotechnologies AG

Very few implant systems have been systematically and thoroughly documented in the literature. The CONELOG® Implant System belongs to this exclusive club because encouraging independent research is fundamental to the CAMLOG strategy **(Fig. 1).**

With product innovations, three points of view must be considered: those of the manufacturer, the dentists and surgeons, and the patients. The creation process includes many factors such as technical product development, clinical research, marketing authorization, product registration, and market launch. In today's progressive developments in dental implants, there is almost no room for serendipity. Each step is regulated and controlled; following the norm has become everyday practice. Discovery by accident was reported the last time for Platform Switching by Lazzara & Porter (2006) [7].

According to the majority of professionals using dental implants, the scientific documentation of a product plays an important role when selecting a specific system.

However, it is almost impossible for a user to read all the peer-reviewed publications in the 84 journals listed as having impact factor (ISI 2013) [6]. Russo et al. (2000) [11] wrote fifteen years ago that in order to remain up-to-date in the field of oral implantology, it would be necessary to read at least two papers each week every single week of the year and apply their recommendations.

On the other hand, patients also collect information about the benefits and risks of a surgical procedure – from the internet, social media, and blogs. They are convinced that they are well informed. They could make their decision on the basis of emotions instead of facts.

The following summary provides insights into the scientific documentation of the CONELOG® Implant System based on facts and figures. We recommend that interested readers investigate the CAMLOG literature overview which has a number of scientific references **(Fig. 2)** [2].

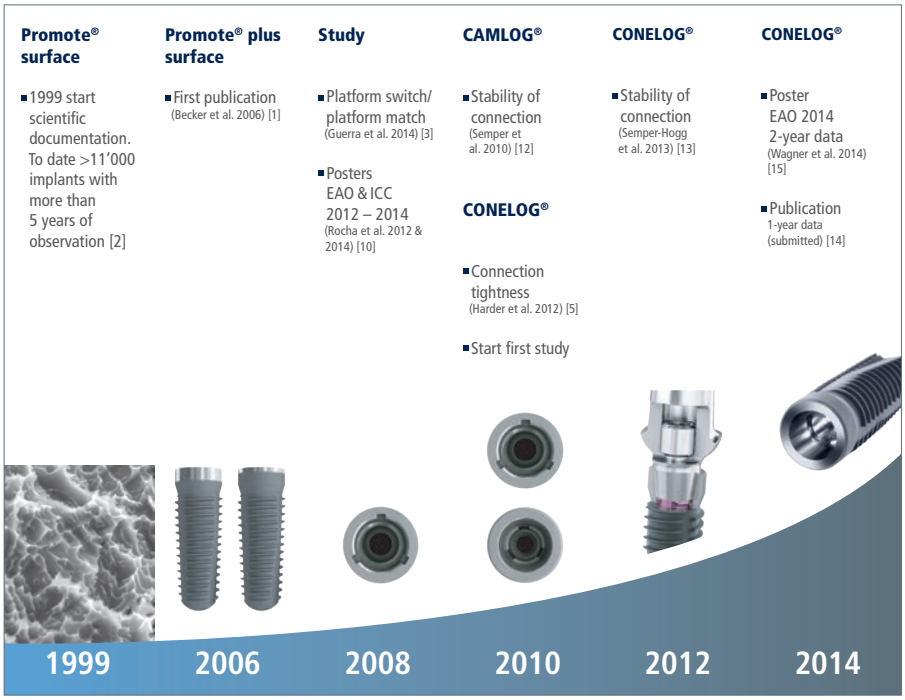


**Fig 1:** The development of the CONELOG® Implant System is based on a solid foundation of scientific research

## Precision of the conical connection

CONELOG® implants offer an implant-abutment connection with self-locking cone geometry. Several mechanical tests have demonstrated the precision of the connection (Semper et al., 2010; Semper-Hogg et al., 2013) [12,13].

Microgaps and its consequence, i.e. microleakage or bacterial penetration in a conical connection are impossible to eliminate (Harder et al., 2010, 2012) [4,5]. The lack of a microgap could result in cold welding of the connection and would make later replacement of the abutment as good as impossible. Therefore, small tolerances are required to minimize but not eliminate this gap. The rotational freedom and ability to vertically reposition the abutment play a major role in the precision of the prosthetic restoration **(Tab. 1)**. An in-vitro study (Nelson et al., 2013) [8] with hand-tightening of the abutment showed excellent results for the CONELOG® Implant System compared to 5 other systems with conical connections.

## Excellent results for the bone level changes with Platform Switching

There are several ongoing clinical studies which aim primarily to evaluate crestal bone preservation at the implant neck or to evaluate the outcomes of different implant lengths. Preliminary results have demonstrated good preservation of the crestal bone post loading (mean value +0.12 mm). Rocha et al. (2013) [9] presented the results for CONELOG® Implants after one year at the EAO in Dublin. These

| Implant system | Rotational freedom (°) | Vertical height deviation (µm) |
|---|---|---|
| Nobel Active | > 5 | > 50 |
| Ankylos C/X | > 5 | < 50 |
| Astra Tech | > 4 | > 50 |
| CONELOG | < 3 | < 50 |
| Bone Level | > 3 | > 50 |
| Tissue Level | > 3 | < 50 |
| External hexagon impact connection (Steri-Oss, Nobel Biocare) | > 3 | < 10 |

**Tab. 1:** Rotational freedom (°) and vertical repositioning of 6 systems (adapted from Nelson et al., 2013)

preliminary results confirm the outcomes of the on-going multicenter study performed on CAMLOG® Implants with and without Platform Switching (Guerra et al., 2014) [3], which demonstrated an excellent maintenance of the crestal bone level with a bone-level change at one-year post loading of only 0.08 mm (with Platform Switching).

## Conclusion

The solid documentation of the CAMLOG® and CONELOG® Implant Systems is based on independently collected data or on scientific evidence sponsored by the company. This is an important contribution to CAMLOG's success story. More than 11,000 implants with a Promote® surface present follow-up data of at least 5 years. The use of Platform Switching (Rocha et al., 2012, 2014) [9,10] and the stability of the implant-abutment connection are key factors contributing to the good integration of CONELOG® Implants.

## 4th Research Award – Deadline for registration November 30, 2015

The CAMLOG Foundation plays an important role in the promotion of research of young talented scientist. The competition for the 4th CAMLOG Foundation Research Award is open.

You can find more information on our website at www.camlogfoundation.org.

## LITERATURE


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[7] Lazzara RJ, Porter SS. Platform switching: a new concept in implant dentistry for controlling postrestorative crestal bone levels. Int J Periodontics Restorative Dent. 2006 Feb;26(1):9-17

[8] Nelson K, Zabler S, Wiest W, Schmelzeisen R, Semper-Hogg W. Die Implantat-Abutment-Verbindung. Implantologie 2013;21(4):355-63

[9] Rocha S, Wagner W, Wiltfang J, Guerra F, Moergel M, Behrens E, Nicolau P. Platform switching vs platform match: interim results from a prospective randomized-controlled multicenter study. Short Oral Communication Ref 100, EAO 2012, 22th Annual Scientific Meeting, Copenhagen, Denmark

[10] Rocha S, Wagner W, Wiltfang J, Guerra F, Moergel M, Behrens E, Nicolau P. Platform switching versus platform matching: two-year results from a prospective randomized-controlled multicenter study. Poster, 5th ICC 2014, Valencia, Spain

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[13] Semper-Hogg W, Kraft S, Stiller S, Mehrhof J, Nelson K. Analytical and experimental position stability of the abutment in different dental implant systems with a conical implant-abutment connection. Clin Oral Investig;2013:17:1017 (first published online 2012)

[14] Wagner W, Moergel M, Rocha S, Nicolau PM, Guerra F. Performance of the CONELOG® SCREW-LINE implant in the posterior mandible – one year results of a prospective two center pilot study Poster P312, EAO 2013, 23rd Annual Scientific Meeting, Dublin, Ireland

[15] Wagner W, Moergel M, Rocha S, Nicolau PM, Guerra F. Clinical performance of the CONELOG® SCREW-LINE implant in the posterior mandible - preliminary 2-year results of a prospective two center pilot study Poster P464, EAO 2014, 24th Annual Scientific Meeting, Rom, Italy



**Fig 2:** The CAMLOG®/CONELOG® Implant Systems are supported by more 700 publications.
More than 200 of these are peer-reviewed publications. A selection is referenced in the "Literature overview" provided by CAMLOG.

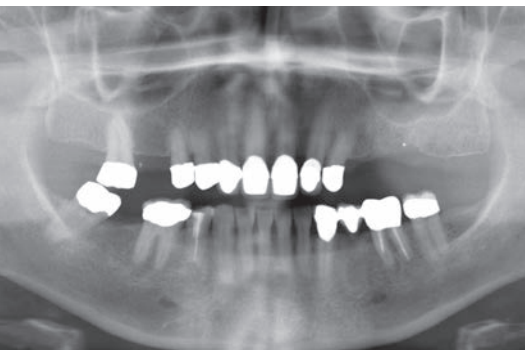

**Fig. 1:** The X-rays shows the initial situation for the patient prior to reconstruction of the maxilla and mandible.

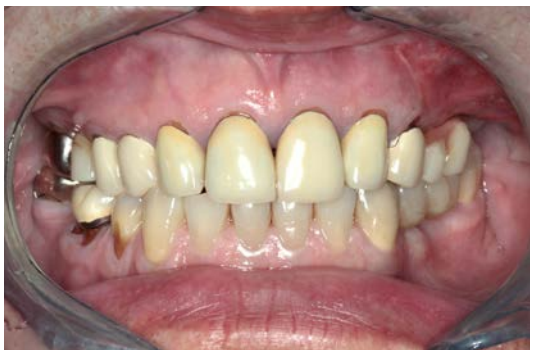

**Fig. 2:** The patient was bothered by the transverse bar in the maxilla, the poor chewing function, and the esthetics.

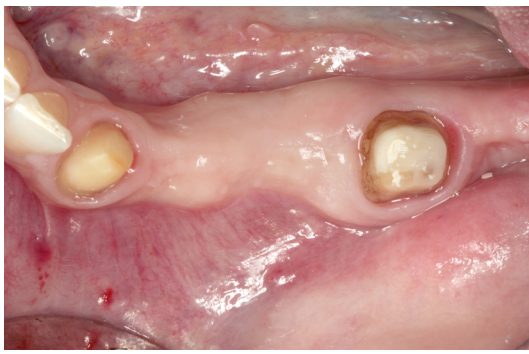

**Fig. 3:** A bone defect was already suspected during the visual examination.

# AN IMPLANT PROSTHETIC TREATMENT CONCEPT – THINKING BIOLOGICALLY AND PLANNING FOR SUCCESS

**Dr. Kai Zwanzig, Bielefeld (Germany)**

Over the past few years we have learnt a great deal about the biology of the oral cavity. Our job now is to systematically apply this knowledge. Implantology has become a complex discipline in which it is extremely rare to manage without augmentative measures. The peri-implant soft tissues must be given a great deal of attention because they play a critical role in an esthetic reconstruction that is stable over the long term. Full-ceramic restoration components around the emergence profile provide considerable support for the biology and are now considered the gold standard.

## Case description

**Figures 1 and 2** show the clinical situation of the 52-year-old female patient described in the article. After completion of the preliminary examinations and a detailed explanatory discussion, and taking into consideration the patient's wishes for a fixed, full-ceramic restoration, the following treatment plan was specified. Tooth 36, which had received root canal treatment, was extracted because the endodontic revision had a poor prognosis and would have been very protracted and expensive. Although the patient had been very critical of an implant procedure prior to the consultation, in agreement with the patient we opted for a single crown restoration on two implants in regio 35 and 36. We apply this strategy if the long-term prognosis of a tooth directly in the surgical area cannot be guaranteed and the costs of revision exceed those of the implant. A laboratory-prepared long-term temporary abutment temporarily closed the gap from 33 to 37, which also showed the patient that a bridge restoration definitely would not be a solution for her in this area.

The article describes restorative therapy that enables one to achieve predictable results that are stable over the long term.

## The surgical phase

Based on the visual diagnosis, it was suspected prior to the surgery that there was a considerable bone defect **(Fig. 3)**. A three-dimensional X-ray did not appear sensible in such a case because there would not have been any therapeutic consequences if the patient had been informed prior to surgery of the need for implant restoration with bone augmentation. In regio 35 and 36 a full-thickness flap was formed to expose the bone surface in the surgical site **(Fig. 4)**. The flap is extended mesially and distally as a split-thickness flap with no vertical releasing incisions to give the flap sufficient mobility and to avoid unnecessary deperiostation, which always leads to bone resorption. The external visual findings were confirmed during surgery. With the help of a guide template, the implant bed was successively prepared in the prosthetically correct orientation using rotary instruments **(Fig. 5)**. Even before insertion of the implant the buccal cortical bone was perforated in places. We expect more rapid migration of vital cells from the induced bleeding sites **(Fig. 6)** into the augmentation material [8,16]. We do this before implant insertion because

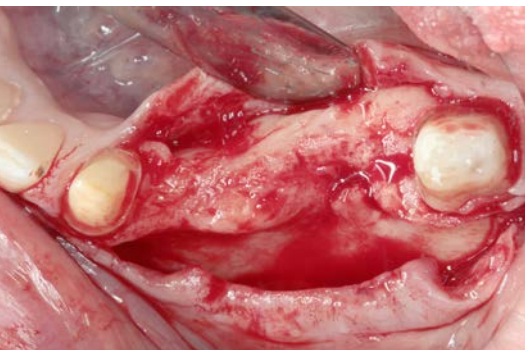

**Fig. 4:** After the flap formation, the occlusal view revealed the hard tissue defect in the implant region.

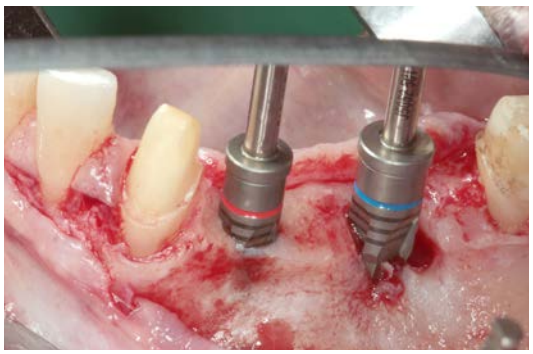

**Fig. 5:** The implant bed was prepared successively with rotary instruments in the correct position for the prosthesis using a guide template.

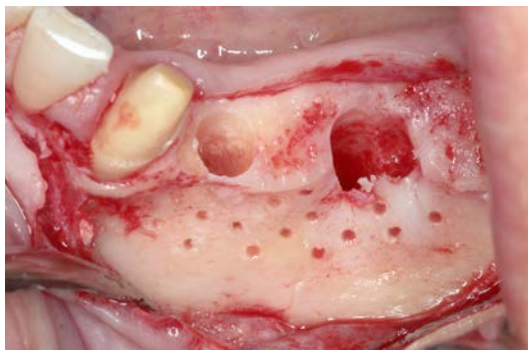

**Fig. 6:** Before the implantation the vestibular cortical bone was perforated. The bleeding sites encourage more rapid migration of vital cells.

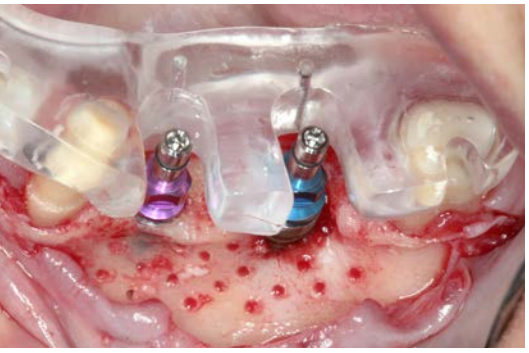

**Fig. 7:** After insertion of the implant, the guide template was again positioned to check optimal alignment of the prosthesis.

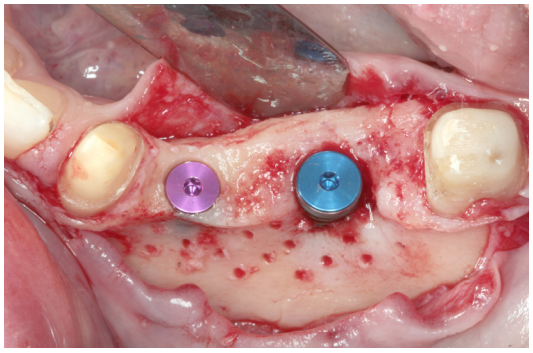

**Fig. 8:** The image shows the exposed threads of the implant and the very thin buccal bone wall prior to the bone augmentation.

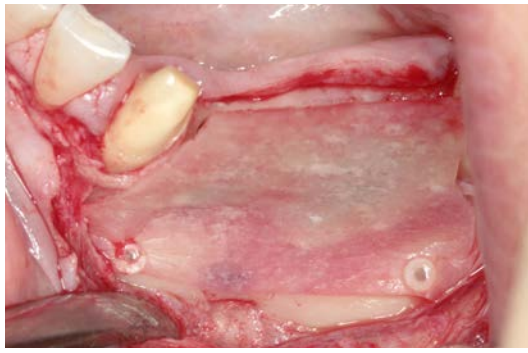

**Fig. 9:** To prevent movements in the augmentation material, a very thin and stable bone lamina was first fixed to the bone with resorbable pins to act as a membrane.

this allows us to reliably avoid damaging the surface of the implant with the Lindemann bur. We inserted a CAMLOG® SCREW-LINE implant with a diameter of 4.3 mm in regio 35 and a CAMLOG® SCREW-LINE implant with a diameter of 5 mm in regio 36. Both implants have a length of 11 mm, which is in accordance with current trends towards overall shorter implants. The correct position was then checked again using the template to guarantee an optimal prosthetic restoration **(Fig. 7)**.

After the insertion, the bone defect had to be augmented on the buccal side **(Fig. 8)**.

The prerequisite for successful bone augmentation is healing of the augmentation material in a stable position with no complications. The augmentation material must be covered and any movement prevented because otherwise there is connective tissue healing that endangers the long-term success [1, 6, 7, 17]. If one opts for augmentation in the lower posterior area with particulate material without adequate stabilization, it must be expected that the strong muscle pulls from the cheek and the resultant movement will ensure that complete bone regeneration will not take place. A rapidly resorbed collagen membrane as a simple support is also not suitable [13,14]. Therefore, in our practice we have applied a technique for many years that relies on a very slowly resorbed membrane. This membrane is also a little stiff, which ensures that the augmentation material does not move and also gives the underlying material enough time to migrate into stable bone [25].

OsteoBiol Soft Cortical Lamina, a thin, smooth porcine cortical bone lamina containing collagen, is the best option to allow the underlying regenerated tissue to mature. The lifetime of the membrane is about six months, which is optimal for the augmentation material if additional xenogeneic material is used. After hydration in PRGF and subsequent fixation with resorbable pins (Inion Tac), it can be cut very easily to shape. The membrane remains absolutely stable while still being adequately flexible **(Fig. 9)**.

Fewer of our patients want to use autologous bone as an augmentation material because they fear an additional procedure for the harvesting. We believe that the use of purely xenogeneic material does not achieve the desired outcome for the augmentation because the osteoinductive potency is almost zero, the material is not resorbed enough, and as a result, the proportion of newly formed vital bone is too low. To encourage bone regeneration, therefore, for the last four years we have used allogeneic bone that comprises 80% of the augmentation material. The allogeneic bone has osteoinductive potential and leads to exceptional regeneration [12,28]. The remaining 20% of the augmentation material is made up of BioOss and PRGF **(Fig. 10)**. This mixture produces a very easy to process matrix that can be easily adjusted and adapted to any defect geometry **(Fig. 11 and 12)**. The minimally resorbed, xenogeneic bone substitution material is added to safeguard the long-term volume stability.

The Soft Cortical Lamina is then stretched over the augmentation material and fixed

**Fig. 10:** A mixture of autologous bone, BioOss, and PRGF produces a very easy to handle matrix.

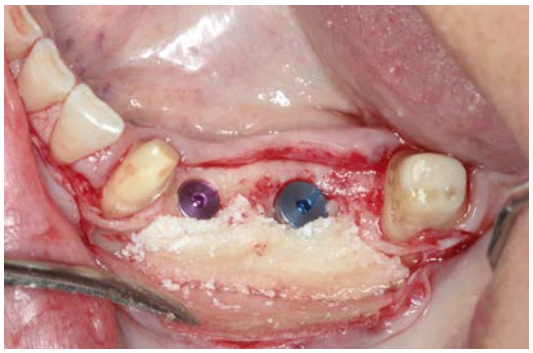

**Fig. 11:** With the bone mixture the jaw bone was augmented both vertically and horizontally.

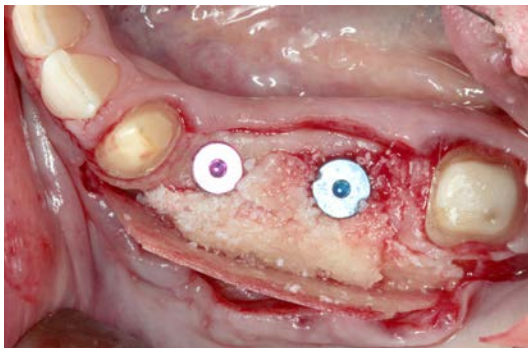

**Fig. 12:** The occlusal view shows the perfectly adapted augmentation material around the implant in regio 35 and 36.

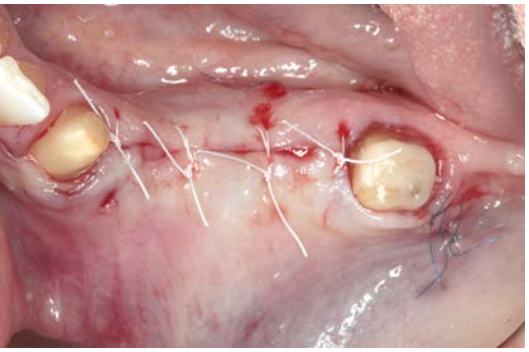

**Fig. 16:** Using two horizontal mattress sutures, the flap was fixed so that the wound margins lay on top of one another free of any tension.

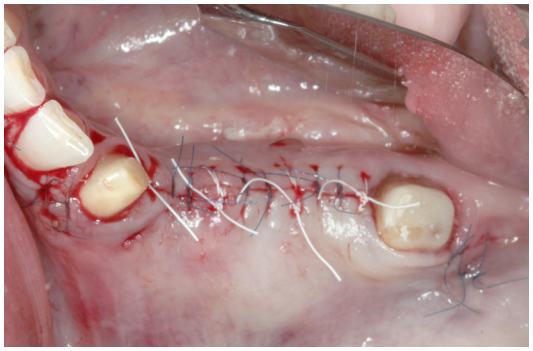

**Fig. 17:** The additional wound closure was done using simple interrupted sutures with a monofilament suture material of size 6-0.

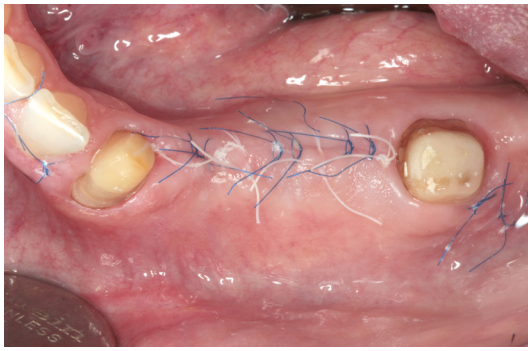

**Fig. 18:** On removal of the sutures after ten days, the site was free of irritation with well healed soft tissue.

lingually with a holding suture to prevent any movement **(Fig. 13)**. To provide additional support of the soft tissue healing, a layer of autologous fibrin is placed over the augmentation material, a process that has been demonstrated to result in better integration and regeneration of the soft tissue **(Fig. 14 and 15)** [15].

The wound is then closed using microsurgical technique. In our opinion, this is the most important step in the procedure along with the flap design because only a clean suture that is absolutely free of tension can achieve the desired outcome. We already prepare for this during the flap formation where the periosteum is split at the sites of the full-thickness flap. The split sections mesially and distally result in a highly elastic flap, which ensures that we can cover the large area of augmentation material without any tension. We intentionally implement this step early so that there is no heavy bleeding shortly before suturing as this always results in significantly impaired healing and irritation. If possible, vertical releasing incisions should be omitted during flap formation to preserve maximum blood supply [10,11]. The flap is firstly fixed with two deep horizontal mattress sutures using a polytetrafluoroethylene suture material (Cytoplast) so that both wound edges already lie over one another without any tension **(Fig. 16)**. Subsequent wound closure is carried out using simple interrupted sutures with a monofilament suture material (6 – 0 Seralene) **(Fig. 17)** [3, 4].

We remove the sutures after 10 days. At this point the site is always completely free of irritation and has well healed soft tissue **(Fig. 18)**.

We usually expose the implant after six months. We know that keratinized gingiva of adequate thickness around the implant is essentially responsible for the long-term success of the implant. For this reason, free mucosal grafts continue to make up a large part of our therapy [21]. Even prior to the exposure, it is apparent that the minimum band of 3 mm of keratinized gingiva required around the implant cannot be achieved with a simple apically positioned flap [5] **(Fig. 19)**. Apical positioning alone would also thin the flap out a great deal, which in turn makes the gingiva less robust and increases bone resorption [18]. This is why we start with apical fixation of the mobile gingival sections of a split-thickness flap deep in the vestibulum to prevent subsequent movement of the peri-implant soft tissue **(Fig. 20)**. After removal of all mobile sections, only the periosteum and a thin layer of connective tissue remains over the augmentation material. During the exposure, narrow, cylindrical healing caps are screwed onto the implants. A free mucosal graft of sufficient thickness is lifted from the palate after measuring and fixed in a stable position and with a precise fit using simple interrupted and cross-stitch sutures **(Fig. 21)**. The periosteum and connective tissue left attached provide nutrients to the transplant; these nutrients are provided solely by diffusion in the first three days. The close contact between the transplant and the recipient bed is important so that the revascularization can occur rapidly for the subsequent supply of nutrients to the free transplant [23]. The harvest site on the palate is always covered by a dressing plate to stabilize the coagulum and to also protect the wound against exogenous factors. After three weeks the transplanted tissue can barely be differentiated from the surrounding tissue; at this point the narrow healing

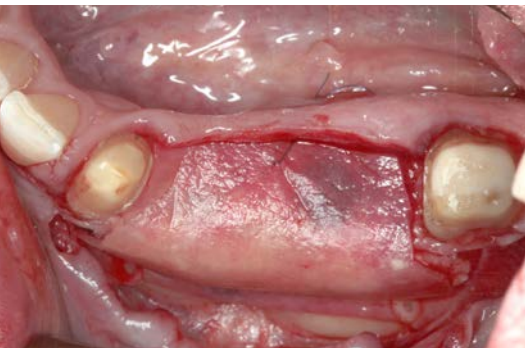

**Fig. 13:** The porcine bone lamina was stretched over the augmentation material and fixed lingually with a holding suture to prevent any movement.

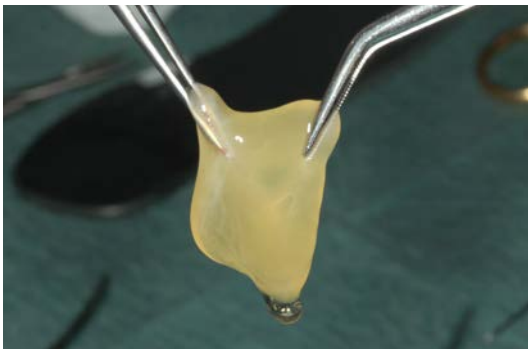

**Fig. 14:** The plasma obtained in the centrifuge contains growth factors and can be applied or inserted anywhere that requires rapid wound healing.

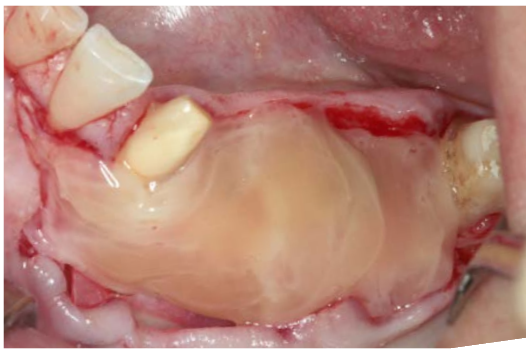

**Fig. 15:** For better integration and healing, a layer of autologous fibrin was placed over the lamina.

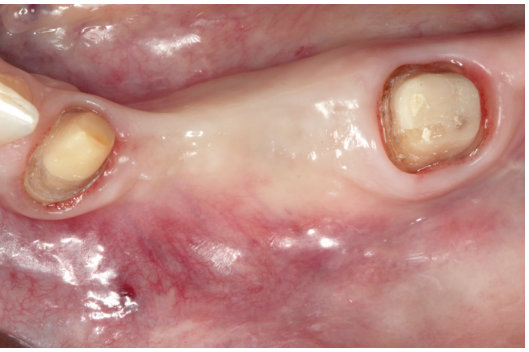

**Fig. 19:** Before the exposure, it became apparent that the minimum requirement for keratinized gingiva could not be achieved with a simple apically positioned flap.

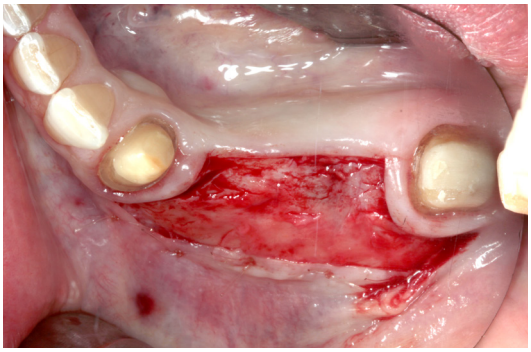

**Fig. 20:** The flap was split deep in the vestibulum and the mobile gingival parts were fixed apically to prevent movements of the peri-implant soft tissue.

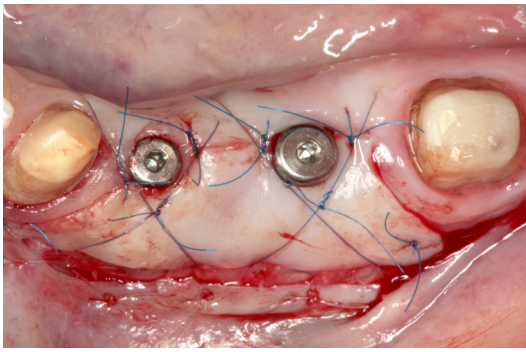

**Fig. 21:** A free mucosal graft from the palate was fixed stably and with a perfect fit using simple interrupted and cross-stitch sutures.

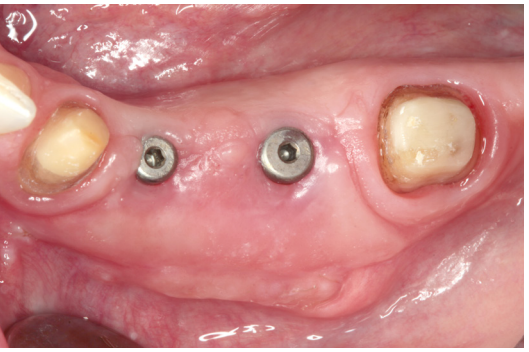

**Fig. 22:** After three weeks the transplanted soft tissue could barely be differentiated from the surrounding tissue…

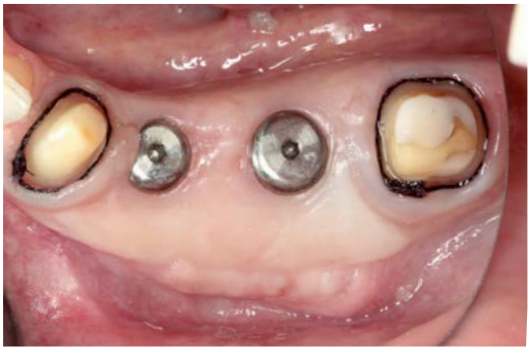

**Fig. 23:** …at this point the straight healing caps were replaced by wide-body healing caps to shape the peri-implant soft tissue.

**Fig. 24:** After the preparation of the teeth with a pronounced concave hollow, the impression posts are screwed on.

caps are replaced with wide-body healing caps to expand the peri-implant tissue in the emergence profile and to prepare for the individual superstructures **(Fig. 22 and 23)**.

## The prosthetic phase

A healing time of two months after transplantation has proven to be a successful strategy with us. After this time we no longer observed any changes in the mucosa. After preparation of the teeth with a pronounced concave hollow, the preparation margins are outlined using a double-thread technique and the impression posts are screwed on **(Fig. 24)**. The impression is taken with silicone in an individual tray and then checked for completeness. Only when all parts of the preparation margins are clearly reproduced is the fabrication of the working cast organized in the dental laboratory **(Fig. 25)**.

A study has shown that residual excess cement was responsible in more than 80% of all cases of peri-implant disease; this is due to the deep location of the cement gap in ready-made parts and it is for this reason that we have not used them for eight years [26]. We want to continue cementing our restorations, however, and therefore try to work in harmony with the biology. This includes first and foremost using individual ceramic parts near the gingiva to locate the cement margins only slightly below the gingiva or even better epigingivally. In areas that are not visible the clinician should even consider placing these margins significantly supragingivally. However, in our opinion full ceramic abutments should be avoided in the posterior region in particular, because fractures are often observed in this area due to the large chewing forces. We believe that the implant-abutment connec-

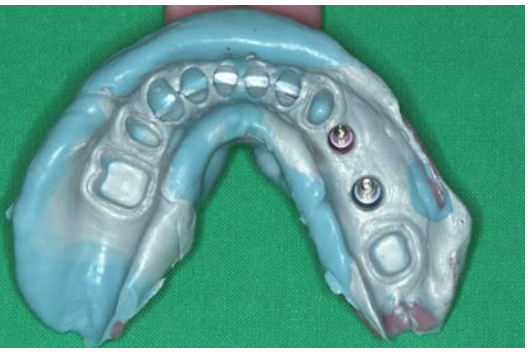

**Fig. 25:** The impression was taken with an individual tray using the open tray impression technique.

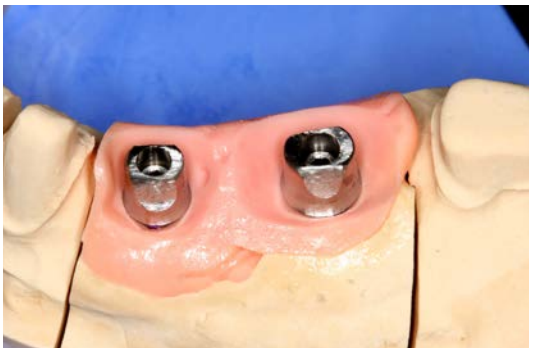

**Fig. 26:** Individualized titanium abutments served as adhesive bases for the hybrid abutments because the reconstruction should be done on Platform-Switching abutments.

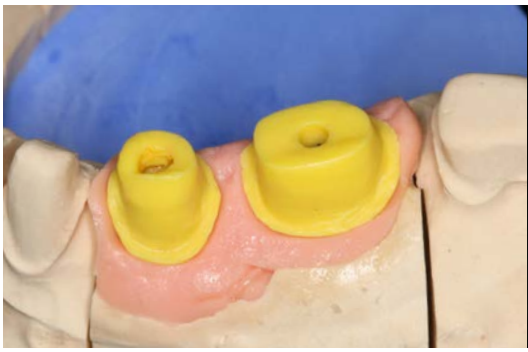

**Fig. 27:** The hybrid abutments were modeled in wax for CAD/CAM fabrication. The later cement gap was located epigingivally.

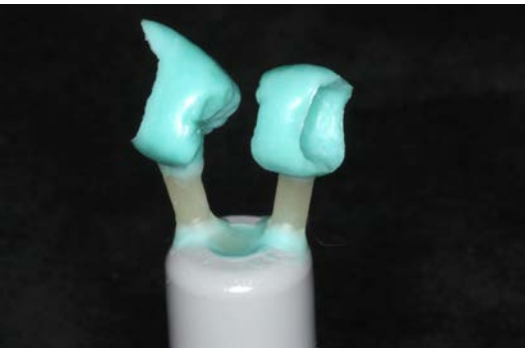

**Fig. 31:** The crowns underwent full-contour wax-up and pressing.

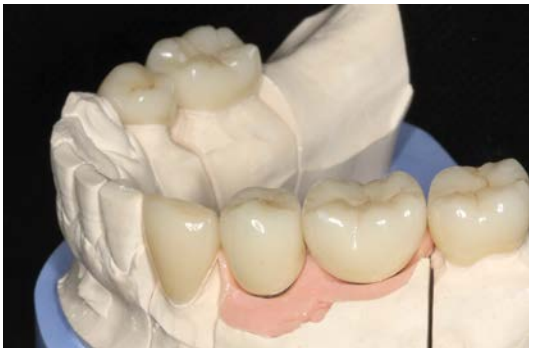

**Fig. 32:** The perfectly fitting IPS e-max Press crowns were stained and polished.

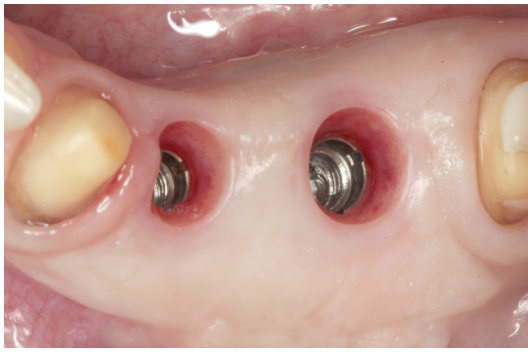

**Fig. 33:** After removing the healing caps, stable soft-tissue cuffs around the implant could be seen.

tion should be made of the same material because this guarantees maximum stability. If possible, we now always try to carry out Platform Switching. This is defined as the diameter of the abutment being less than the diameter of the implant. The resulting shift of the gap in the implant-abutment connection from outside to inside on the implant shoulder is intended to have a positive effect on the establishment of the biologic width and to stabilize the soft tissue on the shoulder. However, this only works with adequate soft tissue thickness [24]. Because CAMLOG does not currently offer any titanium adhesive bases with which such Platform Switching could be done, we use standard abutments that can achieve this. The dental technician must then grind these abutments back so that the connection geometry is not violated and the material remains sufficiently stable **(Fig. 26)**. The subsequently visible, individual part of the abutment is then built up on this customized part. The wax superstructures are then scanned and milled in zirconia with the future cement gap to be located epigingivally **(Fig. 27 and 28)**. After sintering we cement the polished titanium abutment to the zirconia superstructure **(Fig. 29)**. The customization with zirconia means that we have created an abutment that comes very close to a natural tooth in the emergence profile **(Fig. 30)**. It should be noted that the angle with which the zirconia penetrates the soft tissue is not less than 45 degrees because otherwise the gingiva is not displaced but instead compressed, which is likely to cause it to regress. The part of the zirconia that will be located beneath the mucosa must be polished to a high shine so that plaque cannot adhere to the surface. As a result of the high biocompatibility of the zirconia in the emergence profile, a hemidesmosomal attachment of the gingiva can take place, which in the optimal case prevents migration of bacteria apically.

Nowadays we prefer to use crowns made of lithium disilicate for posterior teeth in almost all cases because these are prepared as monolithic restorations and can be adhesively retained. The crowns are waxed up and pressed in-house because the stability of pressable ceramic is higher than milled ceramic. After preparation and customization, the results are perfectly fitting and highly esthetic crowns **(Fig. 31 and 32)**. The healing caps are removed to cement the finished restoration. A stable periimplant cuff of soft tissue is apparent **(Fig. 33)**. The implants are rinsed with CHX and filled with 1% CHX gel. Then the hybrid abutments are screwed onto the implants with a defined torque of 20 Ncm. We use an insertion key that helps us to also check whether the impression was carried out precisely **(Fig. 34)**. After five minutes the abutment screws are retightened with the defined torque to prevent subsequent loosening of the screws. The screw channels are filled with foam pellets and sealed with a light-cured composite. A foam pellet has a number of advantages: it is quickly inserted, it protects the screw head from any composite that penetrates the channel, and it does not develop any wicking effect as cotton swabs do, for example **(Fig. 35)**. Full-ceramic crowns should always be used with adhesive because studies have shown that fractures often occur after conventional cementing [27]. In the lateral view the location of the subsequent cement junction can be seen on the abutments **(Fig. 36)**. We prefer to position these in non-visible areas epi- or supragingivally to ensure

**Fig. 28:** The milled ceramic superstructures in the raw state.

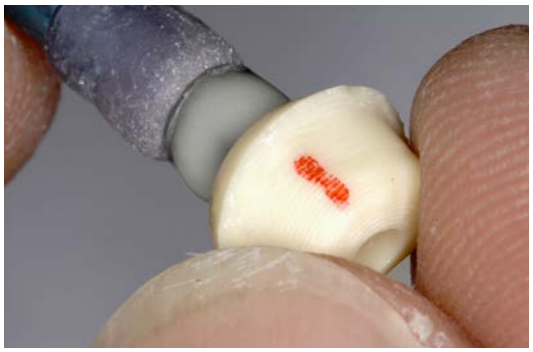

**Fig. 29:** After the ceramic superstructures were sintered, they were then bonded to the customized titanium abutment.

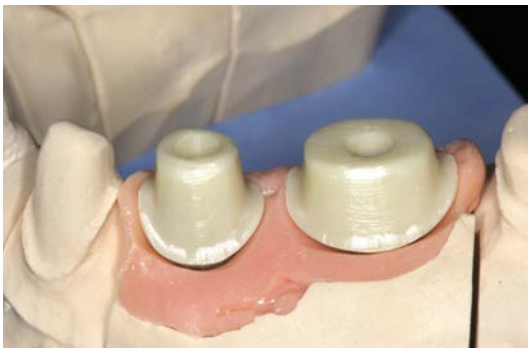

**Fig. 30:** The customized hybrid abutment had an emergence profile that comes very close to that of a natural tooth.

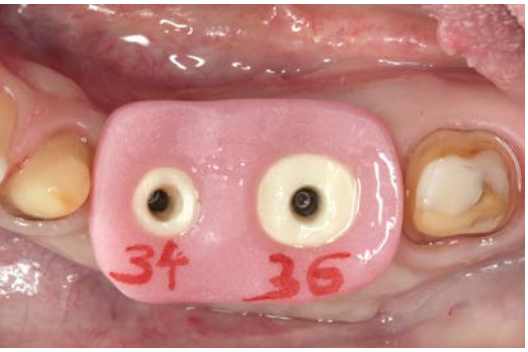


**Fig. 34:** The hybrid abutments were inserted with a key and the precise alignment was checked.

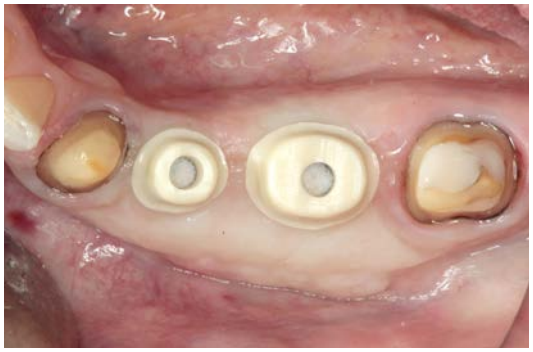

**Fig. 35:** The screw heads were covered with foam pellets and the screw access channels were sealed with light-cured composite.

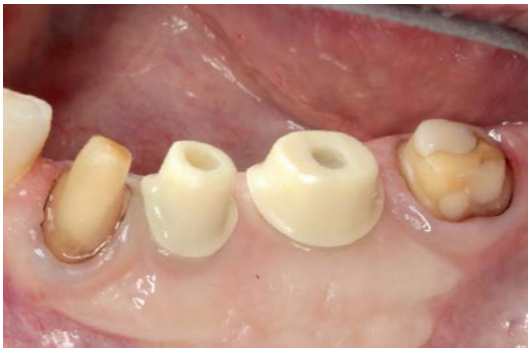

**Fig. 36:** In the lateral view the anatomical emergence profile and the later cement junction located at gingival level can be seen.

that during the adhesion any excessive adhesive can be completely removed. With margins that are located too deeply subgingival, residual cement cannot be removed and leads to peri-implant conditions.

Because of the high biocompatibility of the materials used and the high precision of the parts, just one day after the prosthetic restoration the crowns are already harmoniously integrated into their surroundings **(Fig. 37)**. The radiographic check reveals the precise fit of the restorations and the stable bone after augmentation and Platform Switching **(Fig. 38)**.

The maxilla had already received a new restoration. The patient had been bothered for years by the palatal bar of the prosthesis but was very wary of an implantation. At this stage she could not be convinced to have bone augmentation done so that we were only able to insert three implants using the CAMLOG® Guide System. Because of the compromised hard tissue conditions, CAMLOG® SCREW-LINE implants with machined implant necks were used because the situation is easier to treat should recession develop.

After preparation of the teeth and taking an impression of the upper jaw, the full-ceramic restoration was manufactured in the dental laboratory. The principle applied was analogous to the description of the lower jaw **(Fig. 39 to 42)**. Because there were no complications as a result of the treatment, the patient became more confident and we were able to motivate her to undergo the comprehensive measures in the lower jaw.

At the one-year checkup, we observed significant recessions in the upper jaw near the implants but these are of very little importance visually because of the hybrid abutment. The DVT shows voluminous bone augmentation in regio 35, 36 that was stable and fully reconstructs the lost parts of the alveolar ridge. The situation in the lower jaw is stable **(Fig. 43 and 44)**.

## Conclusion

With correct positioning and dimensioning

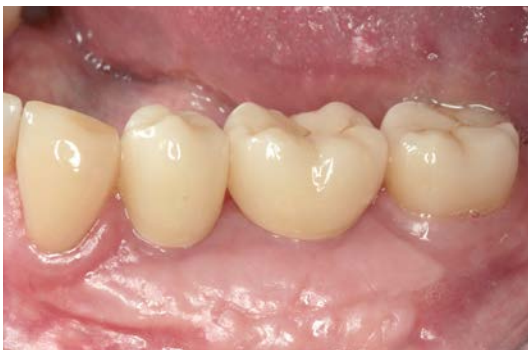

**Fig. 37:** Because of the high biocompatibility of the materials used and the high precision of the parts, the prosthetic restoration harmoniously integrates into its surroundings.

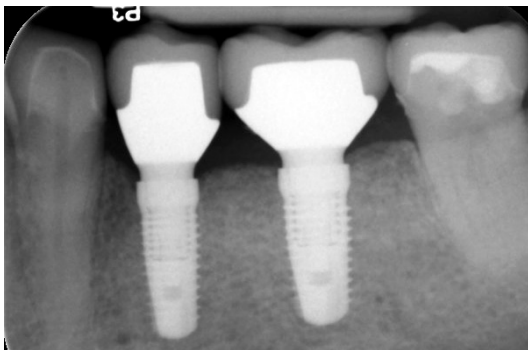

**Fig. 38:** The radiographic check shows stable bone and the precise fit of the reconstruction.

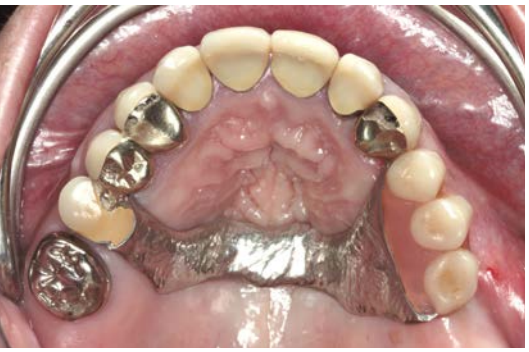

**Fig. 39:** The unsatisfactory situation in the upper jaw and the palatal bar bothered the patient.

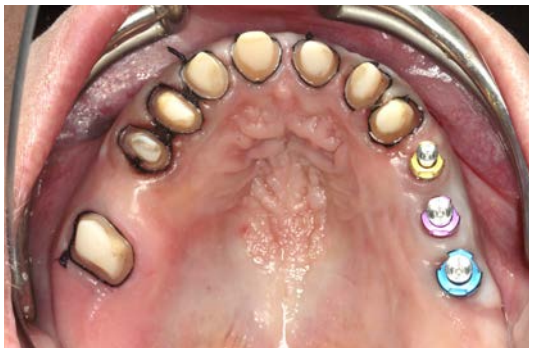

**Fig. 40:** In the second quadrants three CAMLOG® SCREW-LINE implants were inserted using the CAMLOG® Guide System without bone augmentation.

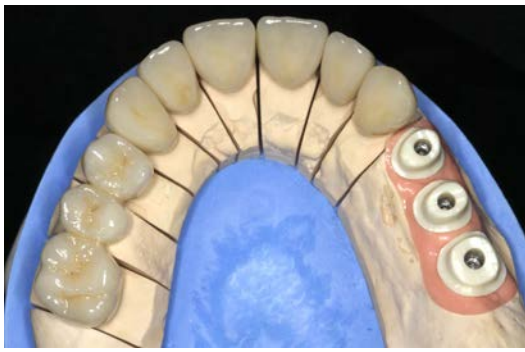

**Fig. 41:** The ceramic superstructures were bonded to the customized PS standard abutments.

of implants, it is only in the rarest of cases that one can omit hard and soft tissue augmentation. These therefore represent key factors for every implant procedure. Particulate material provides the optimal conditions for bone regeneration because rapid angiogenesis and thus regeneration can take place [2,8]. The PRGF may not have any additional impact on improved regeneration of the bone. Thanks to the bond of the bone substitute material in the PRGF, adaptation to the defect is, however, very easy and the stability is further reinforced. The overall priority is to ensure that the augmentation material is stable. This is achieved either using resorbable membranes, which have a very high rate of complications, however, or the technique described above. The PRGF and the fibrin help with soft tissue healing. However, without doubt the critical factors for a positive outcome are the flap design and the suture technique. The flap must be able to be repositioned free of tension and the suturing is done using microsurgery so that the soft tissue is not strangulated. Consistent soft tissue management until the exposure creates the necessary conditions for long-term success of the implant. An adequately thick and keratinized gingiva around the implant ensures the implant is robust and reduces inflammations [19, 20, 22]. The full-ceramic components provide for a high degree of esthetics and biocompatibility with longevity. The monolithic design of the crowns means that chipping can be almost disregarded. In our practice we have not seen any ceramic fractures or total loss of an e.max crown in the last four years.

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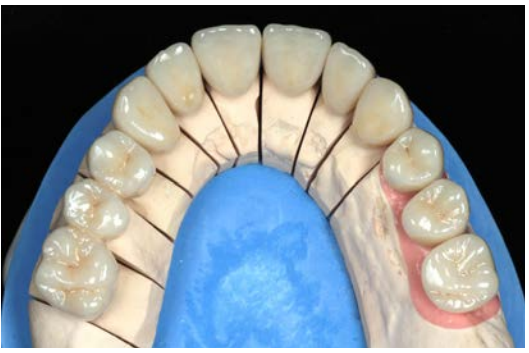

**Fig. 42:** The crowns underwent full-contour modeling and were then pressed with the IPS e-max Press and stained.

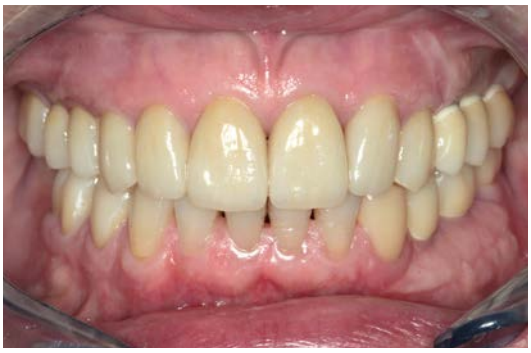

**Fig. 43:** At the follow-up after 12 months a recession could be seen around the implant in the upper jaw. The situation in the lower jaw is stable and free of irritation.

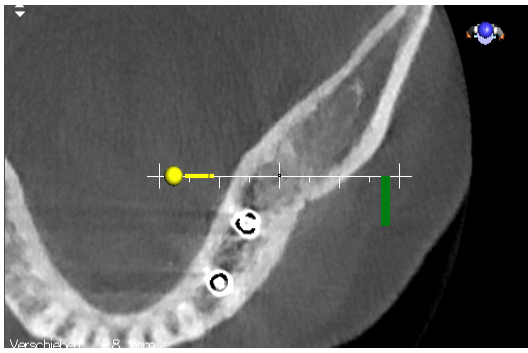

**Fig. 44:** The DVT after one year shows voluminous bone augmentation in regio 35, 36 that was stable and fully reconstructs the lost parts of the alveolar ridge.


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My heartfelt thanks to my team and particularly my two dental technicians MDT Rolf Eilers and Anna-Lena Ille (Kuhles & Berger Laboratory, Bielefeld) whose dedication contributed enormously to this great result.

Dr. Kai Zwanzig completed his dental studies between 1997 and 2002 at the Westfälische Wilhelms-Universität Münster and graduated the following year. He then completed a year of general dentistry followed by training as a specialist in oral surgery. He specializes in the areas of implantology, bone augmentation procedures, periodontal plastic surgery, functional diagnostics, and full-ceramic restorations using CAD/CAM methods and intraoral scanning. In 2007 he founded his own joint practice in Bielefeld. Dr. Kai Zwanzig is the author of specialist dental articles on implantology and complex full-ceramic rehabilitations and is an international continuing education consultant. In 2012 Dr. Kai Zwanzig received a design prize for the construction of his new practice. He runs a visiting clinician and supervision practice selected by the DGI and is a member of the Leading Implant Center.

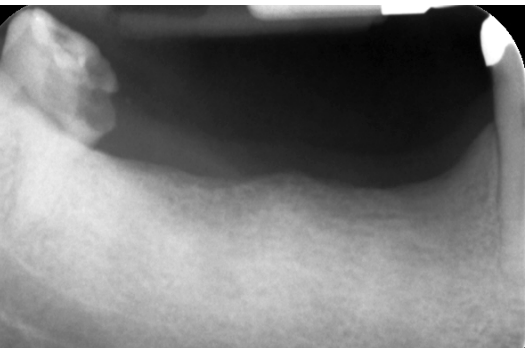

**Fig. 1:** The radiograph shows the reossification of the alveoli and an appropriately high jaw bone.

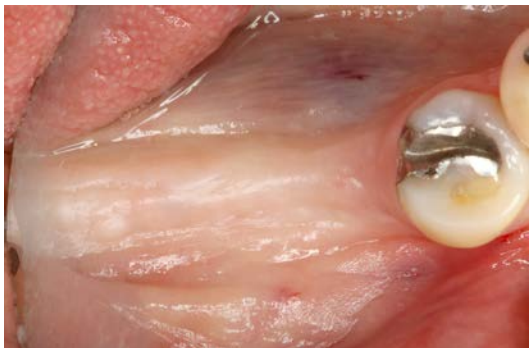

**Fig. 2:** The surgical site in regio 46, 47 reveals adequate keratinized gingiva.

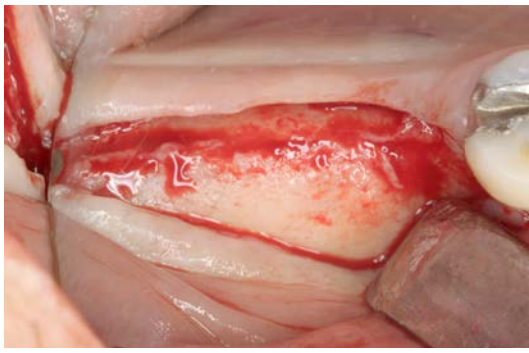

**Fig. 3:** A crestal incision line and a mesial releasing incision are used to expose the jaw bone.

# FUNCTIONAL TREATMENT METHODS

## STANDARDIZED IMPLANT PROSTHETICS BASED ON THE ISY CONCEPT

Dr. Steffen Kistler, Landsberg/Lech (Germany) and MDT Ricarda Eiterer, Marktoberdorf (Germany)

Trends in dental implant therapy are not heading towards standardized, functional, and cost-effective treatment methods in the esthetic area. With the advances that have been made in recent years in implant therapy, both dentists and patients are increasingly demanding options for a functional and esthetic prosthetic restoration. Because of improved oral health, the number of single-tooth restorations has increased across all age groups. The trend is moving from the preparation of healthy tooth substance for bridge restorations to single-tooth implants. A good dental restoration is very important to our patients. They are increasingly opting for fixed implant therapy. The extensive experience we have gained and the resulting successes provide us with many opportunities to make implementing standardized procedures significantly easier and quicker. New implant concepts or short or thinner implant versions allow implantation for specific indications without elaborate surgical procedures such as bone augmentation. In the following article we describe a straightforward and gentle treatment concept in the lower posterior region using the iSy Implant System from CAMLOG.

Part of the therapeutic concept of our practice is to keep the number of surgical procedures during implant treatment as low as possible. This concept is both gentler and requires less time, which also makes the treatment more cost-effective for everybody involved. Transmucosal healing of implants in the non-esthetic zone in accordance with the necessary criteria is state of the art in our practice [1,2]. The stable peri-implant soft-tissue cuff acts as a barrier to the underlying structures during open healing and reduces the risk of microbial contamination, which the implant healing would be affected by immediately after the surgical procedure. Transmucosal attachment is an essential prerequisite for a successful implant restoration. The iSy Implant Concept helps us to achieve this. Adherence to the concept means that the implant base remains in the mouth until the attachment of the final prosthetic restoration. The healing cap and the multifunction cap – for scanning or impression taking – are attached to the implant base. This avoids frequent changes of the abutment and the adhesion of the collagen fiber network is only minimally disrupted when the restoration is attached [3].

### Findings and planning

A 59-year-old patient presented because of a root fracture of the first molar in the fourth quadrant. The general medical and dental findings were otherwise normal. Following extraction of tooth 46 and the previous loss of the second molar 47, the chewing function had to be restored. The patient wanted a fixed restoration on implants. He declined the alternative of removable dentures because he had already had implants inserted at another site and is very pleased with them. The option of a shortened dental arch was not considered due to the issue of elongation of the adjacent teeth. About one year after the extraction of 46, we evaluated the bone height and width at the surgical site using a DVT image. We had our dental technician prepare a guide template to ensure correct prosthetic positioning of the implant. Two iSy Implants were planned, one in regio 46 with 11 millimeters in length and 3.8 millimeters in diameter and one in regio 47 (9 millimeters in length, 4.4 millimeters in diameter). The inner configuration of the implant has

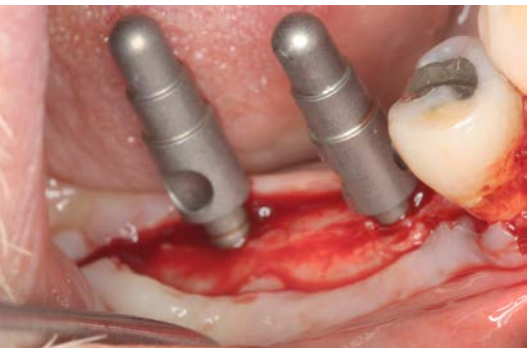

**Fig. 4:** The implant positions and angulation were checked after drilling the pilot drill hole using the direction indicators.

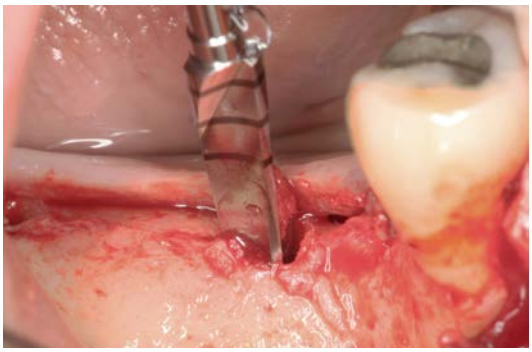

**Fig. 5:** After the pilot drill hole was made, the implant bed was processed to the desired depth of 11 millimeters with the single-use form drill.

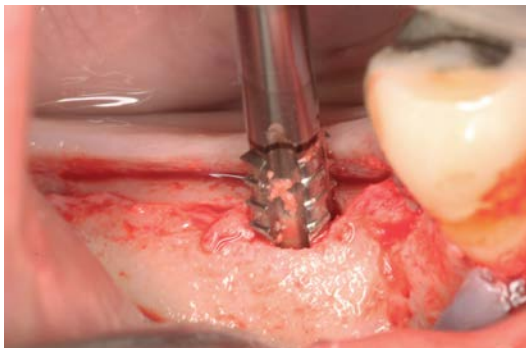

**Fig. 6:** The tap was used to reduce the insertion resistance in dense bone.

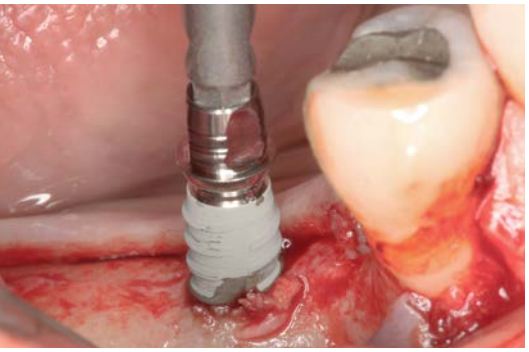

**Fig. 7:** The iSy Implant, pre-mounted on the implant base, was inserted with the help of the driver.

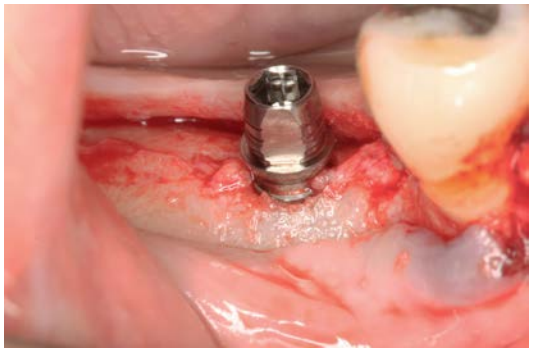

**Fig. 8:** The implant was positioned equicrestally on the vestibular side and aligned to one face of the implant base buccally.

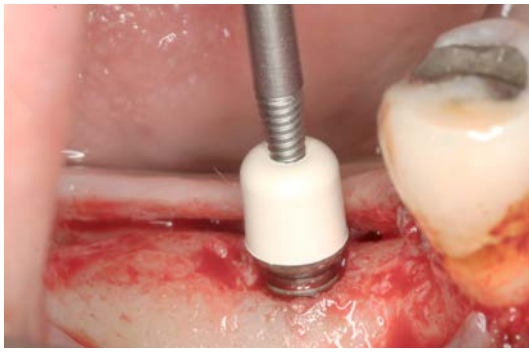

**Fig. 9:** The healing cap was taken out of the packaging and snapped onto the implant base.

a taper of 7.5° and an internal hexagon to prevent rotation. The restoration with the iSy Implant System uses Platform-Switching abutments [5].

## Implantation

More sparing incision lines and smaller incisions are superior to a flapless implant insertion because the bone is well exposed and controlled working is assured. At the time of the surgery, there was a class III defect as defined by Cawood and Howell [6]. The height and width of the bony ridge was adequate, the alveoli were reossified, and the alveolar ridge was slightly rounded **(Fig. 1 and 2)**. Using a crestal incision, the attached gingiva at the surgical site was slit in the middle so that there was at least one millimeter of fixed mucosa present lingual and vestibular. This is necessary both for subsequent close wound closure and for a long-term stable reconstruction and ease of maintaining hygiene. After a mesial releasing incision around tooth 45, we prepared a mucoperiosteal flap in vestibular and lingual directions to expose the jaw bone **(Fig. 3)**. The guide template was stably fixed over the remaining dentition in the lower jaw and the pilot drill hole was made with the 2.8-millimeter iSy Pilot drill to the desired implant depth, eleven millimeters in regio 46 and nine millimeters in regio 47. We removed the template and checked the prosthetically oriented position of the implant bed with the depth and direction indicators **(Fig. 4)**.

## Implant insertion

The iSy Implant set includes the implant and the single-use form drill. The drilling protocol for the iSy System has deliberately been reduced. Thanks to the special drill configuration, the form drill for the particular implant diameter is used immediately after drilling the 2.8 millimeter pilot drill hole. The sterile packed drills were taken out of the holder using the angled hand piece without touching them and the implant bed in regio 46 was then expanded to 3.8 millimeters and in regio 47 to 4.4 millimeters **(Fig. 5)**. Because the cortical bone in this case had a bone density of 2, we used a tap to reduce the insertion resistance and thus to counteract any necrosis **(Fig. 6)**. The iSy Implant is supplied pre-mounted on the implant base. The implant was transferred to the surgical site and inserted using the driver, which snaps into the implant base using light pressure and removes it from the sterile packaging **(Fig. 7)**. Due to the pre-tapped thread it is important to ensure that the positions of the thread ends in the cortical bone and on the implant match. The implant shoulder was positioned epicrestally and one face of the hexagon was aligned in the buccal direction. For visual inspection of the correct alignment, one face on the implant base should correspond to that of the face of the hexagon **(Fig. 8)**. The cylindrical healing cap made of PEEK that is included in the implant set was snapped onto the implant base using the handpiece for healing caps **(Fig. 9)**.

The implant was then inserted in the same manner in regio 47 and the healing cap was attached **(Fig. 10 and 11)**. We used the bone chips harvested in the spirals of the form drill **(Fig. 12)** for lateral bone augmentation **(Fig. 13)**. Using non-resorbable simple interrupted sutures (Resorba 5.0), we closed the surgical site and allowed the implants, in accordance with the iSy Concept, to heal open **(Fig. 14)**.

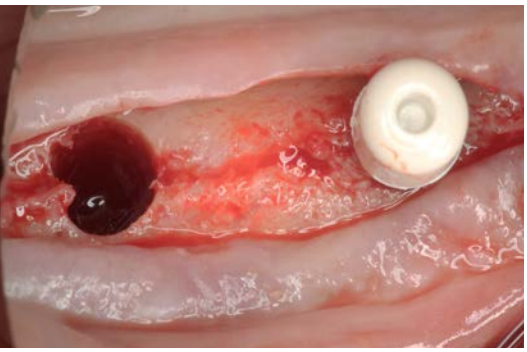

**Fig. 10:** The image shows the implant bed in regio 47 prepared to 4.4 millimeters.

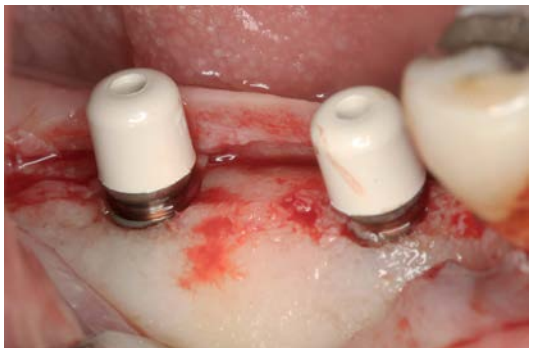

**Fig. 11:** The Platform Switching of the epicrestally positioned implants can be easily seen.

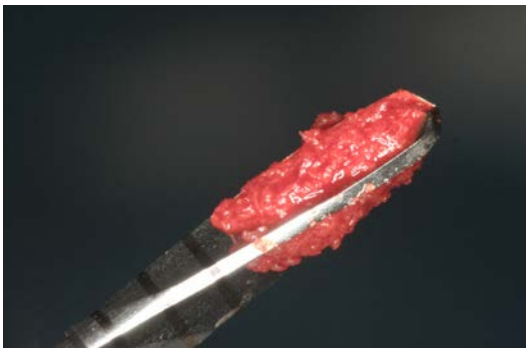

**Fig. 12:** The bone chips collected during preparation of the implant bed in the spirals of the form drill…

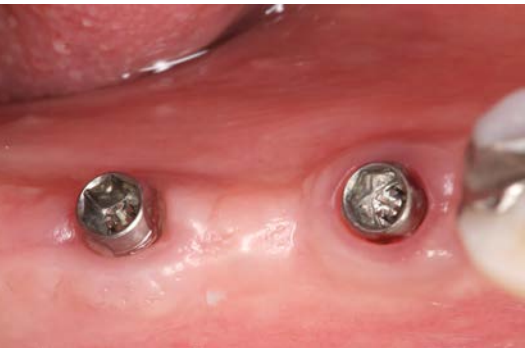

**Fig. 16:** To take the impression, the healing caps were removed from the implant bases …

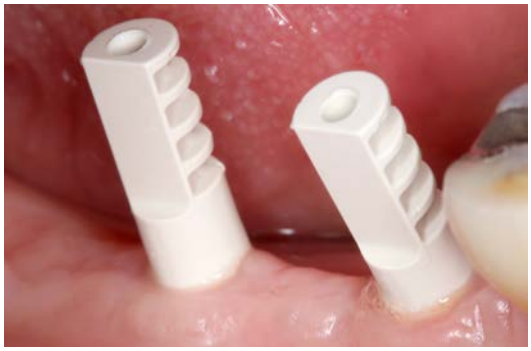

**Fig. 17:** … and the multifunction caps were attached.

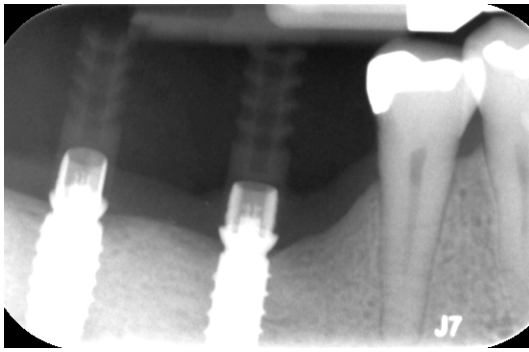


**Fig. 18:** The precise position was checked with the help of a X-ray.

## Impression taking and prosthetic restoration

Because the patient did not want a temporary restoration, we started with the final prosthetic restoration ten weeks after the surgical procedure. There was sufficient stable attached gingiva when the impression was taken **(Fig. 15)**. We removed the PEEK healing caps from the implant base and attached multifunction caps, which are included in the implant set, onto the base **(Fig. 16 to 18)**. Using a polyether impression material (Impregnum™ plus ESPE) and a closed tray, we took an impression of the implant situation. The retention of the multifunction caps is optimally designed to ensure that they are held in the impression material precisely and without distortion **(Fig. 19)**. We used the two other multifunction caps in the implant set as bite registration aids. They were shortened in accordance with the opposing jaw dentition, attached, and then a bite registration was recorded in static occlusion **(Fig. 20 and 21)**. This support prevents the model sinking with articulation. In the laboratory the dental technician screwed the iSy Lab analogs to the lab implant bases, repositioned these in the multifunction caps in the impression, fabricated the master model, and mounted the model in an articulator **(Fig. 22 to 24)**. Until the restoration is ready the healing caps were reattached.

Using CAD/CAM, the anatomically reduced hybrid abutment crowns were constructed in the laboratory, milled out of zirconia (Zirkonzahn), and then individually veneered, always ensuring that the screw access channels were contained in the zirconia to avoid chipping or fractures. The marginal area of the hybrid abutment is shaped concave down to the gingival margin. The crown emergence profiles correspond to the emergence of natural teeth and blend harmoniously into the dental arch. The interdental spaces are designed so that they are easy to clean. The hybrid abutment crowns were bonded with the help of the bonding aid to the iSy Titanium base CAD/CAM. The abutment was silanized, the adhesion area of the zirconia crown activated to the base, and then both were bonded to one another **(Fig. 25 and 26)**. The excess bonding material was removed and the transitions to the base were polished. After a final check of the occlusion in the laboratory **(Fig. 27)**, the hybrid abutment crowns were sterilized and delivered to the practice **(Fig. 28)**.

**Fig. 25:** To bond the hybrid abutment crowns, the iSy Titanium base CAD/CAM were screwed to a lab analog and silanized.

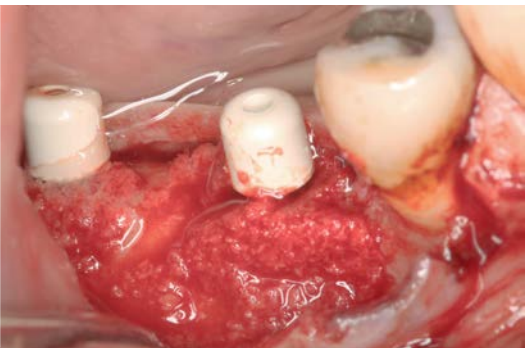

**Fig. 13:** …were used for lateral augmentation.

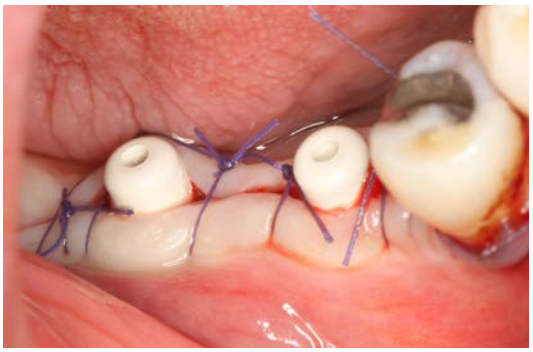

**Fig. 14:** Using simple interrupted sutures, the soft tissue was tightly closed around the healing caps.

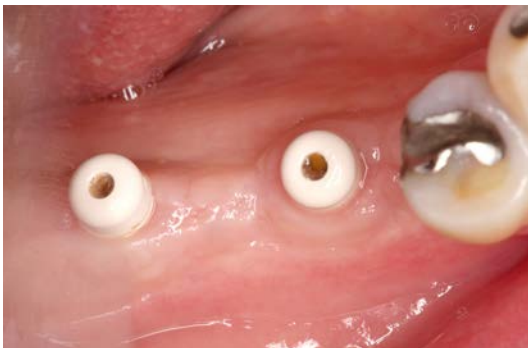

**Fig. 15:** Ten weeks after surgery the soft tissue situation was healthy and stable.

**Fig. 19:** The multifunction caps from the basal direction after closed impression taking with polyether.

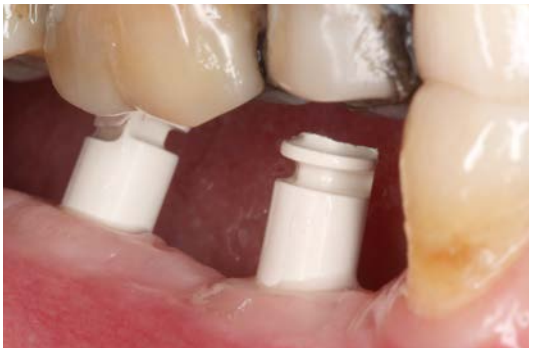

**Fig. 20:** The additional multifunction caps included in the implant set were shortened in accordance with the occlusion.

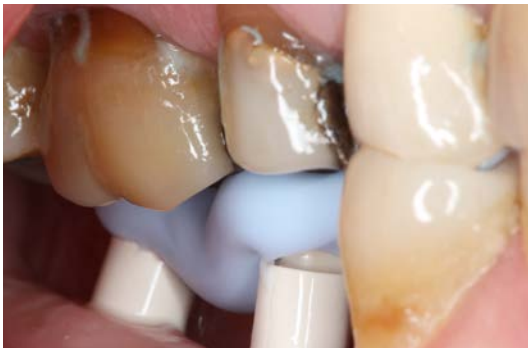

**Fig. 21:** The shortened multifunction caps are used to support the free-end situation during the bite registration.

**Fig. 22:** The iSy Lab components were screwed together (lower picture detail)…

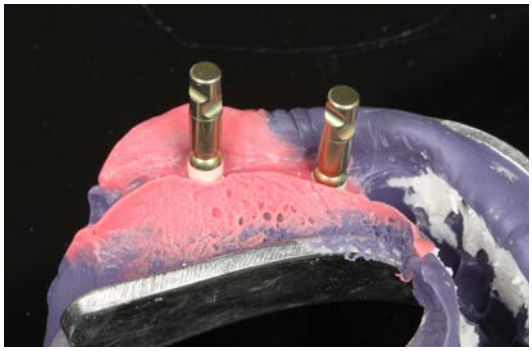

**Fig. 23:** …and repositioned in the multifunction caps in the impression.

**Fig. 24:** After fabrication of the master model, the crown emergence profiles were created and grooves were milled for visual inspection.

**Fig. 26:** The bonded hybrid abutment crowns were removed, the excess material was removed, and the transitions polished.

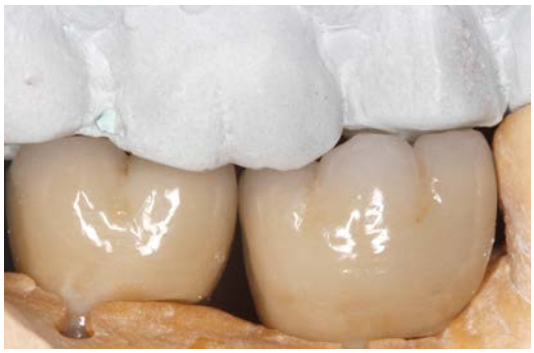

**Fig. 27:** After bonding the crowns the final occlusion was checked.

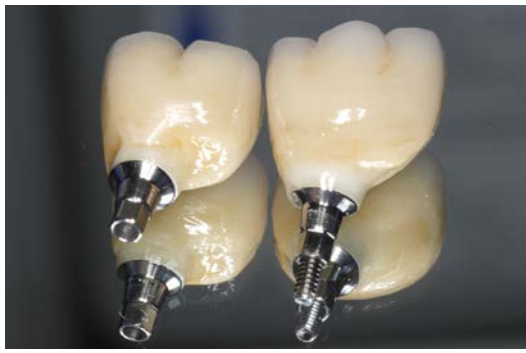

**Fig. 28:** The sterilized hybrid abutment crowns were delivered to the practice with new abutment screws.

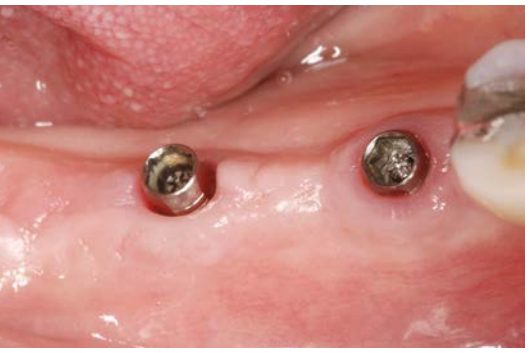

**Fig. 29:** To fit the hybrid abutment crowns, the healing caps were removed.

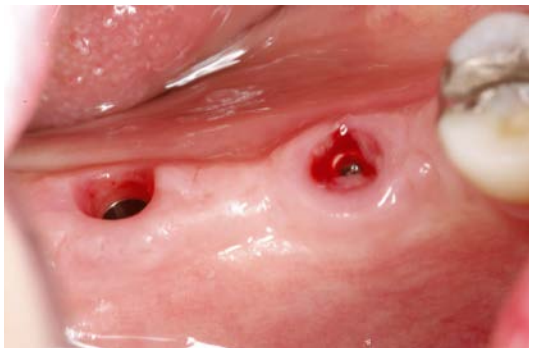

**Fig. 30:** For the first time after the surgical procedure the implant bases were removed. The loosening of the bonded collagen for fibers caused slight bleeding.

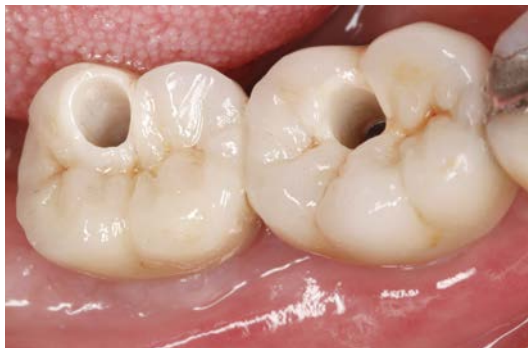

**Fig. 31:** The hybrid abutment crowns were inserted and the screws were tightened with 20 Ncm. The screw access channels contained in the zirconia can be easily seen.

## Fitting the final restoration

Before fitting the hybrid abutment crowns, the healing caps were removed **(Fig. 29)** and the implant bases were detached for the first time [3]. **Figure 30** shows the slight bleeding in the soft tissues, caused by the loosening of the collagen fibres attached to the abutment. This image reveals the good seal to the peri-implant hard and soft tissues by the stable gingival cuff and the adhesion of the fibres to the abutment [5]. We rinsed the implant interface with a chlorhexidine solution, inserted the hybrid abutment crowns, and screwed them into the implant with 20 Ncm **(Fig. 31)**. We prefer directly screw-retained constructions. They are easily and quickly inserted and there is no need to remove cement excess from the sulcus. Cement residue that is not removed may trigger peri-implant disease [7, 8]. We checked the occlusion and re-tightened the abutment screws with 20 Ncm after another five minutes. We sealed the screw access channels first with temporary plastic, took a X-ray to check the exact fit of the reconstruction, and then checked the lateral occlusion **(Fig. 32 and 33)**. Four months after fitting the two hybrid abutment crowns, the peri-implant conditions were stable for the standardized implant restoration in the lower jaw **(Fig. 34)**.

## CONCLUSION

The demographic shift will continue to change the requirements for dental care. Implant-supported restorations are one of the common and trusted treatment options. Their high stability and good bone integration means that implants enable the application of fixed therapeutic concepts that usually result in a better quality of life for patients. However, patients cannot or do not want to invest so much money the care of their teeth. It is up to the treating dentist to select a suitable therapy on the basis of discussions with the patient, the findings, and the diagnoses, taking into consideration the appropriate procedure, time, and cost/benefit factors. For this reason, we offer simple standardized implant concepts for the non-esthetic zone.

The standardized iSy Treatment Concept reduces both the surgical effort and the number of sittings with the patient. The components included in the implant set, such as the healing caps, multifunction caps, and the form drill, mean that the management of orders and parts that would otherwise be necessary is omitted. The concentration on a few work steps, the reduced drilling protocol, and the transgingival healing reduce the costs. With the help of this elegant, transgingival implant concept, we leave the implant base in situ until the final abutment is fitted. This appears to favor the preservation of soft and hard tissues and to make our results more predictable and more stable than was previously possible. New and cost-effective biocompatible materials that can be precisely prepared using CAD/CAM technology are gaining in importance. The hybrid abutment crowns are screwed on in the mouth immediately after removal of the implant bases. This means that otherwise necessary measures to cement the crowns to the abutments with subsequent removal of any excess cement from the sulcus are no longer required. If the restora-tion is extended, the abutment crowns can be simply removed and the implant can be easily integrated into a bridge restoration.

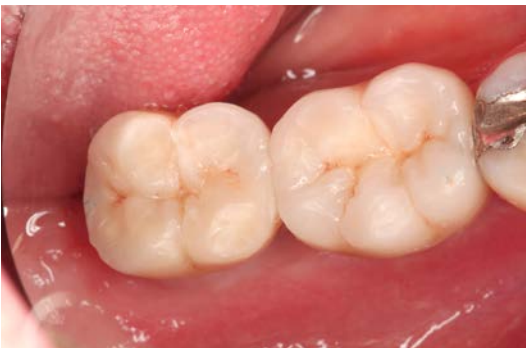

**Fig. 32:** The screw access channels were sealed with composite.

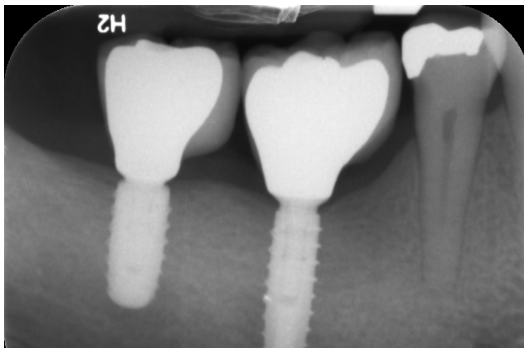

**Fig. 33:** At the checkup four months after fitting the final restoration, stable peri-implant bone can be seen in the X-ray image.

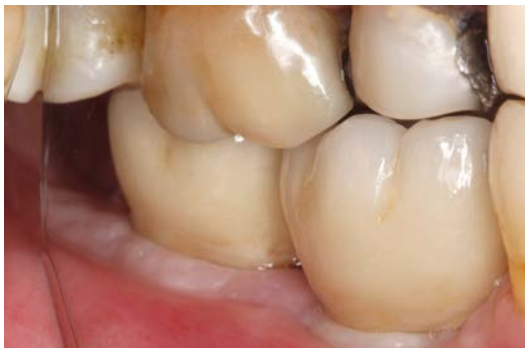

**Fig. 34:** The functional, standardized reconstruction of the free-end situation four months after the fitting.

## LITERATURE


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Ms. Ricarda Eiterer completed her training as a dental technician with her apprenticeship examination in 1986. In the following years she worked in various dental laboratories as well as a practice laboratory where she became experienced in the fabrication of esthetic and functional reconstructions and refined her techniques. From 1996 to 1997 Ricarda Eiterer attended the school for master dental technicians in Munich where she earned her master title for dentistry. In the following years she worked as department head and laboratory manager. After a short period of parental leave, she became self-employed in 2001 and established a dental laboratory in Marktoberdorf.

# ISY SYSTEM EXTENSION INNOVATIONS IN THE ISY® IMPLANT SYSTEM CREATE EVEN MORE OPTIONS

The iSy Implant System has found many supporters who had been waiting for a cost-effective solution of premium quality from a renowned manufacturer. One of the benefits for users of the iSy Concept is that the iSy Implants, healing caps, multifunction caps, and a single-use form drill are all included in a single set. The iSy Concept is based on transgingival healing and is used by many customers to attract even more patients to implant restorations.

The previous iSy System is incorporated into the digital workflow and requires connection to digital interfaces. However, not all practices or laboratories have the necessary digital equipment. To meet the needs of these customers and to give them access to iSy, we are expanding the iSy Portfolio. An independent market research institute determined the requirements for this expansion. We remain true to our concept with this expansion and offer a reduced range of parts in the value segment.

## More prosthetic options – more options, greater flexibility

The expanded prosthetic portfolio for the iSy Implant System will be available from July 2015. Using the new prefabricated iSy® Esthomic® Abutments, esthetically cemented reconstructions can be realized. Screw-retained healing caps adapted to the emergence profile of the Esthomic® Abutments are available in the different profile diameters (S-M-L) and heights. Attaching the final restoration directly onto the implant base will also be possible from July 2015 and offers the clinician a cost-effective restoration option and even greater flexibility in the course of treatment.

We are striking out on a new path by providing open STL data sets for the iSy System online and to download free of charge. This enables milling centers to fabricate self-manufactured abutments and retain value creation fully in-house.

## Impression taking from the implant shoulder – direct and precise

Along with previous methods for taking impressions of the implant base through the multifunction caps, impressions can also be taken directly from the implant shoulder, corresponding to the emergence profile, using new impression posts with an open or closed tray.

## Expanded portfolio – short and sweet

The iSy standard range will be expanded by a short implant (7.3 mm) in addition to the previous three implant diameters and lengths. A major advantage of this short implant is that it can also be used if limited bone is available. This can avoid bone grafts, for example, in sinus floor elevation. The short iSy Implant will be available from July 2015 and will initially be included in the single implant set that includes a healing cap, a single-use form drill, and two multifunction caps.

The innovations in the iSy Implant System create even more options to provide patients with high quality and cost-effective restorations. From July 2015 it will be even more worthwhile to open up new horizons and to get to know the iSy Implant System.

Insertion

Option 1 (from July 2015)

Open healing

Healing cap on implant base

Option 2

Open healing

Healing cap on implant base

Option 3 (from July 2015)

Covered healing

Soft-tissue shaping with healing cap (S, M, L)

## iSy is open to the power of 3

With the new iSy Components there are three possible treatment pathways.

**Option 1:**
Open healing with the impression and a cemented restoration directly on the implant base.

**Option 2:**
Open healing with the impression on the implant base and a restoration on titanium abutments (CAD/CAM Abutments, hybrid abutments, pre-fabricated abutments, etc.).

**Option 3:**
Two-stage surgery with soft-tissue shaping using screw-retained healing caps, impression taking or scanning from the implant shoulder, and restoration on titanium abutments.

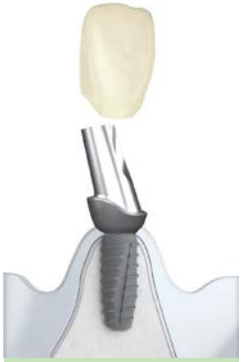
Impression taking on implant base

- Impression taking with multifunction cap
- Scanning with multifunction cap

Final restoration on implant base

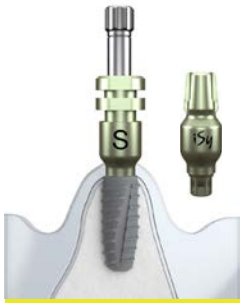
Impression taking on implant base

- Impression taking with multifunction cap
- Scanning with multifunction cap



Final restoration on abutment

- Pre-fabricated Esthomic® Abutments
- Blank
- Open files




Impression taking

- Impression posts for closed- or open-tray technique
- Scanbody (digital)

Final restoration on abutment

- Pre-fabricated Esthomic® Abutments
- Blank
- Open files

iSy BY CAMLOG

# CAMLOG®
## TEMPORARY ABUTMENTS MADE FROM TITANIUM

The CAMLOG® Implant System portfolio will be further expanded in May 2015 with the inclusion of temporary titanium abutments. CAMLOG® Temporary Abutments are made of a Ti6AL4Va titanium alloy and are intended for use in single-tooth restorations in both the posterior and the anterior regions. They can be shortened occlusally, individually veneered with composite, and screwed directly into the implant. The temporary abutments are suitable for immediate restorations or are used after the implant exposure for an esthetic, temporary reconstruction of CAMLOG® SCREW-LINE and CAMLOG® ROOT-LINE 2 implants. One of the advantages of immediate implantation of an esthetic, non-functional immediate restoration, particularly in the esthetically critical area, is that the structures of the peri-implant hard and soft tissues are preserved.

The color-coded temporary abutment is supplied with a CAMLOG® Abutment screw and has a prosthetic height of 12.0 mm. The abutment screw is tightened by hand using the hex screwdriver. The CAMLOG® Temporary abutment has a Tube-in-Tube™ Implant-abutment connection to the rotation securing device and is color-coded to match the implant diameter. After an adequate healing phase for the implant and shaping of the peri-implant soft tissue, another impression is taken for the fabrication of the final restoration.

The indications for the 3.3-mm diameter temporary titanium abutment are single-tooth restorations in the upper posterior and lower incisor teeth. The temporary titanium abutments are not suitable for splinted constructions.

# CAMLOG – THE FUTURE IS INTERNATIONAL

The CAMLOG Group looks to the future with healthy optimism. Having established ourselves as a leading supplier of integrated systems and products for dental implantology and implant-supported restorations, CAMLOG is continuing to grow. Even in these economically uncertain times over the last few years CAMLOG has maintained its position, created more jobs, and now employs more than 400 staff.

### Expansion of the sales network and close partnership with Henry Schein Inc.

Along with defending leading market positions in Germany, Austria, and Hungary, CAMLOG is focused on steadily establishing sales partnerships around the world. In April this year, the go-ahead was given for China, a huge potential market. CAMLOG is consistently pursuing strategic goals and uses synergies with Henry Schein specifically in international markets such as the US and the growing CAD/CAM area.

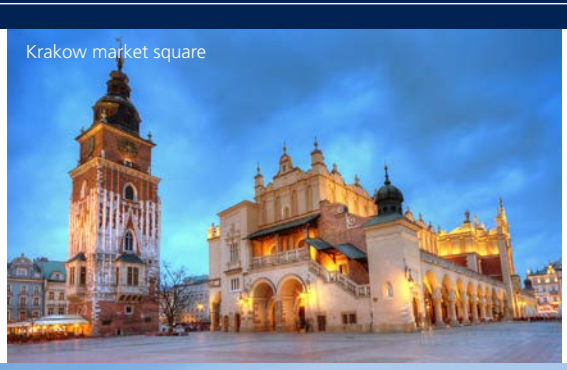
In Turkey, we recently obtained a new partner and will certainly be reporting on positive developments in the near future. The professional team located in Istanbul has many years of experience and the best contacts in the sector.

We have only good news from Finland, too. After starting in 2014, a two-digit market share was soon achieved and the market is growing rapidly. The motivated team is making a big stir up in the north and is looking optimistically to the future. CAMLOG has been represented in Thailand since last year. The existing structures of Henry Schein are enabling a rapid and strong market launch, which is already positively reflected in the development.

### Conclusion

Our international growth, our plans for expansion, and our new subsidiaries all promise a rosy future for the CAMLOG group, which is now represented worldwide in more than 20 countries and is still making big plans.


Krakow


Krakow market square


The state of the art congress center in Krakow was built in 2014

# SAVE THE DATE

## 6TH INTERNATIONAL CAMLOG CONGRESS IN KRAKOW, JUNE 9 –11, 2016

The 6th International CAMLOG Congress, organized by the CAMLOG Foundation, will be held in the wonderful city of Krakow in Poland. The congress will be held under the motto "Tackling everyday challenges" and combines practical and scientific issues for immediate implementation in everyday work.

The top-class scientific committee will be headed by Professor Frank Schwarz (DE) and Professor Piotr Majewski (PL) as co-presidents and is made up of renowned experts who combine scientific experience and a practical background.

### ICE (International Conferences and Entertainment) – The Krakow Congress Centre

Built in 2014, this brand-new, state of the art congress center is an ideal location for the 6th International CAMLOG Congress and offers far more than the average meeting center. The modern building meets all the requirements for sophisticated architecture, as well as the highest standards for acoustics and stage technology. The ICE is already one of the most renowned and most exclusive congress centers in Europe.

### Krakow – A UNESCO World Heritage site

Krakow, famous for its numerous historical landmarks in art and culture, is the former royal capital of Poland and one of the most beautiful places on the tourist map of Europe. The city was a leading trade center in the 13th century and has Europe's largest market square along with many historical homes, palaces, and churches with magnificent interiors. Along with history, art, and a quite special atmosphere, Krakow offers visitors plenty of entertainment and leisure activities. The second largest city in Poland has traditionally been a leading center in Polish scientific, cultural, and artistic life and is one of the most important economic areas in Poland.

Save the Date. CAMLOG looks forward to meeting you at the 6th International CAMLOG Congress in Poland.

**English-Polish DICTIONARY**

| English | Polish | Pronunciation |
|---|---|---|
| yes | tak | [tahk] |
| no | nie | [nye] |
| maybe | może | [m**o**zhe] |
| please | proszę | [pr**o**-zhe] |
| thank you | dziękuję | [jenk**oo**-yeah] |
| Thank you very much. | Dziękuję bardzo. | [jenk**oo**-yeah bardso] |
| My name is… | Nazywam sie… | [nah-zivam sheng …] |
| Sorry! | Przepraszam! | [pshe-pr**a**-sham] |
| I don't understand you. | Nie rozumiem pana. (man) / pani (woman) | [nyehroh-zoom-y**e**mp**a**na/p**a**ni] |
| Good morning! / Hello! | Dzień dobry! | [je**y**n dob-ry] |


Andrea Stix, M.Sc.
Consultant for Communication Strategy
and Practice Marketing

# VISIONS – THE STIMULUS FOR A SUCCESSFUL FUTURE

In the section "Practice Management" we will examine the establishment of communication strategies for the dental practice in a series of articles. The series will open with a discussion of vision, because every company starts with a vision, whether consciously or not. With a consciously designed vision all decisions are made on the basis of this important foundation, which ultimately steers the development and thus the success of the company in a specific direction.

## Every beginning has magic within

There is often something magical, brilliant, or world-changing associated with a vision. A vision does not necessarily have to be altruistic or valuable from a social or environmental perspective. In terms of the business it is also not primarily a focus on financial issues because this is usually the original purpose of the business.

A company vision describes a state that goes beyond the entrepreneurs as a person – it maps out a realistic picture of the future. Strictly speaking, a vision is a realistic description of a desired state for the future company development – it describes where the company will go and is a defined ideal state.

A vision creates a desirable and emotional image of the future of a company. It shows the idea for which the company stands, the basis for strengths, and how the company could look and be perceived.

A vision is made up of two elements: one is a clear concept of what is planned to be achieved in 10, 20, or 30 years. The other is a consideration of the substantive core that makes up a company, that is, its fundamental values and beliefs. Particularly for smaller to medium-sized owner-operated companies such as dental practices, it is essential that these beliefs correspond to the personal values of the owner.

Looked at figuratively, the company vision has firstly a sort of "pole star" function for the company by defining the future-oriented direction. In the long term it acts as a compass that keeps the company on track.

## Vision vs. goal

Visions are often confused with company goals. For example, increasing practice turnover by 10 percent over the next two years is not a vision but instead is a clear goal. True goals are temporally limited; they should be divided into short-, medium-, and long-term goals. To make them measurable, it is important to formulate the goals in concrete terms. The goals of a company are derived from the company strategy. Goals and the corresponding measures to achieve them are flexible.

A company strategy can only be developed from the vision. Good company strategies adjust to changes in the market environment to minimize risks and seize opportunities. Strategies are flexible whereas visions are stable.

Visions are therefore an integral component of every business as well as the cornerstone on which they are built. This important foundation is therefore the basis of all subsequent company decisions. The company vision is an important factor regarding the performance of a company. It is thus responsible to a large degree for its competitiveness. The relevance of a company vision is often underestimated, however.

Particularly in smaller companies, a vision often develops intuitively. Subsequently, this guiding "pole star" is missing. In an environment that is not changing, this is usually of little importance. However, every practice is exposed to a range of internal and external changes, such as regulatory changes, the opening of another practice in the immediate neighborhood or the departure of a founding member of

the practice. Sometimes the changes are also driven by the company itself, such as expanding the range of treatments offered, increasing the size of the medical team, or opening a subsidiary practice.

And with all these positive and negative changes, it is important to be guided by the essential core of the company. This remains unchanged – it holds everything together.

The projected target image, however, also affects the company internally. It gives employees direction, drives them to achieve joint goals, and has inevitable consequences for the company culture. Thus a vision can release unimagined strengths in a company.

The company vision is defined in a central overarching idea, the vision statement. The formulation of the company's self image should be concise, emotional, and unambiguous. And above all, it should inspire.

## Examples of good visions:

Ikea: "To create a better everyday life for the many people."
No-one can possibly avoid noticing this inspiration at Ikea.

**Dental practice A**

"Based on my experience, I want to implement my own concept that is not subject to the dictates of the statutory health insurers. I want to decide what type of treatment I can offer my patients. I would like to offer my type of medicine free of stress and in a relaxed atmosphere to patients who have a strong awareness of and interest in their health. My patients will bring to my practice a profound awareness of quality for their health. I will give my best to satisfy this and will always try to be up to date. I aim for a clientele that recognizes the high quality of my treatments and pays accordingly. The brief, intense contact shall be characterized by appreciation, humanity, reliability, and mutual respect, so that it leaves a positive impression behind on both sides. Close, friendly, and interdisciplinary partnerships with other medical practitioners are an integral part of my concept."

It is not surprising that on the basis of this vision, a highly modern private practice was established that presents itself unobtrusively. The homogeneous target groups are health-aware high earners. Only about ten patients are treated per day and this will remain the case in future. There will not be any partnerships. Cooperation with referring physicians is explicitly encouraged by ongoing meetings.

**Practice B**

"Our practice shall be an interface between medicine and dentistry as well as between outpatient and inpatient care. We would like to offer affordable medicine for everyone. Continuing education and specialist expertise is an integral part of our function. The presentation of our practice is modern but down-to-earth."

This practice wants to grow. It now has a number of subsidiary practices as well as its own continuing education center. This enables it to have a critical influence on the situation in the region. The frequency of an heterogeneous patient clientele in all practices is correspondingly high.

**Practice C**

"Based on the friendship we forged during our studies, our goal is to establish a purely referral-based practice for the oral and maxillofacial discipline. This shall cover the entire spectrum of surgical care from easy to complicated cases. Our friendly and very stable relationship shall contribute to a harmonious cooperation and a family-like atmosphere in the practice. Our employees and a reliable and competent group of referring dentists, who will also offer optimal treatment concepts, will perceive and experience this. We will not provide treatment that goes against our own beliefs."

The practice does not want to enlarge because this may affect the harmony and balance of the very close friendship between the practice partners. The family-like character is very noticeable; the turnover of team members is therefore practically zero. Quality and stability are critical factors here.

All three practices hint at the most elementary part of the vision: the power of imagination. Despite working in the same area, the inevitable divergence of the business paths of these practices is already apparent from their visions.

The strategic positioning of the company is defined based on the vision. The next article will therefore be dedicated to exploring the issue of "strategic positioning".


## CAMLOG EVENTS 2015

| | | |
|---|---|---|
| **19 – 20 June** | Rome, Italy | National CAMLOG Congress |
| **16 – 19 September** | Fuschl, Austria | National CAMLOG Congress |
| **23 – 27 September** | Stockholm, Sweden | EAO |
| **22 – 25 October** | Vienna, Austria | THE COURSE – on human specimens<br>Course language: English |
| **6 – 7 November** | Krakow, Poland | CAMLOG Academy Study Club |
| **13 – 14 November** | Basel, Switzerland | Anatomie und Klinik –<br>Ein praktischer Kurs am Humanpräparat |
| **21 – 24 November** | Tokyo, Japan | National CAMLOG Congress |