



IDS 2013: MANY FANS AT CAMLOG AND A PERFECT START FOR ISY® AND DEDICAM®

The 35th International Dental Show ended on Saturday, March 16, 2013, 90 years after the first international dental exhibition with a record result. 125,000 trade visitors from 149 countries attended the world's leading trade fair for the dental industry. For CAMLOG, IDS represented an excellent platform to showcase its new look and to foster the cooperative dialog with many customers in an intensive trade show atmosphere or to gain new CAMLOG "fans". But that was far from all: The new iSy® and DEDICAM®* brands were introduced to the professional audience for the first time – and immediately given an enthusiastic reception!



With the stand-alone iSy implant concept, CAMLOG entered new territory at this year's IDS. iSy by CAMLOG was reason enough to have a second stand dedicated to iSy alone apart from the CAMLOG stand itself. From day one, a large turnout of visitors characterized the scene at both stands. The visitors were clearly enthusiastic and showed great interest in the innovative products and technologies from CAMLOG.

The iSy® brand by CAMLOG celebrated its successful premiere at IDS

The fresh, state-of-the-art and emergent appearance of iSy even outside the gates of the trade show, as well as the stand itself, created a lot of interest.

Everyone was curious to know what is behind "This is iSy". Of course, no question was left unanswered at the iSy stand.

With iSy, CAMLOG offers a very clear concept for the challenges of the present and future in implant dentistry. iSy is a revolutionary system in its simplicity that is extremely efficient through radical reduction. iSy also stands for "intelligent System" and is suitable for cases that allow the use of simple, standardized implant treatment concepts. The developers of iSy have designed an implant system suitable for most standard and low-risk cases - in a manner that everything from placement of the implant to ordering new components has been simplified. iSy not only has significantly fewer components than other systems, but also relies on single-use instruments and a reduced drilling protocol. iSy is also perfectly coordinated with DEDICAM*, the CAD/CAM solution from CAMLOG. Due to the high standardization of the individual iSy system components, efficiency gains can be achieved in production and parts management, as shown by the attractive price of iSy without users and patients having to compromise on quality and safety.

iSy opens up a new market

The iSy concept was met by an overwhelming response and great interest at IDS 2013 – not only from practice and laboratory users, but also from throughout the ranks of the dental industry and competition. Many surgeons and dentists in implant dentistry have been looking for a second system and have reacted very positively to the iSy concept. They transferred their









existing confidence in CAMLOG to the new "iSy by CAMLOG" brand and without hesitation accepted the iSy introductory offer. Thank you for the vote of confidence to all first adopters of the iSy concept!

The successful introduction of iSy and reception that the concept enjoyed during the five days of the trade show in many personal conversations show that there is a market for iSy in addition to the premium implant systems of CAMLOG® und CONELOG®. iSy offers the option of treating even more patients and in particular, other patient groups.

For more information about the iSy concept, please visit our website at www.isy-implant.com or contact us as usual.



* DEDICAM® is only available in Germany. Further countries will follow.



Market introduction of DEDICAM® – the CAD/CAM solution from CAMLOG

The expectations of patients and positive experiences in the practice and laboratory prove that there is no way to bypass digital technologies and innovative materials in dentistry in the future. Many CAMLOG customers have wanted a CAD/CAM solution for fabricating individual abutments for some time, now. DEDICAM is the decisive step in offering dental practices and laboratories restorations that can be easily implemented with an efficient digital workflow. DEDICAM gives CAMLOG access to the increasingly important CAD/ CAM market and offers custom-made prosthetic structures of high functional and esthetic quality as you would expect from CAMLOG.

CAMLOG has become an "Authorized Milling Partner" of Ivoclar Vivadent since the IDS 2013. Quality is created when all processes have been validated

and coordinated. As Authorized Milling Partner, CAMLOG has access to Ivoclar Vivadent materials including the patented lithium-disilicate glass-ceramic IPS e.max CAD and the IPS Empress CAD. With the quality plastic material Telio CAD, a wide range of temporary restorations can be fabricated.

Safety from the start

With DEDICAM, users have a service partner for high-precision restorations - lasting quality from a single source. Only DEDICAM offers custom one-piece abutments made of titanium with the patented Tube-in-Tube™ connection of the CAMLOG® Implant System. DEDICAM solutions lead to a streamlined workflow in the laboratory. This results in greater economic efficiency combined with a high degree of flexibility. No more timeconsuming grinding of prefabricated abutments or manual construction of bars and bridges. Restorations on natural teeth are also available in addition implant-supported restorations.

DEDICAM provides diverse possibilities – for CAMLOG®, for CONELOG® and iSy®. More information is available at www.dedicam.com.

CAMLOG provides a home

The CAMLOG IDS stand was dominated by the usual open, courteous and communicative atmosphere. atmosphere was partly due to the new CAMLOG "I'm a fan" campaign, which was launched to convey the familiar qualities of CAMLOG such as optimal user-friendliness. first-class service. price-performance excellent know-how comprehensive transfer and above all, the partnership and cooperation with our customers. The personal contact and close exchange of mutual interest are clearly the focus at CAMLOG.

The open, friendly CAMLOG stand also attracted visitors to seek contact with CAMLOG, who had had little to do with us in the past. In talking with experienced specialists and experts, all





















of our guests took the opportunity to take home practice-relevant knowledge and to benefit from the added value of CAMLOG. Many also participated in our "I'm a fan" photo campaign, which we were particularly pleased about!

"I'm a fan"

The new CAMLOG "I'm a fan" campaign was followed up on by a photo campaign at the CAMLOG stand. Several CAMLOG fans sat in the egg chair by Danish designer Arne Jacobson, which was also used in the original campaign. Fans were photographed with a slogan from the

campaign or a statement they created themselves projected onto the wall in a speech bubble. Thrilled by the campaign and infected by the good mood at the stand, many great pictures were taken. The pictures were immediately given to the photographic models in fan passepartouts, underscoring the personal contact.

CAMLOG wishes to thank all our guests for coming by and looks forward to seeing you again soon!







IMPLANT PROSTHETICS: "EFFECTIVE" AND "EFFICIENT" RESTORATION OF THE EDENTULOUS MAXILLA WITH AN OCCLUSALLY SCREW-RETAINED RESTORATION

Dr. Sigmar Schnutenhaus, Hilzingen, Germany, and MDT Dirk Bachmann, Bruchsal, Germany

The effectiveness of a treatment is paramount in (dental) medicine. The patient expects a successful outcome. This aspect of treatment is joined by yet another desire of the "players" involved, an efficient procedure. With a thought-out concept, the following case describes the treatment of a patient with an edentulous maxilla using a high-quality implant-prosthetic restoration. The treatment steps were optimized to also meet the factor of "efficiency".

Patients are becoming more and more demanding and are increasingly no longer satisfied with a "simple" removable complete denture. They want a unique treatment that takes into account their individual needs. Concepts, in which the participants in the treatment can operate flexibly, are in demand. Parameters including functionality, subjective esthetic perception, treatment safety and financial leeway are becoming important decision criteria.

Patient case – treatment concept

In this case report, an implant-prosthetic concept is presented, which is part of a so-called "high-end restoration". The 73-year-old patient wanted a high-quality esthetic restoration of her edentulous maxilla. After pointing out the various prosthetic options, the decision was made for an implantsupported zirconium oxide framework with all-ceramic single crowns. To take into account the "efficiency" parameter in this complex work, we selected an implant concept with which we have had very good experience for years. The All-on-6 technique based on the Allon-4 technique (Paulo Maló) promises first-class results with minimal surgical effort [1]. Vulnerable anatomical structures are bypassed during insertion. The existing bone is optimally used and augmentation can be avoided [2]. Prosthetic abutments (CAMLOG® Vario

SR prosthetic components) compensate for any irregularities in the implant emergence points.

As the final restoration, a one-piece extension bridge is attached to the six implants with distal retaining elements. In our opinion, the occlusally screwretained variant is to be preferred over cemented inserts in such cases. Various studies have confirmed that screw retention is the sure way for a long lasting result. Vario SR abutments can be used, for example, to adequately anchor the implant-supported bridge construction. Fixing screws are used to attach the abutments to the implants and another screw to secure the superstructure over that. This protects the prosthetic restoration against vertical and lateral forces. The abutments and inherent systemic prosthetic components are prefabricated and matched exactly. The result is less workload (efficiency). The implantological concept (All-on-6) benefits from the fact that 20° or 30° angled abutments can be used to compensate for the divergences of implant axes. Prosthetically useful constructions are also possible in less favorable initial situations without expensive surgical interventions (effectiveness) [3].

Fully navigated implant insertion-planning

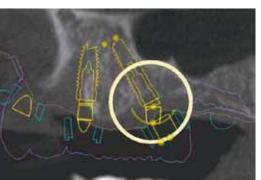
We have employed template-guided insertion for years and are convinced of the benefits [4, 5]. Treatment safety and high treatment comfort should also not be overlooked in the case described here. Preoperative planning is carried out in regard to the desired prosthetic outcome (backward planning). The interaction between treatment partners here is an important aspect that is increasingly easier to meet thanks to digital options. For this patient case, a relatively new implant planning system (smop, swissmeda, Zurich / Switzerland) was selected. Inspired by the principle of computer-supported 3D planning of conventional planning software, the entire process was optimized. The sequence of treatment has been greatly simplified (efficiency) compared to the conventional process. Various reversal processes are eliminated.

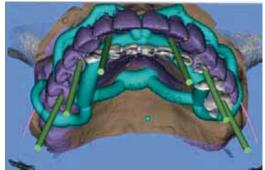
- Impression of the situation and bite registration; insertion of an auxiliary implant (region 11/21) for referencing
- 2. Fabrication of the diagnostic casts and mounting in the articulator
- 3. Set-up of the maxillary prosthesis based on prosthetic criteria (set-up) (Fig. 1)
- 4. Scanning of the maxillary cast with set-up (open-system laboratory scanner) (Fig. 2)





Figs. 1 and 2: Fabrication of the drilling template. In the first step, the position of the teeth and the diagnostic cast were scanned and an STL data set was created for each.





Figs. 3 and 4: After the DVT image (DICOM) – without scanning template – the data (STL and DICOM) were easily imported into the software (smop, swissmeda) and planning of the implant positions was carried out taking into account both prosthetic and anatomical requirements.

- 5. Scanning of the maxillary cast without set-up
- 6. DVT image (NO scanning template!) (DICOM data).

The smop software is server-based, i.e., the information can be viewed and discussed together after data import (scans and DICOM). Six implants were planned: four in the anterior and premolar region and two angled implants in the posterior region of the maxilla.

The focus of planning was a minimally invasive procedure and thus avoidance of additional surgical measures (Figs. 3 and 4). By angling the position of the terminal implants, the length of the distal cantilever bridges was reduced and the perforations of the maxillary sinus bypassed [6]. Thanks to the angled Vario SR abutments, compromises were avoided when planning the prosthetic restoration. After final coordination in the treatment team, the data was transmitted to the design center (swissmeda, Zurich / Switzerland), the drilling template designed virtually and a design proposal submitted to us. No changes were necessary and the digital design was converted into an open STL data set at the design center. Rapid prototyping (3D printing) was used to create a template adapted to our requirements (swissmeda) for inserting the implants. The drill sleeves were inserted into the precisely prepared plastic sleeves at the dental office.

Implant insertion

Preoperatively, we checked the exact fit of the sleeves and template in the mouth of the patient. The skeletal template rested tightly on the mucosa of the edentulous maxilla and only needed to be fixed to the central auxiliary implant (Fig. 5). In such cases, one has good control over the secure fit of the drilling template due to the template resting on the entire surface of the palate and the point-by-point support on the temporary implant. The mucosa was then punched in the region of the implant positions, the template lifted and the mucosal plugs removed (Figs. 6 and 7). After positioning the template once again, the implants (SCREW-LINE implants CAMLOG® Guide) were inserted in a relatively short period of time in accordance with the usual drilling protocol (Figs. 8 and 9). The delicate skeletal template did not



Fig. 5: The skeletal drilling template was checked in the mouth for fit and secured via an auxiliary implant.



Fig. 6: The mucosa was punched through the template or drill sleeves.

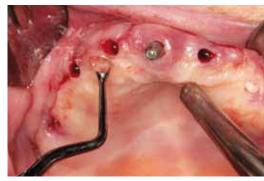


Fig. 7: To remove the mucosal plugs, the template had to be removed once more.



Fig. 8: After repositioning the template, the implants were inserted.



Figs. 9a and 9b: Inserting the implant in region 23 and checking the insertion depth.





Fig. 13: To determine the occlusal height, Vario SR impression posts were used for the bite registration.

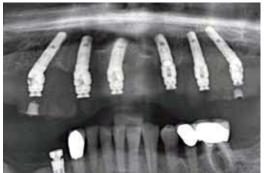


Fig. 14: X-ray image after 3-month healing phase of the six implants in the maxilla.



Figs. 15a and 15b: The implant cast with the Vario SR Lab analogs and indispensable gingival mask.

impede the clinician or assistant during the surgical procedure, i.e., in terms of handling, inserting the implants can be compared to methods that do not use a template.

Inserting abutments, temporary immediate restoration and impression-taking

Before inserting abutments, the Vario SR aligning tools can be used to check the insertion direction of the implant grooves. The respective aligning tool was placed on the insertion post attached to the implant and the alignment of the implant inner configuration gently corrected if necessary. After cleaning the implants, the final abutments (Vario SR) were inserted (Fig. 10). The familiar "click" when the cams of the abutment engage in the grooves of the implant confirmed the precise final position. The abutment screw was tightened at a torque of 20 Ncm and tightened again after five minutes. A follow-up X-ray was taken to check the optimal fit of the abutments.

The Vario SR abutments are no longer removed after this point! That is an

incomparable advantage of the concept. What disadvantage attaching and detaching abutments has on the bone is currently in discussion. In our opinion, there is a risk of irritation to the bone and soft tissue each time an abutment is removed. For individual impression taking, Vario SR impression caps were screwed onto the abutments. A fixing screw engages in the occlusal thread of the angled abutment or in the head thread of the abutment screw (straight abutments). A polyether material in an open tray is used to take the impression (Figs. 11 and 12). After the impression material has set, the fixing screws are loosened, the impression tray removed and the caps firmly secured in the impression. Accurate implant-supported measuring of the arch relations and their transfer to the cast situation is an important aspect in addition to transfer of the implant positions. This requires a thoughtful approach and in particular, in edentulous arches. In this case, special titanium caps (Vario SR) were attached to the abutments and the arch relations fixed with a bite registration material (Fig. 13). To treat the patient after the surgical intervention with a fixed restoration, the existing prosthesis

was reworked, so-called abutment protective caps were placed over the final abutments and the prosthesis was screwed to the implants and protective caps.

Fabrication of the final restoration

After the 3-month healing phase, the implants were osseointegrated. Nothing else stood in the way of inserting the final restoration (Fig. 14).

The Vario SR Lab analogs were attached to the caps in the impression and the impression cast. After the plaster had set, we loosened the fixing screw of the caps and removed the impression. The lab analogs were attached and the cast was finished (Fig. 15).

All-ceramic single crowns had been planned which were to be combined with a zirconium oxide framework into one piece. We have very good experience with this type of prosthetic restoration and resort to it frequently. The "efficiency" factor has a low priority when fabricating the framework of such



Fig. 10: After insertion, the final Vario SR abutments were mounted. To compensate for implant divergences, 30° angled abutments were used in the posterior region.



Figs. 11 and 12: Impression-taking with impression posts (on the final abutments) and open custom tray.





Fig. 15b



Fig. 16: After an esthetic try-in in the patient's mouth, the set-up was fixed with a silicone index.



Fig. 17: Before casting the set-up in plastic, the prosthetic screws were blocked out.



Fig. 18: The set-up transferred to plastic was prepared such that it made sense for subsequent fabrication of the single crowns.

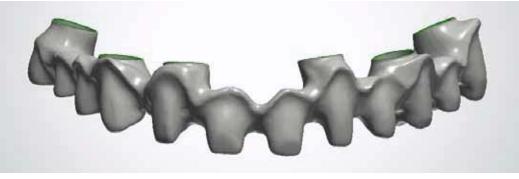


Fig. 19a: After scanning the gradually developed plastic framework, the milling center created a digital bridge construction, which we accepted without objection.

a high-quality restoration. However, the resulting additional costs are outweighed by the finishing. CAD/CAM technology should be used to finish the framework, but that does not mean that preparatory work by hand is not required. For an initial esthetic try-in, the cast abutments were splinted with plastic and the teeth positioned – the set-up formed the base in the preparatory stage of implant planning. For the try-in, we fabricated a screw-retained set-up and were thus able to check the accurate transfer of the implant positions in the patient's mouth. The cosmetic try-in in the patient's mouth was relatively stressfree thanks to the screw retention. We

discussed the objective and subjective esthetic parameters together and checked the occlusal height, again. The resulting situation (set-up), the desired goal, was ultimately fixed with silicone matrices (Fig. 16).

The first step should be fabrication of a framework prototype made of plastic. The prosthetic screws were blocked out (Fig. 17) and the silicone matrix cast on the model with a plastic. We reduced the resulting representation of the set-up, so that the framework reproduced the reduced crown shape perfectly. The silicone matrices were very helpful, here. Each individual "stump" was prepared in a way that

seemed to make sense for subsequent fabrication of the single crowns (Fig. 18). The more detailed the preparation, the simpler the final work steps (allceramic crowns). The prototype of the framework was digitalized and a design made of zirconium oxide ordered in the milling center (Fig. 19). We received an absolutely tension-free framework, a few days later. The importance of freedom of tension in implant-supported structures is well documented and is therefore mentioned here only briefly. Without any corrections to the framework, the individual crowns could then be fabricated (Figs. 20 and 21). Due to the good preparatory work, the



Fig. 19b: The bridge framework implemented in zirconium oxide is prepared for fabrication of a "stump cast".



Fig. 20: "Stump cast", the following procedure is comparable to fabrication of pressed-ceramic single crowns on stumps of natural teeth.



Fig. 21a: The crowns were cast in wax to full contour ...





Figs. 23a and 23b: After checking all important parameters, the individual components (all-ceramic crowns and zirconium oxide framework) are bonded together.



Fig. 24a: Close-up of the completed restoration. The clean, smooth design of the shoulder areas ...



Abb. 27: Optimal cleanability of the fixed restoration is guaranteed. Due to the low smile line, this design does not give rise to any esthetic impairment.



Figs. 28a and 28b: The portrait and lip appearance of the highly satisfied patient.





Fig. 21b: ... and prepared for pressing.



Figs. 22a and 22b: The gingiva parts were veneered with gum-colored ceramic and the finished all-ceramic crowns attached. The natural appearance of the complex ceramic work is impressive.



Fig. 24b: ... and the invisible transition "framework & Fig. 25: The maxillary bridge is prepared for insertion. tooth" is a prerequisite for long-term success.





Fig. 26: The inserted zirconium oxide bridge. The screw channels were sealed with virtually "invisible" composite.

"efficiency" factor was duly noted. We opted for press technology (IPS e.max). In the posterior region, we created full anatomical crowns (using set-up as template) and in the anterior region, we layered individual "teeth" after a cutback (Fig. 21). Finally, the gingival parts of the framework were veneered with gum-colored ceramic (Fig. 22) and the screw channels milled in the crowns. To then connect the individual components firmly together, the IPS e.max crowns were etched, the zirconium oxide surfaces of the framework silanized and the parts bonded together (Fig. 23). The final work steps in the laboratory were to polish the restoration to a high gloss and the final check (Fig. 24).

Inserting the restoration

After removal of the temporary restoration, gingival conditions were perfect, providing the ideal basis for the bridge restoration. The restoration was checked in the patient's mouth. The tension-free (passive) fit of the restoration was again the main focus. The cleanability of the fixed restoration is an important criterion for long-term preservation of the restoration. Due to

the advanced age and low smile line of the patient, this criterion was most important. A compromise between esthetics and functionality was found. With a good feeling, we were now able to transfer the restoration to the Vario SR abutments (Fig. 25) and attach them with (new) prosthetic screws (Fig. 26). The subsequent review of all relevant criteria (e.g., function, esthetics, phonetics, etc.) followed. The good preparatory work paid off. Virtually no correction was required. The screw channels were sealed with an "invisible" composite (Fig. 27).

Conclusion

The prosthetic restoration option presented here is a high-quality solution (Fig. 28). Of course, there are alternatives, and this is precisely the advantage of this implantological treatment concept: The screw-retained restoration can be realized on the Vario SR abutments in various configurations. A less expensive option might, for example, include fabricating a framework from a nonprecious metal and veneering it with a high-quality plastic, which is also an effective method.

To meet the individual requirements of the patient, we need this flexibility and corresponding systems and concepts.

The sequence of treatment shown combines "effectiveness with efficiency":

- 1. Fully navigated implantation (smop, swissmeda)
- 2. "Minimally invasive" thanks to the angled CAMLOG® Vario SR abutments (the existing bone level could be used optimally)
- 3. Temporary immediate restoration on the final abutments (no exchange necessary)
- 4. Zirconium oxide framework and pressed-ceramic single crowns (IPS e.max, Ivoclar Vivadent).

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REFERENCES

[1] MALO P, NOBRE M, RANGERT B. IMPLANTS PLACED IN IMMEDIATE FUNCTION IN PERIODONTALLY COMPROMISED SITES: A FIVE YEAR RETROSPECTIVE AND ONE YEAR PROSPECTIVE STUDY. J PROSTHET DENT 2007; 97 (6): S86 S95.

[2] APARICIO C, PERALES P, RANGERT B. TILTED IMPLANTS AS AN ALTERNATIVE TO MAXILLARY SINUS GRAFTING: A CLINICAL, RADIOLOGIC, AND PERIOTEST STUDY. CLIN IMPL DENT RELAT RES 2001; 3(1): 39-49.

[3] ROSÉN A, GYNTHER G. IMPLANTAT TREATMENT WITHOUT BONE GRAFTING IN EDENTULOUS SEVERLY RESORBED MAXILLAS: A LONG TERM FOLLOW UP STUDY. J ORAL MAXILLOFAC SURG 2007; 65: 1010-16.

[4] TESTORI T, DEL FABBRO M, CAPELLI M, ZUFFETTI F, FRANCETTI L, WEINSTEIN RL. IMMEDIATE OCCLUSAL LOADING AND TILTED IMPLANTS FOR THE REHABILITATION OF THE ATROPHIC EDENTULOUS MAXILLA: 1 YEAR INTERIM RESULTS OF A MULTICENTER PROSPECTIVE STUDY. CLIN ORAL IMPL RES 2008; 19: 227-32.

[5] CRESPI R, VINCI R, CAPPARÉ P, ROMANOS GE, GHERLONE E. A CLINICAL STUDY OF EDENTULOUS PATIENTS REHABILITATED ACCORDING TO THE "ALL ON FOUR" IMMEDIATE FUNCTION PROTOCOL. INT J ORAL MAXILLOFAC IMPLANTS 2012; 27(2): 428-34.

[6] BEVILACQUA M, TEALDO T, MENINI M, PERA F, MOSSOLOV A, DGRAGO C, PERA P. THE INFLUENCE OF CANTILEVER LENGTH AND IMPLANT INCLINATION ON STRESS DISTRIBUTION IN MAXILLARY IMPLANT [SUPPORTED FIXED DENTURES. J PROSTHET DENT 2010; 105:5-13.

"Thanks to the high-quality material components and the thought-out treatment concept, we were able to provide the patient with first-class care according to her wishes."



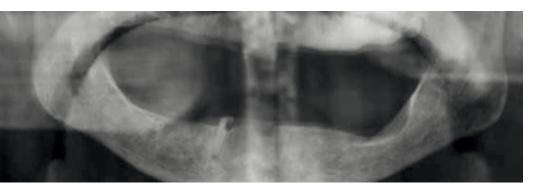


Fig. 1: Preoperative panorama layer image: The root remains of the cuspid in the fourth quadrant were restored with a telescope up to the fracture and were used to stabilize the covering prosthesis.



Fig. 2: The soft tissue has healed well six weeks after extraction.

REMOVABLE RESTORATION ON IMPLANTS – IMPLANT-SUPPORTED TREATMENT FORMS IN THE EDENTULOUS ARCH¹

Prof. Stefan Wolfart and MDT Volker Weber, both Aachen, Germany



The quality of life can be increased significantly by implants for wearers of complete dentures [1,2]. According to the literature, a single implant can be sufficient in the mandible [3,4]. In practice, however, two or four implants are preferred depending on the form of treatment. In the following example, the treatment team realized three different supporting options in succession for the same patient on four CAMLOG® SCREW-LINE implants in each case: Locator® abutments, electroplated double crowns and a milled CAD/CAM bar.

The patient was given the choice. This contribution is a very brief version of the authors' concept and describes the characteristics of the three types of restoration with regard to the selected implant system.

Planning and interim restoration

A 78-year-old female patient presented with a transverse fracture of her last mandibular tooth for new restoration (Fig. 1). As the tooth is extremely painful and the prosthetics can no longer be held in place, she decides in favor of an implant-supported restoration on four implants. To improve the hold of the prosthetics, four intraforaminary implants are to be placed in the mandible and a covering prosthesis fabricated. The maxilla is to be restored in parallel with a mucosa-supported complete prosthesis.

Six weeks after extraction (Fig. 2) the functional, esthetic and phonetic situation is analyzed first and the arch relation registered with wax matrices (Fig. 3). Based on the duplicated wax setup, a template is prepared from x-ray opaque plastic for the digital volume tomogram. After transfer to a computer-guided planning program, the prosthetically oriented implant positions are determined. Using the corresponding laboratory-supported hardware (X1 med3D®, med 3D), these are converted into a positioning and drilling template.



Fig. 3: As in conventional complete prosthetics, bite registration and a wax set-up are performed first. These also serve as basis for the x-ray template in the mandible and the final prostheses.



Fig. 4: The reworked x-ray template is used as drilling template. Bleeding points on the gingiva facilitate incision guidance.

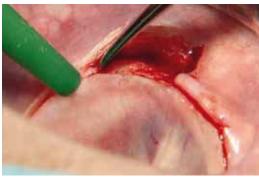


Fig. 5: The incision route followed the bleeding points and equally divides the gingiva into a vestibular and a lingual flap. Median stress relief is also provided to allow tension-free manipulation.



Fig. 6: A drilling template is again used for pilot drilling, but without a depth stop.



Fig. 9: Precutting of the thread is recommended for bone qualities D1 and D2 at a maximum of 15 rpm.



Fig. 10: After preparing the implant beds, the CAMLOG® SCREW-LINE implants are screw-retained in positions 34, 32 and 42 and 44.



Fig. 11: The wound edges are adapted tension-free with a mattress suture. Additional individual button sutures were placed due to the strong muscular pull.



Fig. 14: To expand the keratinized gingiva, a partially layered flap is prepared in the perimplant region, moved apically and fixated to the periosteum with individual button sutures (right mandible).

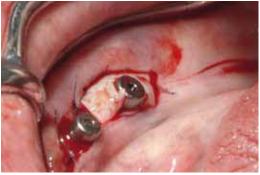


Fig. 15: A free mucosal graft is harvested palatally and sutured around the implants. Care should be taken to ensure that the graft does not separate from the base through muscular pull.



Fig. 16: After four weeks of healing the area around the healing caps presents irritation-free with a sufficient band of fixed gingiva, also in the region of the graft.

Surgery

During surgery, the drilling template initially serves to determine the route of incision (Figs. 4 and 5). The implant positions are marked with the pilot drill. The template is then removed, the marked positions enlarged with the round bur and the bone bed smoothed. Then the pilot holes are drilled templateguided with the 2-mm spiral drill (Fig. 6).

The template is again removed so that alignment and vertical shoulder position can still be corrected during successive widening of the drill holes with the conical pre-drill and the shaping drills (Figs. 7 and 8). A thread is precut at low revolutions due to the hard quality of the bone (Fig. 9). In case of bones with D1 quality, the cortical bone shaping drill is used in addition prior to cutting the thread.

Then the four CAMLOG® SCREW-LINE implants are placed manually (Fig. 10). The insertion posts are removed and the implants filled with CHX-Gel before placing the cover screws and suturing the flaps free of tension (Fig. 11). Figures 12 and 13 show the x-ray check and the permanent soft lining after trimming the implant positions for interim restoration.



Fig. 7: Further preparation is then performed without a drilling template. The alignment of the implant axes is checked using a parallel gauge.



Abb. 8: The shape drill has an optional depth stop which helps to ensure that the implant shoulder is placed 0.4 mm supra-crestally. Additional laser markings are provided for deviating insertion depths, if so desired.

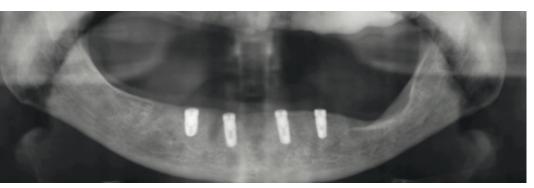


Fig. 12: The x-ray control shows four CAMLOG® SCREW-LINE implants which were placed with virtually parallel axes.



Fig. 13: The interim restoration is ground basally in the area of the implants and given a permanently soft lining. This minimizes the pressure on the implants and the surrounding soft tissue.



Fig. 17: Polyether impression-taking is open using an individual tray. The lab analogs are screwed to the impression posts, a gap-free fit indicates correct positioning.



Fig. 18: The LineFinder[®], a bite fork with extraoral transfer aid which is adjusted on the patient, is used for the precise transfer of the face center.



Fig. 19: The longitudinal axis of the LineFinder® is fixed in the articulator and serves to correctly align the wax set-up.

Twelve weeks later, the implants are exposed by crestal incision using the previous incision route. Vestibuloplasty is performed on both sides to expand the keratinized gingiva (Fig. 14). Hereby, the split flaps must be able to be moved apically without tension. As too little fixed gingiva is available in the fourth quadrant despite apical displacement, an additional free mucosal graft is applied there (Fig. 15).

First type of restoration: Locator® abutments

Four weeks after exposure, the softtissue situation around the healing caps has developed well **(Fig. 16)**. Impression was taken using the pick-up technique **(Fig. 17)**. The functional and esthetic situation with face bow, LineFinder® and repeated wax bite registration is transferred to the laboratory **(Fig. 18)**. With the aid of the LineFinder®, the dental technician can reproduce the center of the face at any time and take possible asymmetries into account. The wax set-up is modified slightly (Fig. 19).



Fig. 20: The CAMLOG® Locator® abutments are mounted on the master model with the lab analogs.



Fig. 21: The retention rings of the CAMLOG® Locator® System differ depending on the retention force of the insert and the angulation of the implants.

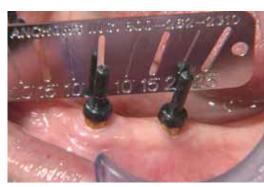


Fig. 22: The divergence of the implants is checked with parallel posts and the parallel gauge. The result is less than 20 degrees, that is approximately 10 degrees per implant. The retention inserts for low divergence are selected.



Abb. 26: The patient is very pleased with the Locator® prosthesis.



Fig. 27: The castable CAMLOG® gold-plastic abutments are fitted with a modeling aid made of burn-out plastic, which is shortened according to the spatial conditions.



Fig. 28: The screw channel is blocked out, the primary component is coated with conductive silver lacquer to ensure gold separation in the blocked out area.

The CAMLOG® Locator® System consists of implant abutments with dual retention areas and different retention inserts for the matrix (Figs. 20 to 22). These are fixed in a cast model frame to give the matrices a secure hold in the prosthesis (Figs. 23 and 24). To this purpose, the dental technician duplicates the master model together with the Locator® abutments and checks the spacing against the previously prepared silicone index (Fig. 23).

To place the finished restoration (Fig. 25), the treating clinician screw-retains the Locator® abutments with a special insertion instrument at a torque of 30 Ncm and inserts the prosthesis in its final position. Then function and esthetics are checked (Fig. 26). The treatment team and the patient are highly satisfied with both.

Second type of restoration: electroplated double crowns

The telescope-anchored prosthesis is fabricated according to the Weigl protocol with electroplated secondary components on the existing master

model. As usual, the primary components are customized with castable CAMLOG® gold-plastic abutments (Fig. 27), embedded, cast and then processed again in the parallelometer. The secondary components are fabricated employing electroplating technology (Fig. 28) and the tertiary framework via the cast model technique.

The treating clinician screws the primary components to the implants using a positioning key and test-fits the supplied parts. To achieve the desired passive fit, the secondary components and the tertiary framework are bonded intraorally **(Fig. 29)**. The interplay between all components now needs to be transferred back to the laboratory as accurately as possible. To this purpose, a fine bite registration and a pick-up impression of the tertiary framework are taken **(Fig. 30)**.

Once the tertiary framework and the secondary components have been bonded, the abutments should no longer be removed as this could endanger the tension-free passive fit. For this reason, the dental technician had previously

fabricated an interim prosthesis, which the patient can wear over the primary components. The technician fabricates a new master model and reproduces the wax set-up of the replacement prosthesis with the aid of the silicone matrix. Following a renewed wax tryin, the prosthesis is completed (Fig. 31) and inserted (Fig. 32).

Third type of restoration: CAD/CAM bar

A bar-retained covering prosthesis is realized as third and last option. The bar is made of titanium using the CAD/CAM method. The existing master model again serves as basis. This time, CAMLOG® bar abutments are mounted on the lab analogs (Fig. 33). Deviating from the open impression shown in this patient case study, components for closed impression are also available. This has the advantage that the bar abutments no longer need to be removed from the patient's mouth.

Design and fabrication of the bar are performed according to the desired specifications at an external milling center



Fig. 23: The spatial conditions on the duplicated master model can be checked effectively with the pre-wall of the wax set-up when preparing the cast model.



Fig. 24: The Locator® housing and the finished cast model framework are bonded with a dual-hardening adhesive composite.



Fig. 25: After completion, the blue retention inserts for low pull forces and slight divergence of the implant axes are pushed in.



Fig. 29: The tertiary framework, made from a cobalt-chrome based alloy, is fitted with occlusal and vestibular openings so that excess plastic can be expelled during bonding.



Fig. 30: A bite register of light-curing plastic was prepared on the tertiary framework in the laboratory for the transfer of the maxillary-mandibular relationship. An impression is taken of the overall situation of the tertiary framework using an individual tray.



Fig. 31: The completed prosthesis with basal electroplated telescopes.



Fig. 32: The inserted prostheses, second version of the mandibular restoration.



Fig. 33: The CAMLOG® bar abutments are selected according to implant diameter and gingival height and screwed to the master model.



Fig. 34: The bar was designed externally using the CAD method. The wax set-up and the master model were scanned individually and then matched. This way, the bar can be designed ideally in accordance with the prosthetic specifications.

(ISUS by Compartis®). The technician receives the virtual planning suggestion per e-mail in a special viewer (Fig. 34). This allows for modifications prior to authorization. The bar's accuracy of fit is first checked in the laboratory (Fig. 35), and then intra-orally.



Fig. 35: The fit of the bar, which was also milled externally, is checked on the master model with the Sheffield Test. With one tightened screw in each case, the bar is positioned tension-free on the other abutments.



Fig. 36: Plastic attachment parts are integrated to increase and control the pull-off force



Fig. 37: The bar is screwed to the bar abutments with a torque of 15 Ncm. Guide grooves for interdental brushes were added in the laboratory to improve the hygiene potential



Fig. 38: The final bar restoration in the patient's mouth. Which version did she decide on?

A gold model cast frame is then

fabricated by the technician as secondary component. This allows modeling of a protective back plate with a thickness of only 0.3 mm. This way, the lingual area is not as restricted as would be the case with a complete plastic mounting. Other positive aspects include the good friction and fit of the gold cast component which is complemented by suitable attachments (Preci Vertix®/

Preci Horix®, Preat Corporation) (Fig. 36). The initial try-in showed that the hygienic features of the bar were not yet optimal. For this reason, concave guide areas for a cleaning brush were added in the laboratory (Fig. 37). Figure 38 shows the inserted bar prosthesis.

Discussion

The key question in the end was: which type of restoration did the patient prefer? The patient decided in favor of the first restoration, with which she felt instantly comfortable: the Locator® prosthesis. She was also sympathetic towards the other two anchoring concepts, but stayed with her decision.

A check of the literature shows that the patient's decision could easily have been otherwise. The different implant-prosthetic anchoring concepts do, however, differ in some parameters in terms of follow-up. But there is no evidence which would favor one of these types of restoration. Patient satisfaction is generally high, the use of Locator® abutments is comparable to milled bars [5]. A comparison of Locator® and telescope anchorage also revealed no difference in this aspect [6]. The surgical and prosthetic success rates for bars and

telescopes were high for both concepts in another study [7]. Furthermore, healthy peri-implant conditions are possible with all variants [2].

The fact that bar designs fare less well with regard to the latter point [5] could be due to several factors which need to be observed during planning, execution and follow-up: oral hygiene is more difficult with bars than with telescopes, and there is usually also more pronounced accumulation of plaque and calculus. Therefore, the hygiene aspect is particularly important. Guide grooves for cleaning brushes help patients accomplish efficient cleaning. In this case, the dental technician prepared these of his own accord as the form and alignment of this detail is not yet ideal in CAD/CAM planning. If a bar design is chosen, then milled bars are preferable to resilient mounting in combination with round bars. This reduces aftercare considerably [8].

According to Dr. Ackermann and Dr. Kirsch, the CAMLOG® Implant System is ideal for the electroplated telescope technology [9]: "On the one hand, it allows a perfect fit of implant and primary telescope as the groove-cam interface guarantees virtually zero rotation of the two parts against each other." In addition "the form fit of the Tube-in-Tube connection between the implant and the telescope abutment offers very high stability against horizontally acting forces."

However, the best design is of little use if the patient is not motivated to care for his new dentures or is not in a position to do so manually. This is why a resilient biological basis is even more important. If a peri-implant band of keratinized gingiva is lacking, or if this is very narrow, then this should be created using suitable soft-tissue techniques. Expansion can be achieved by vestibuloplasty or a free mucosal graft. Inflammatory complications will then occur significantly less [10].

In contrast, experience with telescopes shows them to be more difficult to handle than bars. Resilient mounted Locator® restorations are also userfriendly. The self-aligning design of the Locator® anchoring system supports the patient when inserting and seating the prosthesis. Easy handling was also the

reason in our case study why the patient quickly decided in favor of this variant. Regardless of this individual decision, our example nicely shows that there is no *single* right solution in dentistry, but that there are several ways to reach the objective. When choosing one concept or another, preference and experience of the clinician must ultimately be the decisive factors, together with patient-related factors such as age and manual dexterity of the patient.

REFERENCES

- [1]. Assuncao WG, Barao VA, Delben JA, Gomes EA, Tabata LF. A comparison of patient satisfaction between treatment with conventional complete dentures and overdentures in the elderly: a literature review. Gerodontology 2010;27:154-162.
- [2]. Wolfart S, Moll D, Hilgers RD, Wolfart M, Kern M. Implant placement under existing removable dental prostheses and its effect on oral health-related quality of life. Clin Oral Implants Res 2012.
- [3]. Feine JS, Carlsson GE, Awad MA, Chehade A, Duncan WJ, Gizani S, et al. The McGill consensus statement on overdentures. Mandibular two-implant overdentures as first choice standard of care for edentulous patients. Gerodontology 2002;19:3-4.
- [4]. Alsabeeha NH, Payne AG, De Silva RK, Thomson WM. Mandibular single-implant overdentures: preliminary results of a randomised-control trial on early loading with different implant diameters and attachment systems. Clin Oral Implants Res 2011;22:330-337.
- [5]. Cordaro L, di Torresanto VM, Petricevic N, Jornet PR, Torsello F. Single unit attachments improve peri-implant soft tissue conditions in mandibular overdentures supported by four implants. Clin Oral Implants Res 2012.
- [6]. Krennmair G, Seemann R, Weinlander M, Piehslinger E. Comparison of ball and telescopic crown attachments in implant-retained mandibular overdentures: a 5-year prospective study. Int J Oral Maxillofac Implants 2011;26:598-606.
- [7]. Krennmair G, Suto D, Seemann R, Piehslinger E. Removable four implant-supported mandibular overdentures rigidly retained with telescopic crowns or milled bars: a 3-year prospective study. Clin Oral Implants Res 2012;23:481-488.
- [8]. Krennmair G, Krainhofner M, Piehslinger E. The influence of bar design (round versus milled bar) on prosthodontic maintenance of mandibular overdentures supported by 4 implants: a 5-year prospective study. Int J Prosthodont 2008;21:514-520.
- [9]. Ackermann KL, Kirsch A, Nagel R, Neuendorff G. Mit Backward Planning zielsicher therapieren. Teil 1: Implantatprothetische Behandlungsbeispiele. Teamwork Journal for Continuing Dental Education 2008;11:466-484.
- [10]. Greenstein G, Cavallaro J. The clinical significance of keratinized gingiva around dental implants. Compend Contin Educ Dent 2011;32:24-31; quiz 32, 34.

AUTHORS



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completed his studies in dentistry at the Philipps University Marburg, Germany followed by a doctorate. After working for one year in a dental practice he worked as research associate in the Clinic for Dental Prosthetics, Propaedeutics and Materials Science at the University Clinic Schleswig-Holstein, Campus Kiel, from 1998 to 2008. He was appointed senior physician in 2001 and completed his specialist training in dental prosthetics. 2006, post-doctoral lecturing qualification. Since October 2008, Stefan Wolfart is director of the Clinic for Dental Prosthetics and Biomaterials at the University Clinic Aachen. His clinical and scientific focus is on implant dentistry, dental esthetics, clinical performance of new ceramic materials and the associated improvement in quality of life.

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MDT Volker Weber

worked closely from 1988 to 2009 with the prosthetic department of the RWTH (Rhine-Westfalia Technical University) Aachen, Germany, (Director: Prof. H. Spiekermann) in the field of implant dentistry. This cooperation was intensified when he joined the Impladent dental laboratory in Aachen in 1992. 1994, MDT training in Cologne. Since 2005, he has been active as speaker on implant prosthetics for various institutions and published articles on the topic of "Implantsupported superstructures". Since 2009, he has continued his collaboration with the Clinic for Dental Prosthetics and Biomaterials at the RWTH Aachen under director Prof. Stefan Wolfart.

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Experience this publication as a video! It comes from the video compendium "Implantatprothetik VIER TEAMS – IHRE KONZEPTE UND LÖSUNGEN" (Implant prosthetics FOUR TEAMS – THEIR CONCEPTS AND SOLUTIONS) (Quintessenz Verlag). Volume 3 by S. Wolfart and V. Weber deals with removeable dentures on implant-supported restorations in edentulous jaws. The video compendium is available from CAMLOG as a DVD or Blu-Ray disc.







THE NEW ISY® IMPLANT SYSTEM

iSy was not only the number 1 topic at the IDS trade exhibition in Cologne, iSy is also a milestone in the CAMLOG history of innovations

When thinking of iSy, a consistent focus on the essentials immediately stands out: With fewer implant variants, fewer instruments and fewer steps, iSy has simplified implant dentistry significantly – from planning to ordering individual items. The new clarity of the concept allows greater productivity and not least, greater enjoyment at work.

From the ground up, iSy is a newly designed, extremely efficient implant system for a variety of indications. And thus a CAMLOG promise to all dentists, surgeons and laboratories to achieve more with less. The iSy overall concept is coordinated in every way to the workflows and specific cost situation in the dental office. For example, the single-

use form drill requires no preparation, saving time and money. iSy convinces by being less complex, requiring fewer steps and also less time during surgery. And the price is right. With iSy, resources can be used more efficiently and even more patients gained for implant-prosthetic restorations.

Swiss engineering, paired with the outstanding concept of quality of German manufacturing, make iSy an implant system of excellent origins. The entire process has been redesigned from the ground up based on the most current knowledge. The latest production technologies and rigorous quality assurance ensure that iSy meets high standards in all areas.

iSy is a trailblazer in the digital workflow. From easy component reordering to e-learning via multichannel platform to multimedia communication with the dental laboratory.

Apart from all relevant product information, an online shop, CAD/ CAM platform and download center on www.isy-implant.com, you can also find a simple step-by-step video tutorial* that shows you how efficient iSy is to work with.

Standing still is not in the nature of iSy, which is why the iSy platform is continuously being expanded, e.g., with case studies and opportunities for exchange for users.

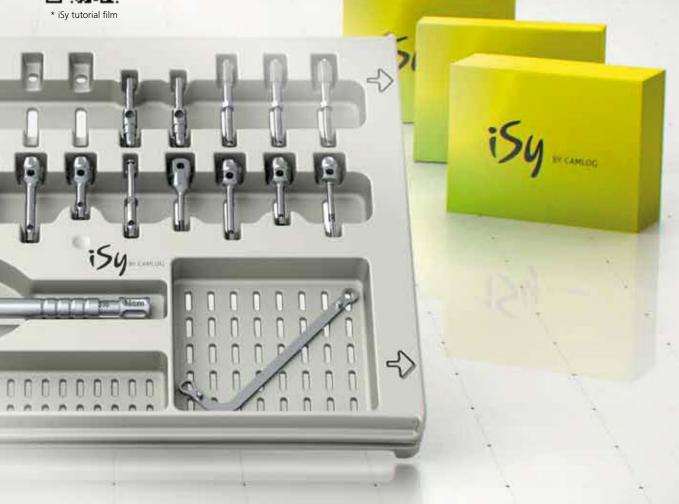


The iSy Implant System in detail

iSy saves time, nerves and money. Fewer components and less complexity greatly simplify learning, handling and ordering. You only require three components: the surgery and prosthetic set, the implant pack, and the abutment for final prosthetic restoration.







Efficiency meets high tech: iSy implants

With just three diameters (3.8 / 4.4 / 5.0 mm) in three lengths (9 / 11 / 13 mm) and three packaging sizes with 1, 2 or 4 implants, iSy makes easy work of choosing the right implant. It doesn't get any easier - and drills, healing caps and multifunctional caps are also included. iSy implants impress with a pre-mounted implant base. After placement of the implant, the base remains on the implant and holds the healing cap, impression cap and temporary restoration – completely without screws. The conical implantabutment connection has an identical inner diameter for all implant sizes.

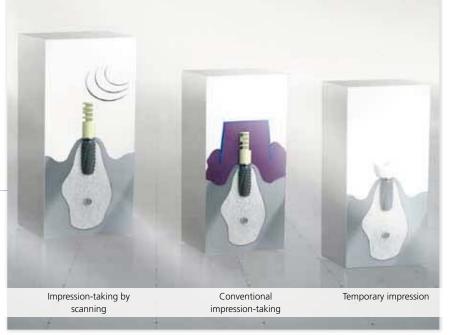


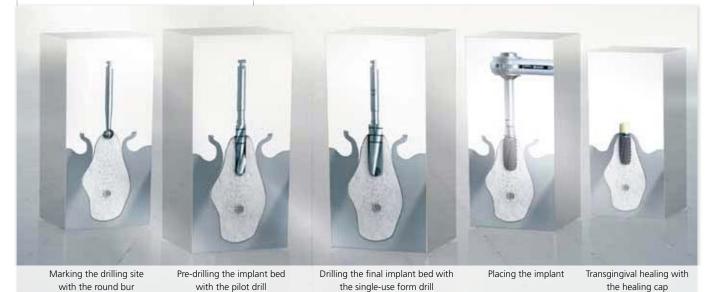
One for all: iSy multifunctional cap

The iSy multifunctional cap can be digitally scanned, used for conventional impression-taking and cuts a fine figure as a temporary base. It can also be used for bite registration. The snap function mechanism requires no screw and ensures easy and accurate position transfer.

The surgical procedure

iSy manages with a significantly reduced drilling protocol. The time and cost advantage comes from the innovative design and intelligent interaction between components.





Prosthetics

With DEDICAM, a comprehensive portfolio of high-quality CAD/CAMbased prosthetic solutions is available to you for the iSy Implant System that combines proven CAMLOG precision with high cost-effectiveness and an impressive level of flexibility. Thanks to its open CAD interface with a huge range of designs and material, as well as streamlined processes, DEDICAM offers a highly efficient workflow. The iSy Implant System offers you the following options for conventional prosthetic restorations:

Titanium base CAD/CAM, Universal abutment and Locator®.



To gain the quickest and most comprehensive overview on the iSy Implant System, please visit: www.isy-implant.com iSy can't do everything – but everything iSy does, iSy does easier.



INTERVIEW



logo had the opportunity at the IDS in Cologne to conduct an insightful interview with Michael Ludwig, Managing Director of CAMLOG Vertriebs GmbH, on the new iSy Implant System.

logo: Mr. Ludwig, can you describe the iSy Implant System in simple and concise terms, as the name implies?

Michael Ludwig: With iSy, we are following an absolutely clear concept. iSy is a revolutionary system in its simplicity that is extremely efficient through radical reduction. The system requires only 70 parts. This is much less than with other systems, and yet it covers a broad application spectrum. The three implant lengths and diameters are designed to cover the most frequent standard cases. Single-use instruments

and a downsized drilling protocol save time and resources in the dental office. The prosthetic range is consistently trimmed towards efficiency and is of future-oriented design with CAD/CAM-based solutions. iSy sounds simple, iSy is simple, it is an intelligent system.

logo: With iSy, CAMLOG is building a second brand. Why?

Michael Ludwig: In addition to the premium segment, which we have worked very successfully to this point, the implant market in Germany offers great opportunities for us in the value area. Apart from high-end implant dentistry, there is also great demand for simpler, standardized implant treatment concepts, that can be implemented in nearly any dental office, at least prosthetically.

Here we have the right answer at the right time with our iSy System. The DGET (Deutsche Gesellschaft für Endodontie und zahnärztliche Traumatologie, e.V., editor's note: German Society for Endodontics and Dental Traumatology) speaks of 11 million extracted teeth in Germany per annum. This offers enormous potential.

logo: Aren't you taking away business from your two other systems, the CAMLOG® and CONELOG® Implant Systems, by introducing a new cheap implant?

Michael Ludwig: Objection: iSy is *not* a cheap implant. iSy is a concept that ensures an efficient, simple, standardized implant procedure thanks to high-quality, cost-effective products. We offer our customers a real opportunity to treat even more patients and especially other patient groups. That may include pricesensitive customers, it will be implant restorations that do not have the highest esthetic requirements or painsensitive patients, who fear a two-phase treatment

logo: What esthetic limitations do I accept when I choose iSy?

Michael Ludwig: That's not necessarily the case, rather it depends on the respective treatment case and the required degree of customization. Esthetic restorations can also be implemented with iSy if the iSy concept best fits the required treatment protocol. However, customization with iSy during the course of treatment is limited as

iSy implants heal transgingivally, thus eliminating surgery to expose the implant site. We offer a reduced assortment of prefabricated components for the final prosthetic restoration and the new CAD/ CAM solutions by DEDICAM: (www.dedicam.com).

logo: What users do you want to attract with iSy?

Michael Ludwig: For us, iSy gives us the opportunity to do business with practicing dentists and surgeons, who have not purchased from us in the past. With iSy, we are confident that we are in tune with the market, will reach new groups of buyers and help an expanded group of patients gain access to dental implants.

logo: You are Germany's first premium manufacturer to introduce a cost-effective secondary system. Why now?

Michael Ludwig: That's right. And we are sure that this is the right decision, especially at this time. The implant market has changed dramatically in the past two years. Price points have emerged and many customers are less willing to use only high-priced products. Other well-known global competitors have acquired Brazilian and Israeli companies for hundreds of millions of Euros to gain access to a 2-brand strategy through foreign expertise. In contrast, we believe in "Made in Germany" quality and in products that come from our own development. We are confident that customers trust "Made in Germany" more than "Made in Brazil".

logo: Where do you save with iSy, how are the lower prices possible?

Michael Ludwig: As the manufacturer, we save by greatly reducing the number of components in the assortment in all areas, but especially in manufacturing and parts management. Savings are also possible in marketing and sales. After the market introduction phase, we will spend far less than other manufacturers here. Users save time with iSy in the treatment and capital in stocking parts. The entire system is designed for efficiency. We pass this advantage on to our customers and their patients.

logo: Why should dentists and surgeons in implant dentistry use iSy and not more cost-effective implants?

Ludwig: We fear Michael comparison. For us, the concept is the focus. The price is important, but not the top priority. For users and patients, the total package has to work. That includes simplicity and efficiency in use, as well as the top quality of iSy, which is manufactured at our German production site in Wimsheim. Only clinically tested materials, technologies and surfaces are used. The addition of "by CAMLOG" stands for sustainability, innovation and know-how, therefore long-term safety. Discounters and companies that are set on copying can't offer that. Customers really don't want "cheap products" without service from companies who don't even have production of their own. They want products for simple, standardized treatment concepts at a fair price coupled with good service. That also matches our corporate philosophy and culture. We're not concerned about the quick deal, but about long-term, sustainable success.

logo: Are there any scientific studies on the iSy Implant System?

Michael Ludwig: No. We rely on timetested materials and technologies for iSy, where there is no need for expensive scientific studies.

logo: How many users of the system are there already?

Michael Ludwig: iSy was introduced to the market at the IDS 2013, and we have already gained over 100 new customers with iSy. Our success proves us right in having made the right decision with iSy.

logo: You offer a wide range of services for CAMLOG. Will you be able to do the same for iSy?

Michael Ludwig: iSy users are advised and supported by CAMLOG Field Services, Customer Service and Technical Service. This expertise and the relationship of trust locally are untouchable for us. No discounter can deliver this depth of service. They are more likely to annoy dentists with their

flood of advertising. In addition, iSy customers will be able to use web-based services, which we are continuously developing and expanding.

logo: Given all the advantages of iSy, why as a CAMLOG user should I continue to choose CAMLOG and not replace CAMLOG with iSy as the primary system?

Michael Ludwig: The range of applications and the ability to implement highly custom solutions are unmatched with CAMLOG and CONELOG. Some patients want the best possible restoration and esthetics and are willing to pay a little more for it. In addition, CAMLOG is the time-tested system of choice for many dentists and surgeons. There is no reason to change. As a secondary system, iSy allows dentists and surgeons to treat additional patients.

logo: Do you think such simple systems like iSy will supplant complex systems over the short or long term?

Michael Ludwig: No. Complex systems that offer the full range of surgical and prosthetic options will have their place in the future because highly custom solutions may be necessary depending on the case. The market is divided in segments based on specific criteria. Criteria may include clarity, diversity of applications and price. As a premium supplier, CAMLOG is setting a trend with iSy. You might compare it with the automotive industry where there are different models for different requirements.

logo: Many thanks for the interview and we wish you every success with iSy.



TAPPING, SWIPING, SURFING

Modern dental offices are no longer just about drilling and polishing, but also about tapping, swiping and surfing. This may well be due in part to the new CAMLOG communication tool. Since the CAMLOG App was made available just over three months ago, it has been downloaded over 1,800 times world-wide.

What is the new CAMLOG App?

CAMLOG has launched a new application for iPads to provide its customers with all the information concerning CAMLOG implants and their applications. Next to an abundance of information including videos and animations, the App also offers interactive applications. Webinars can be followed by tapping and communication exchanged with colleagues on CamlogConnect.

What can the App do?

Access to the CAMLOG® and CONELOG® Implant Systems is placed right at front and impossible to overlook. The benefits of both systems, together with their common features, and their individual features are structured clearly and to the point. This adds practical benefits to treatment planning, the ordering process and the exchange with colleagues.

The CAMLOG icon leads to an image film and the brochure "In focus" which give insights on the company. The course program gives information on the broad spectrum of further education options, the patient brochure offers support for informing and counseling patients. In addition, the news ticker provides current daily news and informs on the latest activities at CAMLOG.

All CAMLOG-relevant websites can be directly accessed via the App. At present, this includes the CAMLOG website, the websites of the CAMLOG Foundation, CamlogConnect and the CAMLOG Facebook page.

Which extras does the App offer?

The App also includes case studies, videos and documentations on the topic of CAD/CAM. The user can also access all brochures and work instructions easily, without print media piling up on the shelves. The information is sorted by CAMLOG and CONELOG and subdivided into surgery and prosthetics.

The science area offers an overview of literature available on the CAMLOG and CONELOG systems.

The area "My CAMLOG" is a special feature where own files and documents can be entered directly by the user into the CAMLOG App via Dropbox.

How to get the App?

Anyone who owns an iPad and wishes to view the CAMLOG App can do this without difficulty via the individual Apple account. All Apple Tablets from the iPad2 onwards, as well as the iPad mini and the iPad with retina display, are supported.

The App can be downloaded free of charge. CAMLOG always appreciates your praise, your criticism and your suggestions: and this could well be a recommendation in the App store.



CAMLOG App





CAMLOG has been operating on the market very successfully for many years. CAMLOG is a brand and every brand needs a unique look. We presented the new distinctive CAMLOG "face" at the International Dental Show 2013 - or better put, the many faces. Expressive personalities will from now on shape the CAMLOG brand image and stand for the well-known CAMLOG qualities. The campaign includes persons who know what they are talking about. Customers and employees who have been enthusiastic about CAMLOG for years. We look forward to presenting you the new CAMLOG campaign.

The CAMLOG qualities

Our success and our reputation are no coincidence. They are backed by facts. These include unmistakable product quality, optimal user-friendliness, dealings based on partnership, first class service, an exceptional price-performance ratio and, last but not least, extensive transfer of know-how to our users. These are precisely the benefits the campaign is based on. It reinforces the CAMLOG qualities and will shape the CAMLOG brand image long-term.

A home for communications

With the new campaign we would like to give the CAMLOG brand a home for communications. People, our customers and interested parties, should have a clear image of CAMLOG in their minds – know what they can expect and what we stand for. Each visual of the campaign depicts a dentist, surgeon, dental technician or employee stating his own demands. Demands which CAMLOG satisfies – eye-catching, convincing, and well-founded.

Evidence instead of claims

Sustainable convincing communication moves from the claim level to the evidence level. Messages and arguments which are evidence and experience based are given greater credibility. This is the guiding principle of the CAMLOG campaign.

We view the involvement of our customers and partners in this campaign as a major compliment. In the same vein as the new CAMLOG campaign is a compliment to our loyal customers and their daily endeavors. We wish to thank

I AM A REPEAT OFFENDER,

and need prices to perfectly plan with.

Dr. Andreas Meschenmoser | Specialist for oral surgery



all who spoke on behalf of the CAMLOG advantages and whose statement shows their commitment to CAMLOG – be it as part of the campaign, our photo session at the CAMLOG exhibition stand at the IDS (see page 5) or in daily life. For us, this is motivating evidence time and again, that our values, principles and quality standards are appreciated. We therefore wish to express our thanks and will continue to do our best every day to justify the trust put in us.









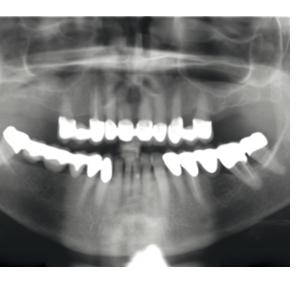








"When budgets are tight, treatment planning needs some extra thinking." Dr. Manfred Wolf and Dr. Peter Schmid from Stuttgart / Germany have put together fascinating questions on this topic as well as adding interesting cases from their practice.



With the new survey format, they are pursuing the following questions on the CamlogConnect user platform: "How do treatment plans differ for different budgets?" — "Are there international differences among therapeutic concepts, or can certain common standards be observed?"

The current survey is concerned with the optimal restoration of a bilateral free end situation.

On www.camlogconnect.com members can create three different treatment scenarios. Adequate therapeutic concepts are to be developed for specific budgets of \in 4,000 (approx. \$ 5,000), \in 7,700 (approx. \$ 10,000) and without financial restrictions.

CamlogConnect meanwhile boasts 2,500 specialists from 50 countries in its network of dentists, oral surgeons, implantologists and dental technicians. Hence, CamlogConnect is the ideal forum for the new survey concept. All members registered with CamlogConnect can participate. The results of the survey will be published and discussed in the next CamlogConnect newsletter. Members are also welcome to submit own cases from their practice and find out which therapeutic approaches their colleagues would follow in the same indication.

"By users for users", that is the core idea of CamlogConnect to give all CAMLOG customers the best possible benefits for their daily practice.

Learn, share & enjoy!





SAVE THE DATE! 5TH INTERNATIONAL CAMLOG CONGRESS —



VALENCIA 26TH-28TH JUNE 2014

The CAMLOG Foundation will be holding the 5th international CAMLOG Congress in Valencia, Spain. The congress' motto "The Ever Evolving World of Implant Dentistry" promises to present the symbiosis of science and practice at the highest level.

As was the case at preceding CAMLOG congresses, the committee will once again comprise high-ranking scientific personalities and be presided over by Prof. Mariano Sanz (Spain) and Prof. Fernando Guerra (Portugal). True to its motto "The Ever Evolving World of Implant Dentistry", continuous developments in the scientific and practical aspects of implant dentistry will be taken into account.

Congress participants can expect firstclass presentations, that serve to deepen the specialist knowledge of the listeners on the one side, and contribute toward improving the clinical results in the daily practice of the dental physicians on the other. A number of workshops will be held in the run-up to the congress. Main topics of the congress are the clinical concepts and recommendations, and also the complexity of multifactorial decision-making in implant dentistry. Lectures and discussions will also be addressing controversial themes. Attention here will focus particularly on the implementation of these topics in daily implant practice.

Apart from the top-class program of the scientific congress, the location of Valencia itself has a great deal of magnetism. Due to its location on the Mediterranean and the agreeable climate that goes with it, the third largest city in Spain is highly appealing and offers something for all tastes. A must for every science, culture, arts and architecture enthusiast certainly is the futuristic *Ciudad de las Artes y de las Ciencias*; a state-of-the-art science park that is situated in the now dried up and urbanized bed of the River Turia, and the dimensions and architectural

extravagance of which are, without doubt, unique in the world!

Please, save the date. CAMLOG is looking forward to welcoming you at the 5th International CAMLOG Congress in Spain.









5[™] INTERNATIONAL

CAMLOG CONGRESS — 26TH–28TH JUNE 201 VALENCIA







10.00

13.00

14.00

15.00

16.00

17.00

PRE-PROGRAM

THURSDAY, JUNE 26th, 2014

WORKSHOP

Workshop I

Workshop II

Workshop III

Symposium for young Iberian scientists (Spanish)

FRIDAY, JUNE 27th, 2014

OPENING

SESSION I

Clinical concepts & recommendations Biological & surgical aspects

COFF EE BREAK

SESSION II

Clinical concepts & recommendations Biological & restorative aspects

LUNCH

SESSION III

Multifactorial decision-making

EVENING: CAMLOG PARTY

CONGRESS PROGRAM

SESSION IV

SATURDAY, JUNE 28th, 2014

CAMLOG Foundation-supported research
CAMLOG Foundation research award ceremonies

SESSION V

Controversial topics

LUNCH

SESSION VI Complications – what can we learn?

CLOSING

SCIENTIFIC COMMITTEE

Presidents:

Prof. Mariano Sanz ES Prof. Fernando Guerra PT

Members:

Prof. Gil Alcoforado PT Prof. Jürgen Becker DE Prof. Juan Blanco ES Prof. Carlo Maiorana ΙT Dr. Alex Schär CH Dr. Paul Sipos NL Prof. Thomas Taylor US Prof. Hendrik Terheyden DE Prof. Pascal Valentini FR Prof. Fumihiko Watanabe JΡ

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